

INTERNATIONAL COURT OF JUSTICE

WHALING IN THE ANTARCTIC
(AUSTRALIA v. JAPAN)

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CHAPTER 1 - INTRODUCTION

SECTION I. THE DISPUTE

1.1 Japan and Australia are both parties to the *International Convention for the Regulation of Whaling* (the “ICRW”)¹ and are also bound by a number of other international obligations relating to the taking and treatment of whales and trade in whales.

1.2 Due to developing international concern over the level of exploitation and consequent depletion of whale stocks, and also more general environmental concerns over the taking of whales, Australia ceased whaling in 1978. In 1982, the International Whaling Commission (the “IWC”),² the governing body established under the ICRW, adopted a worldwide moratorium on commercial whaling. This was additional to a number of earlier more specialised moratoria on the taking of certain species and utilisation of certain practices. Subsequently, the Commission adopted the Southern Ocean Sanctuary in which commercial whaling also was prohibited. These decisions were implemented by way of amendments to the Schedule to the ICRW. Subject to any reservation that may be made by a Contracting Government to the ICRW, amendments to the Schedule form part of the ICRW and are legally binding.

¹ *International Convention for the Regulation of Whaling*, Washington D.C., 2 December 1946, 161 UNTS 74 (entered into force on 10 November 1948) [Annex 1].

² In this *Memorial* the term “Commission” is used to refer to the over-arching forum established by the ICRW as the principal organ responsible for giving effect to the object and purpose of the ICRW (discussed further at Chapter 2). This is distinct from the term “IWC” which is used to refer to the inter-governmental organisation established by the ICRW as a whole (including the Commission and its committees). Over the course of its history, the IWC has gradually changed its practice of citation for reports of the Commission and committees. In this *Memorial*, Australia has adopted the IWC standard for citation of these reports, such that reports of the International Whaling Commission may be variously cited as *Rep. int. Whal. Commn* or *Annual Report of the International Whaling Commission* or *Report of the Annual Meeting of the Commission*.

1.3 While Japan has maintained reservations to some of aspects of the more specialised moratoria and to the prohibition on the taking of minke whales in the Southern Ocean Sanctuary, it is otherwise bound by the terms of the relevant moratoria and the Southern Ocean Sanctuary.

1.4 Notwithstanding Japan's acceptance in 1986 of the moratorium on commercial whaling, it was determined to continue its whaling activities by one means or another. Its purported means of doing so was, and remains, the use of special permits "for purposes of scientific research" authorising large-scale takes of minke whales in the Southern Ocean allegedly issued in reliance upon Article VIII of the ICRW. It was no coincidence that Japan only started to issue special permits authorising large-scale so-called "scientific whaling" immediately after the moratorium on whaling for commercial purposes came into effect for Japan's pelagic (deep sea) whaling operations in May 1987. The *Japanese Whale Research Program under Special Permit in the Antarctic* ("JARPA") was commenced during the next whaling season.³ The permits issued to give effect to JARPA were but a ruse to enable the continuation of whaling by Japan.

1.5 Japan terminated JARPA in 2005 and then commenced immediately the much larger *Japanese Whale Research Program under Special Permit in the Antarctic Phase II* ("JARPA II") which is the subject of these proceedings. Not only does that program envisage the taking of double the number of minke whales than taken under JARPA, it also envisages the taking of humpback and fin whales and it has no defined end date.

1.6 Furthermore, Japan commenced JARPA II despite the absence of a proper review of the immediately preceding JARPA and in the face of 20 years of sustained criticism of JARPA from both within and outside the IWC. That

³ Antarctic whaling seasons run during the southern summer. A single season therefore runs over two calendar years, from around November until April.

criticism focused in particular on the complete absence of a need for lethal whaling to achieve the posited objectives of JARPA. Yet this unnecessary lethal whaling is the *raison d'être* of its successor, JARPA II.

1.7 Japan's conduct of JARPA II is in breach of its obligations under international law. Australia has drawn these breaches to the attention of Japan on many occasions and requested that it cease its activities under JARPA II. In this respect, reference is made to the Aide Memoire that forms Annex I to Australia's *Application Instituting Proceedings*.⁴ Japan has declined to accede to these requests and, in so doing, has asserted that its conduct of JARPA II is consistent with its obligations under international law. As such, a legal dispute exists between Australia and Japan as to the lawfulness of JARPA II under international law.

1.8 In this *Memorial*, Australia will establish that Japan's whaling under JARPA II, and hence any special permit whaling of a similar kind carried out by Japan, is contrary to Japan's obligations under international law. The focus of Australia's case is Japan's failure to comply with its obligations under the ICRW, and, in particular, its obligation not to kill whales for commercial purposes and its obligation not to conduct commercial whaling for fin and humpback whales in the Southern Ocean Sanctuary. Australia will establish that the true purpose of JARPA II is continued whaling pure and simple. Australia will establish also that the issue of special permits by Japan allegedly under Article VIII of the ICRW purportedly authorising whaling "for purposes of scientific research" is not consistent with the Convention. In this respect, Australia will demonstrate that JARPA II is not a program "for purposes of scientific research".

⁴ Aide Mémoire, Joint Démarche by Australia, Argentina, Austria, Belgium, Brazil, Chile, Costa Rica, Croatia, Czech Republic, Ecuador, the European Commission, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, Mexico, Monaco, the Netherlands, New Zealand, Portugal, San Marino, Slovak Republic, Slovenia, Spain, Sweden, the United Kingdom and Uruguay, "Objection to Japan's Scientific Whaling", 21 December 2007 [Annex 67].

1.9 While JARPA II does envisage the taking of humpback whales and special permits have been issued by Japan authorising the killing of that species, no humpbacks have yet been taken pursuant to that program. In the event that humpback whales are taken pursuant to JARPA II, Australia reserves the right to seek remedies from the Court in relation to a breach of the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (“CITES”).⁵ Australia is not seeking any remedy flowing from the obligations of Japan under the *Convention on Biological Diversity*.⁶

SECTION II. JURISDICTION

1.10 The Court has jurisdiction over this dispute by reason of the respective declarations made by Australia and Japan under Article 36(2) of the Statute of the Court.⁷

SECTION III. STRUCTURE AND OUTLINE OF THIS MEMORIAL

1.11 The balance of this Chapter provides an outline of the structure of this *Memorial* and provides a comment on the handling of scientific evidence by the Court in this case.

⁵ *Convention on International Trade in Endangered Species of Wild Fauna and Flora*, Washington D.C., 3 March 1973, 993 UNTS 244, (entered into force on 1 July 1975) (“CITES”).

⁶ *Convention on Biological Diversity*, Rio de Janeiro, 5 June 1992, 1760 UNTS 79 (entered into force on 29 December 1993).

⁷ Declaration of Australia dated 22 March 2002 signed by the Hon. A.J.G. Downer, Minister for Foreign Affairs; Declaration of Japan dated 9 July 2007 signed by the Hon. Kenzo Oshima, Permanent Representative of Japan to the United Nations.

CHAPTER 2

1.12 Chapter 2 commences by providing an overview of the framework established by the ICRW, including its structure, purpose and object. It outlines also the evolution of the ICRW regulatory model from 1946, tracing the development of regulation from undifferentiated catch limits to more sophisticated and increasingly restrictive forms of regulation. Chapter 2 also outlines the development and adoption of various conservation measures by the IWC, such as the moratorium on whaling for “commercial purposes” and the establishment of extensive whale sanctuaries, including the Southern Ocean Sanctuary. It then describes the comprehensive nature of the present regime which envisages only the three types of whaling: commercial whaling, aboriginal subsistence whaling and whaling for purposes of scientific research. The Chapter concludes with an outline of the pre-exploitation and current levels of the relevant populations of whales intended to be taken under JARPA II, thus showing the effect that exploitation has had on those populations over the course of the last century.

CHAPTER 3

1.13 Chapter 3 sets out the facts behind the current dispute. It describes how, in January 1988, Japan commenced so-called “scientific” whaling in the Southern Ocean as a means of continuing whaling *per se* and to protect its whaling industry following its acceptance of a commercial whaling moratorium. Chapter 3 then examines the key participants in Japan’s whaling industry and describes Japan’s whaling in the Southern Ocean as well as the production, distribution and sale of whale products in Japan. It sets out the “scientific” whaling business model, by which the revenue from the sale of whale meat funds ongoing whaling operations and benefits key stakeholders. The Chapter also sets out how this affects the conduct of Japan’s “research”.

CHAPTER 4

1.14 Chapter 4 traces the origins and development of Article VIII of the ICRW and sets out the proper interpretation of this exception in accordance with established principles of treaty interpretation as reflected in Articles 31 and 32 of the *Vienna Convention on the Law of Treaties* (the “*Vienna Convention*”).⁸ It addresses also the requirement to perform obligations under the ICRW in good faith as required by Article 26 of the *Vienna Convention*. Applying these principles, it will be seen that Article VIII is exceptional and not self-judging. The provision must be applied using objective criteria and, in doing so, it operates so as to confine Japan, acting in good faith, only to grant permits that authorise the killing, taking and treating of whales “for purposes of scientific research” and for no other purpose.

CHAPTER 5

1.15 Chapter 5 describes the failure of JARPA after nearly two decades of so-called “scientific” whaling by Japan. It explains how, in JARPA II, Japan continues to employ the same flawed method - the collection of data through whaling - that did not generate useful or reliable results in JARPA. Japan has simply structured JARPA II around new objectives that purport to be scientific but have no greater prospects of scientific advancement or success than JARPA had. Chapter 5 then assesses JARPA II against the four essential characteristics of a program “for purposes of scientific research” referred to in Chapter 4 and establishes that JARPA II does not have any of these characteristics. Chapter 5 establishes also that JARPA II is not carried out for purposes of scientific research. The manifest purpose of JARPA II - which may be traced to the

⁸ *Vienna Convention on the Law of Treaties*, Vienna, 23 May 1969, 1155 UNTS 331 (entered into force on 27 January 1980) (the “*Vienna Convention*”).

inception of JARPA in 1987 in response to the moratorium on commercial whaling - is the continuation of whaling on a permanent basis.

CHAPTER 6

1.16 Chapter 6 establishes that Japan's whaling under JARPA II is in contravention of the commercial whaling moratorium, the Southern Ocean Sanctuary and the factory ship moratorium under the ICRW.

CHAPTER 7

1.17 Chapter 7 sets out the remedies sought by Australia.

SUBMISSIONS

1.18 Finally, this *Memorial* concludes by setting out Australia's Submissions.

APPENDICES – SCIENTIFIC REPORTS

1.19 Two scientific reports form appendices to this *Memorial*. The first is entitled *Antarctic Baleen Whale Populations* authored by William de la Mare, Natalie Kelly and David Peel.⁹ This report reviews the status of the Southern Hemisphere whale populations that have been subject to commercial and/or scientific whaling and, in particular, the minke, fin and humpback whale species that are the subject of JARPA II.

1.20 The second report entitled *An Assessment of Japanese Whale Research Programs Under Special Permit in the Antarctic (JARPA, JARPA II) as Programs for Purposes of Scientific Research in the Context of Conservation and Management of Whales* is authored by Professor Marc Mangel, Distinguished

⁹ W de la Mare, N Kelly, D Peel, *Antarctic Baleen Whale Populations*, April 2011 (“*de la Mare et al., Antarctic Baleen Whale Populations*”) [Appendix 1].

Professor of Applied Mathematics and Statistics at the University of California Santa Cruz.¹⁰ Professor Mangel identifies the essential characteristics of a program undertaken for purposes of scientific research. He then analyses the objectives, methodologies and other features of JARPA II and, in so doing, assesses whether JARPA II has the essential characteristics of a program undertaken for purposes of scientific research. He concludes that JARPA II is not a program for purposes of scientific research in the context of conservation and management of whales.

1.21 In commissioning and appending two reports by scientific experts, Australia has taken account of the approach outlined by the Court in the *Case Concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay)* to the effect that “persons who provide evidence before the Court based on their scientific or technical knowledge...should testify before the Court as experts...so that they may be submitted to questioning by the other party as well as by the Court”.¹¹ Australia welcomes this approach and will take all necessary steps to ensure that an author of each of the appended reports is available for questioning by Japan and the Court, under such conditions as the Court considers appropriate. In this regard, Australia notes that the questioning of experts would require sufficient time to be made available in any future schedule of hearings.

1.22 In the event that the Court is minded to seek its own expert opinion on matters of scientific or technical expertise in accordance with Article 50 of the Statute, Australia submits that it should do so with “transparency, openness,

¹⁰ M Mangel, *An Assessment of Japanese Whale Research Programs Under Special Permit in the Antarctic (JARPA, JARPA II) as Programs for Purposes of Scientific Research in the Context of Conservation and Management of Whales* (“Mangel, Expert Opinion”) [Appendix 2].

¹¹ *Case Concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment, 20 April 2010, para. 167.

procedural fairness”¹² and provide the parties with an opportunity to comment on: (i) the proposed choice of the relevant expert or experts; (ii) the terms of reference of any report they may be invited to prepare; and (iii) any opinion subsequently given by that expert including, as appropriate, by means of questioning.

ANNEXES

1.23 There are two volumes of Annexes containing the evidence upon which Australia relies in this *Memorial*. Those Annexes include international instruments, IWC documents, inter-governmental and multilateral documents, books, articles, documents from the Australian and Japanese Governments and documents from the Japanese whaling industry.¹³

¹² *Case Concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Joint Dissenting Opinion of Judges Al-Khasawneh and Simma, para. 14.

¹³ In some cases relevant excerpts of the documents have been provided. Also, English translations are provided for all relevant parts of documents annexed in Japanese.

CHAPTER 2 - THE INTERNATIONAL REGULATION OF WHALING

2.1 This Chapter sets out the background to the comprehensive international regime for the regulation of whaling which now rests within an increasingly conservation-oriented context. It is against this background that the legality of Japan's so-called "scientific" whaling falls to be determined.

2.2 Section I provides an overview of the framework established by the ICRW, its structure, purpose and object.

2.3 Section II outlines the evolution of the ICRW regulatory model from 1946 and the concomitant transformation of the practice of the IWC. This Section traces the development from undifferentiated catch limits to increasingly restrictive regulation. Reflecting trends in broader international environmental law, it is clear that the regulation of whaling has become increasingly conservation-oriented. This Section also outlines the development and adoption of various conservation measures by the IWC, such as the moratorium on whaling for "commercial purposes" and the establishment of extensive whale sanctuaries, including the Southern Ocean Sanctuary.

2.4 Section III describes the comprehensive and restrictive nature of the present regime and identifies the three types of whaling envisaged by the regime: commercial whaling, aboriginal subsistence whaling and whaling for purposes of scientific research.

2.5 Section IV outlines pre-exploitation and current levels of the relevant populations of whales intended to be taken under JARPA II, showing the effect that exploitation has had on those worldwide populations over the course of the last century.

SECTION I. THE ICRW FRAMEWORK

2.6 In this Section, Australia provides a brief history of the modern regulation of whaling, followed by a review of the framework established by the ICRW in 1946 for the regulation of the conservation and management of whales. It will be seen that the ICRW is established as a framework Convention, carrying within it a mechanism for its own evolution to meet changing demands over time.

A. EARLY ATTEMPTS AT INTERNATIONAL REGULATION

2.7 The need for the regulation of whaling at an international level first arose in the early 20th century following the emergence of “factory ships” which extended commercial whaling into waters beyond national jurisdiction. Whaling began in the Antarctic in 1904, and by 1910 the Antarctic whaling grounds were producing more whale oil than the North Atlantic industry.¹⁴ The scale of commercial whaling continued to steadily increase, reaching its peak in 1930/31 when 3,701,668 barrels of whale oil were produced in a single season.¹⁵ This large increase in production led to a collapse in the price of whale oil.¹⁶ States subsequently expressed significant concerns over the sustainability of the industry and the decline in whale stocks, thus prompting calls for its regulation.¹⁷

2.8 The international regulation of whaling was first formally proposed within the League of Nations in the 1920s, with the first international agreement, the

¹⁴ J N Tønnessen and A O Johnsen, *The History of Modern Whaling* (C Hurst and Company, 1982) (“Tønnessen and Johnsen, *Modern Whaling*”), 176.

¹⁵ *Ibid.*, 330. This equated to 43,210 whales caught.

¹⁶ *Ibid.*, 387-389; R Ellis, *Men and Whales* (Alfred A Knopf, 1991) (“Ellis, *Men and Whales*”), 350.

¹⁷ For further information on the impact of commercial whaling, see *de la Mare et al., Antarctic Baleen Whale Populations* [Appendix 1].

Convention for the Regulation of Whaling, being signed in Geneva on 24 September 1931 (“1931 Convention”).¹⁸ The 1931 Convention imposed a number of limited restrictions on the whaling industry. For the first time, prohibitions on the killing of calves, immature whales, nursing female whales or of any species of right whale were introduced in an attempt to ensure the continuation of the industry.¹⁹ The 1931 Convention also required all whaling operations to be licensed by a Contracting Party. Notwithstanding these conservation concerns, the Convention had a primary focus on the development of the commercial industry.

2.9 The 1931 Convention had 28 Contracting Parties.²⁰ Neither Australia nor Japan were Parties (Australia signed but did not ratify the 1931 Convention).²¹

2.10 The 1931 Convention failed to bring the whaling industry under effective international control. As whale oil prices continued to decline,²² and it was recognised that, in addition to right whales, gray whales were also virtually extinct,²³ States called for stronger regulation. The regulatory framework governing commercial whaling was strengthened in 1937 by the

¹⁸ *Convention for the Regulation of Whaling*, Geneva, 24 September 1931, 155 LNTS 349 (entered into force 16 January 1935) (“1931 Convention”) [Annex 2].

¹⁹ The 1931 Convention, Articles 4 and 5. The ban on the killing of right whales was introduced as right whales had been decimated in the North Atlantic by this time: *Ellis, Men and Whales*, 386. Right whale species include North-Cape whales, Greenland whales, southern right whales, Pacific right whales and southern pigmy right whales.

²⁰ See L. Leonard, “Recent Negotiations Toward the International Regulation of Whaling” (1941) 35 *American Journal of International Law* 90, 100.

²¹ See Australian Government Press Release, “Antarctica and Whaling”, 24 August 1936 [Annex 68].

²² *Tønnessen and Johnsen, Modern Whaling*, 410.

²³ *Ellis, Men and Whales*, 464.

International Agreement for the Regulation of Whaling (“1937 Agreement”).²⁴ The *1937 Agreement* marked an increasing focus on whale conservation by imposing limitations on catch seasons and strict limits on the minimum length at which particular whales could be taken. It also introduced a prohibition on the hunting of gray whales and maintained prohibitions on the taking of calves and the hunting of right whales.²⁵ Nevertheless, it continued to maintain as its express object the prosperity of the commercial whaling industry.²⁶ With the exception of Japan, all States conducting Antarctic pelagic whaling at that time became Contracting Parties to the *1937 Agreement*.²⁷

2.11 The *1937 Agreement* had nine Contracting Parties and entered into force for Australia on 23 July 1946.²⁸ In addition, between 1937 and 1945, a number of Protocols to the *1937 Agreement* were concluded. These Protocols limited the hunting of humpback whales, declared a whale sanctuary in the Antarctic,²⁹ established an agreed system for measuring the size of each Contracting Government’s whale hunt³⁰ and addressed the post-war conditions.³¹

²⁴ *International Agreement for the Regulation of Whaling*, London, 8 June 1937, 190 LNTS 79 (entered into force 7 May 1938) (“1937 Agreement”) [Annex 3].

²⁵ The *1937 Agreement*, Articles 4, 5 and 7.

²⁶ The *1937 Agreement*, preamble.

²⁷ Although Japan did not attend negotiations for the *1937 Agreement*, it did attend negotiations for some of the subsequent Protocols to that Agreement.

²⁸ Australia’s Instrument of Ratification for the *International Agreement for the Regulation of Whaling*, Canberra, 10 July 1946, signed by Acting Minister of State for External Affairs, M J O Makin, deposited in the archives of the Government of the United Kingdom of Great Britain and Northern Ireland on 23 July 1946. Australia withdrew from the *1937 Agreement* on 1 July 1950 following the entry into force for Australia of the ICRW.

²⁹ *Protocol amending the International Agreement on the Regulation of Whaling*, London, 24 June 1938, 196 LNTS 131 (entered into force 30 December 1938) (“1938 Protocol”), Article 1 [Annex 4].

³⁰ *Protocol amending the International Agreement for the Regulation of Whaling*, London, 7 February 1944, UKTS 1946 No. 61 (Cmd. 6990) (“1944 Protocol”) [Annex 5]. The Government of Eire failed to ratify the *1944 Protocol* as required in Article 7 to bring the

B. ADOPTION OF THE ICRW

2.12 Lack of knowledge about whale stocks, coupled with confusion over the coverage of existing agreements, led to renewed concerns about the future sustainability of the international whaling industry.³² A conference on whaling was held in Washington in November 1945, attended by 19 States, as well as the UN Food and Agriculture Organisation.³³ The twin aims of the Conference, as announced by then United States Secretary of State Dean Acheson in his opening address, were: (i) to codify the range of existing agreements;³⁴ and (ii) to establish a permanent and effective international organ for the supervision of the

Protocol into force. The *1944 Protocol* was supplemented by a further Protocol in 1945 to bring the *1944 Protocol* into force without the Government of Eire's ratification: the *Supplementary Protocol concerning the International Agreement for the Regulation of Whaling of 8 June 1937 as amended by the Protocols of 24 June 1938 and 7 February 1944*, London, 5 October 1945, UKTS 1946 No. 44 (Cmd. 6941) (entered into force 5 October 1945). The agreed system for measuring the size of the whale hunt was based on the Blue Whale Unit, discussed further in Section II.A of this Chapter.

³¹ *Protocol amending the International Agreement for the Regulation of Whaling of 8 June 1937 and the Protocol for the Regulation of Whaling of 24 June 1938*, London, 26 November 1945, 11 UNTS 43 (entered into force 3 March 1947) ("*1945 Protocol*") [Annex 6].

³² *Tønnessen and Johnsen, Modern Whaling*, 492-494, 499.

³³ *Ibid.*, 499.

³⁴ By 1946, nine multilateral international agreements had been finalised between various States: the *1931 Convention*, the *1937 Agreement*, the *1938 Protocol*; the *1944 Protocol* and its Supplementary Protocol regarding its entry into force; the *1945 Protocol* and its Supplementary Protocol regarding its entry into force; the *Supplementary Protocol Concerning the 1937 International Agreement for the Regulation of Whaling, as Amended by the Protocols of 24 June 1938 and 7 February 1944*, London, 15 March 1946, UKTS 1946 No. 44 (Cmd. 6941); and the *Protocol Extending for the Whaling Season of 1947-48 the Provisions of the Protocol amending the International Agreement for the Regulation of Whaling of 8 June 1937 and the Protocol for the Regulation of Whaling of 24 June 1938*, Washington D.C., 2 December 1946, 161 UNTS 361 (entered into force 5 February 1948).

whaling industry.³⁵ In his address, Secretary Acheson emphasised the need to conserve the depleted whale stocks.³⁶

2.13 The resultant treaty, the ICRW, reflects these aims and that emphasis. While the text of the ICRW mirrors many provisions of the earlier agreements, there are two important differences: (i) the establishment of the inter-governmental organisation, the IWC,³⁷ and (ii) the inclusion of a Schedule of regulations annexed to the ICRW limiting and controlling whaling.

2.14 The ICRW entered into force generally and for Australia on 10 November 1948.³⁸ Japan lodged its notice of adherence on 21 April 1951 and the ICRW entered into force for Japan on that day. Membership of the IWC is open to any State that formally adheres to the ICRW, either by ratification or instrument of adherence. There are currently 89 members of the IWC, including both Australia and Japan.³⁹

C. THE OBJECT AND PURPOSE OF THE ICRW

2.15 In order to understand the comprehensive regime established by the ICRW it is essential to understand, from the outset, the object and purpose of the treaty.

2.16 The preamble to the ICRW evidences a significant change from the philosophy of the *1931 Convention* and the *1937 Agreement*. The opening

³⁵ *Tønnessen and Johnsen, Modern Whaling*, 500; Speech of Dean Acheson to the Opening Plenary Session of the International Whaling Conference, 20 November 1946 [Annex 70].

³⁶ Speech of Dean Acheson to the Opening Plenary Session of the International Whaling Conference, 20 November 1946 [Annex 70].

³⁷ ICRW, Article III.

³⁸ Australia ratified the ICRW on 1 December 1947.

³⁹ International Whaling Commission, *IWC Members and Commissioners*, at <<http://www.iwcoffice.org/commission/members.htm#members>> on 12 April 2011.

sentence of the preamble to the ICRW recognises “the interest of the nations of the world in safeguarding for future generations the great natural resources represented by the whale stocks”.

2.17 The primary motivation for this shift – that is, abandoning industrial profitability as the sole underlying object of international regulation of whaling – is evident in the second paragraph of the preamble, which considers that “the history of whaling has seen over-fishing of one area after another and of one species of whale after another to such a degree that it is essential to protect all species of whales from further over-fishing”. The preamble proceeds to recognise that: (i) whale stocks are susceptible of natural increases if whaling is properly regulated; (ii) it is in the common interest to achieve the optimum level of whale stocks as rapidly as possible “without causing widespread economic and nutritional distress”; and (iii) in the course of achieving these objectives, whaling operations should be confined to those species best able to sustain exploitation in order to give an interval for recovery to certain species of whales now depleted in numbers.

2.18 The preamble concludes with an expression of the desire of the Contracting Governments to establish a system of international regulation for whale fisheries to ensure proper and effective conservation and development of whale stocks, and the resultant decision to conclude a convention “to provide for proper conservation of whale stocks and thus the orderly development of the whaling industry”.

2.19 The preamble to the ICRW therefore evidences two fundamental objectives underpinning the system established by the ICRW: first, to provide for the proper and effective conservation and recovery of all whale stocks; and secondly (relying on and flowing from the first), to make possible the “orderly development” of the whaling industry. It is significant that the first objective of the preamble is the conservation of whale stocks for future generations – that is,

before any reference to regulation of the whaling industry. Further, through use of the conjunction “and thus” in the final paragraph of the preamble, the “orderly development” of the whaling industry is expressly made contingent upon the proper and effective conservation of whale stocks. As stated by Professor Birnie:

[T]he primary purpose [of the Convention] is conservation and development of whale stocks for the secondary objective of enabling the whaling industry to continue in a more orderly fashion. The other parts of the Preamble are directed to recognising the main problem of that industry – over-exploitation – and the best means for achieving stock development.⁴⁰

2.20 While the ICRW is plainly a convention for the regulation of whaling, its object and purpose was to establish a comprehensive regime to provide for the proper and effective conservation and recovery of all whale stocks. The ICRW does not set out how this object and purpose is to be achieved. Rather, as will be demonstrated in the next Section, it establishes a scheme which allows for the object and purpose to be achieved in an evolving and continuing fashion on the basis of the best available scientific advice.

D. STRUCTURE AND SCHEME OF THE ICRW

2.21 The ICRW consists of 11 Articles and a Schedule with the latter forming an integral part of the Convention.⁴¹ The Articles establish the institutional mechanisms through which the object and purpose of the ICRW are to be achieved. The Schedule contains the detailed regulations governing the conduct of whaling. As with other Conventions establishing a regulatory regime, the institutional mechanisms of the ICRW are designed to allow the Convention regime to evolve and develop as understanding changes over time as to what is appropriate to give effect to the object and purpose of the Convention.

⁴⁰ P Birnie, “Legal Aspects of Non-Consumptive Utilisation of Cetaceans” (1983), unpublished paper presented at the Global Conference on the Non-Consumptive Utilisation of Cetacean Resources, 7-11 June 1983 (“*Birnie, Non-Consumptive Utilisation of Cetaceans*”), 5 [Annex 74].

⁴¹ ICRW, Article I(1).

(1) Key Institutions

2.22 Article III of the ICRW established the Commission as the principal institution responsible to give effect to its object and purpose. Each Contracting Government is represented on the Commission by a Commissioner, who may be accompanied by experts and advisers.⁴² The ICRW left it to the IWC itself to determine its other constitutive elements and Rules of Procedure.⁴³ Specifically, the IWC is empowered by the ICRW to establish “such committees as it considers desirable to perform such functions as it may authorize”.⁴⁴ Since its first meeting in May 1949, the IWC has developed a number of key institutions. These include the current four standing committees: the Scientific Committee; the Technical Committee;⁴⁵ the Finance and Administration Committee; and, most recently, the Conservation Committee. The Scientific Committee is of particular relevance to the current dispute.

2.23 The Commission is envisaged as having a legislative and regulatory role. An important aspect of this role as set out in Article V is the adoption of detailed regulatory measures through amendments to the Schedule. To assist it in this, Article IV authorises the Commission to organise studies and collect and study information concerning whale stocks.

2.24 The Commission also is entrusted by Article VI with the making of recommendations on “any matters which relate to whales or whaling and to the objectives and purposes of the Convention”. In practice, recommendations made

⁴² Ibid., Article III(1). See also International Whaling Commission, *Rules of Procedure and Financial Regulations (as amended by the Commission at the 62nd Annual Meeting, June 2010)* (“*Rules of Procedure*”), A1.

⁴³ Ibid., Article III.

⁴⁴ Ibid., Article III(4).

⁴⁵ The Technical Committee has not met since 1999, but remains on the record. The need for a Technical Committee remains under review by the Commission: see Chair’s Report of the Sixty-Second Annual Meeting, *Annual Report of the International Whaling Commission 2010*, 35.

under Article VI are presented as Resolutions of the Commission.⁴⁶ These Resolutions provide further evidence of the evolving attitude of the Commission to the proper interpretation and application of key provisions of the ICRW. The practice of the IWC reflected in such Resolutions of the Commission provides authoritative guidance on those matters of interpretation and application.

2.25 In adopting Resolutions and amendments to the Schedule, the Commission has been assisted by the work of the Scientific Committee, a body of considerable importance in the present dispute. It is therefore important to understand the role played by the Committee. The Scientific Committee has defined its duties as being to:

Encourage, recommend, or if necessary, organise studies and investigations related to whales and whaling...

Collect and analyse statistical information concerning the current condition and trend of whale stocks and the effects of whaling activities on them...

Study, appraise, and disseminate information concerning methods of maintaining and increasing the population of whale stocks...

Provide scientific findings on which amendments to the Schedule shall be based to carry out the objectives of the Convention and to provide for the conservation, development and optimum utilization of the whale resources... [and]

Publish reports of its activities and findings.⁴⁷

2.26 The Scientific Committee does not itself carry out scientific research. Instead it manages, collates and reports on research carried out by Contracting Governments, other international and national scientific institutions and individual scientists. In addition, the Scientific Committee has in the past commissioned

⁴⁶ *Rules of Procedure* E and J provide further procedural guidance on the Commission's process for passing Resolutions.

⁴⁷ International Whaling Commission, *Rules of Procedure of the Scientific Committee (as amended by the Commission at the Sixty-Second Annual Meeting, June 2010)*, (“*Rules of Procedure of the Scientific Committee*”), preamble.

consultants to provide reviews on specific research topics or methods.⁴⁸ The Scientific Committee also plays a role in reviewing special permits.⁴⁹

2.27 The membership of the Scientific Committee primarily comprises nominees of Contracting Governments.⁵⁰ While there is no formal requirement that Government nominees have any scientific qualifications or expertise in the science of whales, it is expected that nominees will be scientists with expertise in marine mammals. The Scientific Committee also has the capacity to include advisors from inter-governmental organisations in a non-voting capacity.⁵¹ The UN Food and Agriculture Organisation, the United Nations Environment Programme and the International Union for the Conservation of Nature and Natural Resources (“IUCN”) all have had advisors on the Scientific Committee for considerable periods.

2.28 The Chair of the Scientific Committee may also invite qualified scientists, not nominated by Contracting Governments, to participate in meetings as non-voting contributors. These contributors are known as “Invited Participants”.⁵²

2.29 Membership of the Scientific Committee has grown markedly since 1946. In 1955, the Scientific Committee comprised 11 scientists from seven member

⁴⁸ See, for example, the work undertaken by the Committee of Experts in the 1960s: “Reports of the Committee of Three Scientists on the Special Scientific Investigation of the Antarctic Whale Stocks”, Appendix V, *Fourteenth Report of the Commission*, 1964, 32-107; Report of the Committee of Four Scientists, June 1964, Appendix V, *Fifteenth Report of the Commission*, 1965, 47-60.

⁴⁹ *Rules of Procedure of the Scientific Committee*, preamble; see also Chapter 4 of this *Memorial*, Sections I.D and I.E.

⁵⁰ *Rules of Procedure of the Scientific Committee*, A1.

⁵¹ *Ibid.*, A2.

⁵² *Ibid.*, A6. A small number of interested local scientists may also be invited as non-voting observers to the meetings of the Scientific Committee: *Ibid.*, A7.

countries.⁵³ In 2010, its annual meeting was attended by 167 scientists from 25 member countries and five international organisations, and included 55 Invited Participants.⁵⁴

(2) The Schedule

2.30 The Schedule contains comprehensive regulations for the conservation and management of whales and contains a number of obligations of particular relevance to the current dispute. Article V(1) of the ICRW authorises the IWC to adopt a range of regulatory measures from time to time through amendments to the Schedule with respect to the conservation and utilisation of whale resources. In this way it was envisaged that the object and purpose of the Convention could be achieved on an ongoing basis, taking account of contemporary issues and developments. Any amendments to the Schedule are required by Article III(2) to be made by a three-quarters majority of members voting. Article V(2) sets out the criteria for determining the content of amendments. Amendments are to be such as are necessary to carry out the objectives and purposes of the Convention and to provide for the conservation, development and optimum utilisation of the whale resources. They are to be based on scientific findings and shall not involve restrictions based on nationality nor allocate specific quotas to any factory ship or land station. In the absence of an objection, the amendments adopted under Article V form part of the obligations under the Convention and are binding on Contracting Governments. Article V(3) of the ICRW permits Contracting Governments to object to amendments to the Schedule. Under that provision, obligations in the form of amendments to the Schedule will have no application to

⁵³ Report of the Scientific Sub-Committee, April 1955, Appendix IV, *Sixth Report of the Commission*, 1955, 17-24.

⁵⁴ Report of the Scientific Committee, 9 June 2010, IWC/62/Rep 1, Annex A.

a Contracting Government if it lodges an objection to the amendment within 90 days.

2.31 Over the period since 1946 amendments have been made regularly to the Schedule as the IWC's understanding of how best to give effect to the object and purpose of the ICRW has developed. The key amendments to the Schedule as the ICRW regime has evolved are detailed below.⁵⁵

2.32 By setting out the detailed regulatory provisions within the Schedule, the ICRW is established as a framework Convention, which provides within it the tools for regular amendment of those detailed regulations governing the conduct of the conservation and management of whales. In this way it was acknowledged that while certain of the essential characteristics of the framework were to remain static (and were included within the Convention), the implementation of that framework's object and purpose was subject to continual review and evolution. It is this evolution which is described in Section II below.

⁵⁵ See Section II of this Chapter.

SECTION II. EVOLUTION OF THE INTERNATIONAL REGULATION OF WHALING UNDER THE IWC

2.33 Building on the framework established in 1946, Contracting Governments progressively have strengthened the international regime for the regulation of whaling by increasing the restrictions on the whaling industry.

2.34 This Section traces the development of the regulatory model since the adoption of the ICRW as seen through the evolution of the Schedule. This review reveals an increasingly restrictive regulatory regime, founded on a growing understanding of the state of whale stocks and reflecting the significant international environmental developments over the second half of the 20th century and early 21st century.

2.35 In this respect, the history of whaling regulation from the introduction of the ICRW to the present may be divided into the periods traced below, with certain significant events identified:

- (1) undifferentiated catch limits (1946-1972);
- (2) the Stockholm Conference (1972);
- (3) the period of the New Management Procedure (1974-1981);
- (4) the commercial whaling moratorium (1981);
- (5) the development of the Revised Management Procedure (1986-1994);
- (6) the introduction of the Southern Ocean Sanctuary (1994); and
- (7) the Berlin Initiative and the establishment of the Conservation Committee of the IWC (2003).

A. UNDIFFERENTIATED CATCH LIMITS (1946-1972)

2.36 The period of undifferentiated catch limits commenced upon the entry into force of the ICRW and continued the reliance on the Blue Whale Unit (“BWU”) which was first introduced in the *1944 Protocol*.⁵⁶

2.37 The BWU was premised on the fact that, in the first half of the 20th century, the commercial value of whales was primarily derived from the quantity of oil able to be extracted. One BWU was the amount of oil which could be extracted from one blue whale and equated to a “catch” of two fin whales or two and a half humpback whales or six sei whales.⁵⁷ Limitations on whaling catches were expressed in BWU and, subject to any specific prohibitions on taking whales of a particular species, any number of any species of whale could be caught provided that the total caught did not exceed the set BWU limit. In 1948, when the Schedule to the ICRW first became effective, it included a catch limit for the Southern Ocean set at 16,000 BWU – leaving Contracting Governments to decide which species would be taken within this limitation. The BWU was initially provided for in paragraph 8(a) of the Schedule and was amended from time to time. In 1953 the Schedule was re-arranged and the BWU reflected in section IV(4)(a).

2.38 During this period, the Commission did agree on the need to protect some particular species or populations of whales (for example, through imposing a zero catch quota on Antarctic blue whales in 1963).⁵⁸ Nevertheless the continued use of the BWU, despite scientific advice suggesting it should be abandoned, meant unsustainable whaling operations continued throughout the 1950s and 60s.

⁵⁶ The *1944 Protocol*, Article 3 [Annex 5].

⁵⁷ *Ibid.* [Annex 5].

⁵⁸ Chairman’s Report of the Fifteenth Meeting, Appendix III, *Fifteenth Report of the Commission*, 1965, 17-18; *de la Mare et al.*, *Antarctic Baleen Whale Populations*, para. 3.13 [Appendix 1].

Also, the failure to set catch limits based on the state of individual species led to the depletion of whale species in order of their oil yield, size and value.

2.39 During the late 1960s, an emergent concern for the preservation of whale stocks was but part of the broader developing international concern over the environment in general. These international developments were recognised in a Resolution of the United Nations Economic and Social Council passed at its Forty-Fifth session in 1968 which highlighted the need for:

...intensified action at the national and the international level, to limit and, where possible, to eliminate the impairment of the human environment.⁵⁹

B. THE STOCKHOLM CONFERENCE (1972)

2.40 Recognising these broader international concerns, the United Nations General Assembly convened the United Nations Conference on the Human Environment (the “Stockholm Conference”) from 5 to 16 June 1972:

...to provide a framework for comprehensive consideration within the United Nations of the problems of the human environment in order to focus the attention of Governments and public opinion on the importance and urgency of this question and also to identify those aspects of it that can only, or best, be solved through international co-operation and agreement.⁶⁰

2.41 The Stockholm Conference was attended by 113 States along with a large number of international institutions and observers from non-governmental organisations.⁶¹

⁵⁹ See discussion of “Resolution on question of convening an international conference on the problems of the human environment”, ESC Res 1346 (XLV), 45th Session, 1555 Plen Mtg, 30 July 1968 in the Report of the United Nations Conference on the Human Environment, Stockholm, 1972, UN Doc. A/CONF.48/14/Rev.1, 5-16 June 1972, (“*Report of the Stockholm Conference*”), 37.

⁶⁰ Resolution on Problems of the Human Environment, GA Res 2398 (XXIII), 23rd Session, 1733rd Plen Mtg, 3 December 1968.

⁶¹ *Report of the Stockholm Conference*, 43.

2.42 The non-binding instruments adopted by the Conference included: (i) a Declaration containing 26 Principles to “inspire and guide the peoples of the world in the preservation and enhancement of the human environment”; and (ii) an Action Plan consisting of 109 Recommendations.⁶²

2.43 A number of the Principles and Recommendations adopted at the Stockholm Conference were relevant to the conservation and management of whales. Some of these include:

Principle 2: The natural resources of the earth, including the air, water, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning and management, as appropriate.

...

Principle 4: Man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat, which are now gravely imperilled by a combination of adverse factors...

...

Principle 25: States shall ensure that international organizations play a coordinated, efficient and dynamic role for the protection and improvement of the environment.⁶³

2.44 Specifically, the poor state of the whale stocks and the management failures of the IWC were addressed in Recommendation 33 of the Conference:

It is recommended that Governments agree to strengthen the International Whaling Commission, to increase international research efforts, and as a matter of urgency to call for an international agreement, under the auspices of the International Whaling Commission and involving all Governments concerned, for a 10-year moratorium on commercial whaling.⁶⁴

2.45 Although not binding, these Principles and Recommendations reinforced the growing international awareness of the environment and marked a fundamental turning point in the development of the broader international legal regime. In turn, this influenced the development of new treaties, and brought

⁶² Ibid., 3-31.

⁶³ Ibid., 4-5.

⁶⁴ Ibid., 12.

increasing pressure to bear on international institutions, such as the IWC, to ensure their practice was consistent with this increasingly conservation-oriented approach to management.⁶⁵

2.46 The Stockholm Conference has been described as the “first step towards the establishment of international environmental law”.⁶⁶ It was a key marker of the shifting focus of the international community towards the conservation of the environment and the preservation of species. This shift was reflected clearly in the practice of the IWC over the following decades and prevails today.

C. THE NEW MANAGEMENT PROCEDURE (1974-1981)

2.47 Partly in response to the concerns expressed over the state of the world’s whale populations at the Stockholm Conference, the BWU was abandoned in 1972 and removed from the Schedule to the ICRW.⁶⁷ From that time, the IWC began to set catch limits by individual species.⁶⁸ After two years, a New Management Procedure (“NMP”) was adopted by the Commission at its Twenty-Sixth Annual Meeting in 1974 and first put into effect in the southern summer of 1975/76 as a management tool for maintaining stocks.⁶⁹

2.48 The NMP, set out in paragraphs 10(a) to 10(c) of the Schedule to the ICRW, was used by the IWC to divide whale populations by species into one of three categories (Sustained Management Stocks, Initial Management Stocks, or

⁶⁵ P Birnie, *International Regulation of Whaling: From Conservation of Whaling to Conservation of Whales and Regulation of Whale-Watching* (Oceana Publications, 1985), Volume I, 375.

⁶⁶ L B Sohn, “The Stockholm Declaration on the Human Environment” (1973) 14 *Harvard International Law Journal* 423, 515.

⁶⁷ Chairman’s Report of the Twenty-Fourth Meeting, Appendix III, *Twenty-Fourth Report of the Commission*, 1974, 20.

⁶⁸ *Ibid.*

⁶⁹ Chairman’s Report of the Twenty-Seventh Meeting, *Rep. int. Whal. Commn* 27, 1977, 6-9.

Protection Stocks) according to the estimated level of the population. In so doing, the NMP was designed to:

- (1) protect depleted stocks so that they could recover;
- (2) maintain other stocks at or above levels that would allow catches to stabilise at a sustainable level;
- (3) prevent exploitation of previously unexploited stocks until acceptable estimates of abundance were obtained; and
- (4) allow commercial whaling to continue when information was lacking.

2.49 The aim of the NMP was to maintain whale stocks at the level at which the highest continuing catch could be taken year after year without depleting the population below a certain level.⁷⁰

2.50 The NMP relied on principles of population dynamics, which examine how the size of an animal population changes over time, by investigating the rates of births and deaths among the population (known as “biological parameters”).⁷¹

2.51 The procedure was based on the assumption that scientists could rely upon estimates of these parameters in order to determine a sustainable catch limit for whaling, by calculating how proposed catches would affect the overall size of the population.

2.52 The NMP was overly complex, since it required scientists to obtain reliable information on the actual size and state of real whale populations and to understand how these populations would respond to different catch levels in constantly changing environmental conditions. This is notoriously difficult.⁷²

⁷⁰ *Mangel, Expert Opinion*, paras. 3.15-3.16 [Appendix 2].

⁷¹ *Ibid.*, paras. 3.15, 3.9-3.11 [Appendix 2].

⁷² *Ibid.*, paras. 3.13, 3.17 [Appendix 2].

As a consequence, the Scientific Committee experienced serious problems in attempting to implement the NMP, since there were insufficient reliable data on biological parameters for it to operate effectively.⁷³ In addition, although the NMP provided sufficient protection for the most depleted stocks (such as Antarctic blue whales and fin whales), continued adherence to it would have permitted unsustainable takes of other stocks over the long term.⁷⁴

2.53 Due to the serious problems inherent in the NMP, in 1978 the Scientific Committee decided to investigate alternative management procedures.⁷⁵ The development of a revised management procedure was subsequently endorsed by the Commission.⁷⁶ In the period leading up to the adoption of the commercial whaling moratorium in 1982, the Scientific Committee was unable to agree on classifications and catch limits for certain stocks using the NMP and was reduced to providing reactive, *ad hoc* management advice to the Commission.⁷⁷

2.54 While the NMP remains in paragraphs 10(a) to 10(c) of the Schedule, it is no longer applied by the Commission. Since the adoption of the commercial whaling moratorium in 1982, the Commission has accepted a new management tool, the Revised Management Procedure.⁷⁸

⁷³ *Ibid.*, paras. 3.17-3.18 [Appendix 2].

⁷⁴ J Cooke, "The management of whaling" (1994) 20(3) *Aquatic Mammals* 129, 129-130.

⁷⁵ "Alternative Whale Management Procedures", Annex O, Report of the Scientific Committee, *Rep. int. Whal. Commn* 29, 1979, 99-100.

⁷⁶ See Resolution on the Technical Committee Working Group on Revised Management Procedures, Appendix 4, Chairman's Report of the Thirty-Second Annual Meeting, *Rep. int. Whal. Commn* 31, 1981, 29; Resolution on Developing Revised Management Procedures, Appendix 2, Chairman's Report of the Thirty-Third Annual Meeting, *Rep. int. Whal. Commn* 32, 1982, 35.

⁷⁷ With respect to minke whales, see, for example: *Rep. int. Whal. Commn* 31, 1981, 108-110; *Rep. int. Whal. Commn* 32, 1982, 50-52; *Rep. int. Whal. Commn* 33, 1983, 51-52, 97.

⁷⁸ See Section II.E of this Chapter.

D. DEVELOPMENT AND ADOPTION OF THE COMMERCIAL WHALING MORATORIUM (1982)

2.55 In the decade following the Stockholm Conference in 1972, numerous proposals were introduced in the IWC to implement the Recommendation of the Stockholm Conference for a 10-year moratorium on all commercial whaling. In 1979, the Schedule of the ICRW was amended by the insertion of paragraph 9(d), subsequently renumbered paragraph 10(d), to incorporate a moratorium on whaling by factory ships (the “factory ship moratorium”) as follows:

Notwithstanding the other provisions of paragraph 10 there shall be a moratorium on the taking, killing or treating of whales, except minke whales, by factory ships or whale catchers attached to factory ships. This moratorium applies to sperm whales, killer whales and baleen whales, except minke whales.⁷⁹

This provision remains in effect.

2.56 Also in 1979, the Commission adopted an amendment which prohibited all commercial whaling in a defined area known as the Indian Ocean Sanctuary.⁸⁰ Further limiting the scope of commercial whaling, in 1981, the Commission agreed to place a moratorium on the killing of sperm whales.⁸¹

2.57 A moratorium on all commercial whaling was finally adopted by the requisite three-quarters majority at the IWC’s Thirty-Fourth Annual Meeting in 1982. The Resolution adopting the moratorium was approved by a large majority of the Commission with 25 in favour, seven against and five abstentions.⁸²

⁷⁹ The vote to amend the Schedule to introduce a factory ship moratorium received the necessary three-quarters majority with 18 votes in favour (including Australia), 2 against (including Japan), and 3 abstentions. A second vote was held to apply the moratorium to land stations. This vote failed to receive the required majority, with 11 votes in favour, 5 against, and 7 abstentions. Chairman’s Report of the Thirty-First Annual Meeting, *Rep. int. Whal. Commn* 30, 1980, 26.

⁸⁰ Schedule, para. 7(a).

⁸¹ Schedule, para. 16.

⁸² Voting in favour were: Antigua, Australia, Belize, Costa Rica, Denmark, Egypt, France, Federal Republic of Germany, India, Kenya, Mexico, New Zealand, Oman, St Lucia, St Vincent, Senegal, Seychelles, Spain, Sweden, the United Kingdom and the United States; against were Brazil, Iceland, Japan, Republic of Korea, Norway, Peru and the USSR. Chile, China, Philippines, South

The IWC Resolution amended the Schedule to the ICRW by inserting paragraph 10(e) to introduce zero catch quotas on all commercially exploited stocks by the 1986 coastal and 1985/86 pelagic seasons:

Notwithstanding the other provisions of paragraph 10, catch limits for the killing for commercial purposes of whales from all stocks for the 1986 coastal and the 1985/86 pelagic seasons and thereafter shall be zero. This provision will be kept under review, based upon the best scientific advice, and by 1990 at the latest the Commission will undertake a comprehensive assessment of the effects of this decision on whale stocks and consider modification of this provision and the establishment of other catch limits.

2.58 The delay of the entry into effect of the moratorium for three years gave whaling states the opportunity to phase out their commercial whaling activities over time, in order to cope with any adverse economic consequences.⁸³

2.59 This was a significant milestone in the development of the ICRW and reflects the recognition by the IWC that the over-exploitation and continued depletion of whale stocks that had characterised the first three decades of the IWC could not be permitted to continue.

(1) Objections to the moratorium

2.60 Following the adoption of the commercial whaling moratorium, the Governments of Japan,⁸⁴ Peru,⁸⁵ Norway⁸⁶ and the Union of Soviet Socialist Republics (“USSR”)⁸⁷ lodged formal objections to the amendment within the

Africa and Switzerland abstained: Chairman’s Report of the Thirty-Fourth Annual Meeting, *Rep. int. Whal. Commn* 33, 1983, 21.

⁸³ Ibid.

⁸⁴ IWC Circular Communication RG/EE/4613 “Amendments to the Schedule adopted at the 34th Annual Meeting and an Objection by the Government of Japan”, 5 November 1982 [Annex 53].

⁸⁵ IWC Circular Communication RG/EE/4607, “Objection by the Government of Peru to an Amendment of the Schedule adopted at the 34th Annual meeting”, 29 October 1982.

⁸⁶ IWC Circular Communication RG/EE/4611 “Objection by the Governments of Norway and the USSR to an Amendment of the Schedule adopted at the 34th Annual meeting”, 3 November 1982.

⁸⁷ Ibid.

period prescribed in Article V(3) of the ICRW. For all other Contracting Governments, including Australia, paragraph 10(e) of the Schedule came into force on 3 February 1983.⁸⁸

2.61 On 22 July 1983, during the first meeting of the Commission following the passage of the moratorium, Peru confirmed that it had decided to phase out its whaling industry and formally withdrew its objection to paragraph 10(e) of the Schedule.⁸⁹

2.62 Neither Norway nor the Russian Federation⁹⁰ has withdrawn their objections to paragraph 10(e). Accordingly, paragraph 10(e) is not binding on either of those Contracting Governments.⁹¹

2.63 Japan's objection to paragraph 10(e) of the Schedule was lodged with the Commission on 5 November 1982.⁹² However, on 1 July 1986, Japan withdrew its objection, thereby formally accepting the moratorium. Japan's withdrawal had effect from 1 May 1987 with respect to commercial pelagic whaling; from 1 October 1987 with respect to commercial coastal whaling for minke and Bryde's whales; and from 1 April 1988 with respect to coastal sperm whaling.⁹³ Therefore, since 1 April 1988, paragraph 10(e) has been binding on all of Japan's whaling operations. The circumstances surrounding Japan's withdrawal of its objection and its simultaneous commencement of large-scale special permit whaling purportedly under Article VIII of the ICRW are dealt with in Chapter 3.

⁸⁸ See footnote to para. 10(e) of the Schedule.

⁸⁹ Chairman's Report of the Thirty-Fifth Annual Meeting, *Rep. int. Whal. Commn* 34, 1984, 20.

⁹⁰ As successor State to the USSR.

⁹¹ See footnote to para. 10(e) of the Schedule.

⁹² IWC Circular Communication RG/EE/4613 "Amendments to the Schedule adopted at the 34th Annual Meeting and an Objection by the Government of Japan", 5 November 1982 [Annex 53].

⁹³ International Whaling Commission Report 1986-87, *Rep. int. Whal. Commn* 38, 1988, 1.

2.64 Iceland did not lodge an objection to paragraph 10(e) of the Schedule. However it withdrew from the ICRW in accordance with Article XI, effective on 30 June 1992.⁹⁴ In October 2002, Iceland was readmitted as a member of the IWC with a reservation to paragraph 10(e) at the Fifth Special Meeting of the Commission.⁹⁵ Australia, along with 17 other countries, lodged an objection to Iceland's reservation to paragraph 10(e).⁹⁶ Australia maintains its view that Iceland's reservation to paragraph 10(e) is invalid.

(2) Rapid growth of special permit whaling upon commencement of the moratorium

2.65 As will be noted in Chapter 4, Article VIII of the ICRW provides for Contracting Governments to issue permits for the killing of whales “for purposes of scientific research”. Prior to the entry into effect of the commercial whaling moratorium in 1985/86 comparatively few whales had been taken in purported reliance on Article VIII. In the first decade following the entry into force of the ICRW in 1948, special permit catches by Contracting Governments were modest, generally proposing takes of six whales or fewer. The period after 1957 did see an increase in the scope and number of special permits issued by Contracting Governments, but nothing on the scale that followed the introduction of the commercial whaling moratorium.

2.66 The entry into effect of the commercial whaling moratorium in 1985/86 marked a turning point in the scale and ambit of “scientific” whaling

⁹⁴ International Whaling Commission Report 1991-92, *Rep. int. Whal. Commn* 43, 1993, 2; see also Chair's Report of the Fifty-Third Annual Meeting, *Annual Report of the International Whaling Commission 2001*, 5.

⁹⁵ Chair's Report of the Fifth Special Meeting, *Annual Report of the International Whaling Commission 2003*, 139-142.

⁹⁶ *Ibid.*, 142; Note from the Ambassador of Australia to the Department of State of the United States of America, Note No. 44/2003, 5 February 2003.

programs: about 2,100 whales were killed under special permits issued in the 34 years between 1952 and 1986 at an average rate of approximately 62 whales per year.⁹⁷ In contrast, 14,410 whales were killed in the 25 years between the introduction of the commercial whaling moratorium and the end of the 2010/11 pelagic season,⁹⁸ at a markedly higher average rate of approximately 572 whales per year – almost 10 times the average rate that preceded the introduction of the moratorium. This was no coincidence.

2.67 Following the entry into effect of the commercial whaling moratorium, proposals for large-scale whaling under special permit have been introduced by Iceland, the Republic of Korea, Japan, Norway and the USSR. Again, it is no coincidence that these are the same countries that had conducted the largest commercial whaling operations immediately prior to the moratorium. It is notable that two States, the Republic of Korea and the USSR, responded to serious concerns raised about their proposals by not proceeding with their so-called

⁹⁷ V Morell, “Killing Whales for Science?” (2007) 316:5824 *Science* 532, 533.

⁹⁸ International Whaling Commission, *Special Permit Catches since 1985* (2010) at <http://iwcoffice.org/conservation/table_permit.htm> on 19 April 2011; T Bando *et al.*, *Cruise Report of the Second Phase of the Japanese Whale Research Program under Special Permit in the Western North Pacific (JARPN II) in 2009 (part I) – Offshore Component*, SC/62/O4; G Yasunaga *et al.*, *Cruise Report of the Second Phase of the Japanese Whale Research Program under Special Permit in the Western North Pacific (JARPN II) in 2009 (Part II) – Coastal Component off Sanriku*, SC/62/O5; T Kishiro *et al.* *Cruise Report of the Second Phase of the Japanese Whale Research Program under Special Permit in the Western North Pacific (JARPN II) in 2009 (Part II) – Coastal Component off Kushiro*, SC/62/O6; S Nishiwaki *et al.*, *Cruise Report of the Japanese Whale Research Program under Special Permit in the Antarctic – Second Phase (JARPA II) in 2009/2010*, SC/62/O3; Japan Fisheries Agency, “Result of FY2010 JARPNII Coastal Whaling Research Program (off Kushiro)”, Press Release, 8 October 2010; Japan Fisheries Agency, “Completion of FY2010 JARPNII Coastal Whaling Research Program (off Sanriku)”, Press Release, 9 June 2010; Government of Japan, Japan Fisheries Agency, “Results of the 24th Antarctic Ocean Cetacean Capture Survey (JARPA II) in FY2010”, Press Release, 21 March 2011, at Ministry of Agriculture, Forestry and Fisheries website, <<http://www.jfa.maff.go.jp/j/press/enyou/110321.html>> on 18 April 2011. This figure does not include the number of whales killed by Japan under the offshore component of JARPN II in 2010, which has not yet been formally reported.

“scientific” whaling proposals. By contrast, Iceland, Japan and Norway have all ignored calls by the IWC to halt or suspend their proposed whaling under the guise of “scientific research” in the past. During the period of the commercial whaling moratorium these States seamlessly exchanged commercial whaling operations for purported special permit operations. This was business as usual under the cloak of “science”.

2.68 Iceland and Norway are both currently whaling and are not seeking to rely on special permits issued under Article VIII. As discussed above, Iceland is whaling under its purported reservation to paragraph 10(e) of the Schedule, and Norway under its objection to the moratorium lodged in 1982.

2.69 Each of these programs have, to a greater or lesser degree, been criticised by the IWC. However, the programs instituted by Japan are set apart on two specific grounds. First, Japan’s programs have involved the killing of significantly greater numbers of whales than those of all the other nations combined. This is clearly evidenced in Figure 1 below. Figure 2 reveals the proportion of special permit catches by Japan compared with all other nations combined, both prior to and after the commercial whaling moratorium entered into effect. Out of the total of 14,410 whales killed under special permit between the introduction of the moratorium and the close of the 2010/11 season, 13,385 (93.5%) have been caught by Japan.⁹⁹ Of the whales killed under special permits issued prior to the commercial whaling moratorium, that is between 1954 and 1985/86, it has been estimated that Japan caught approximately 840 whales, or 40% of the worldwide scientific take.¹⁰⁰

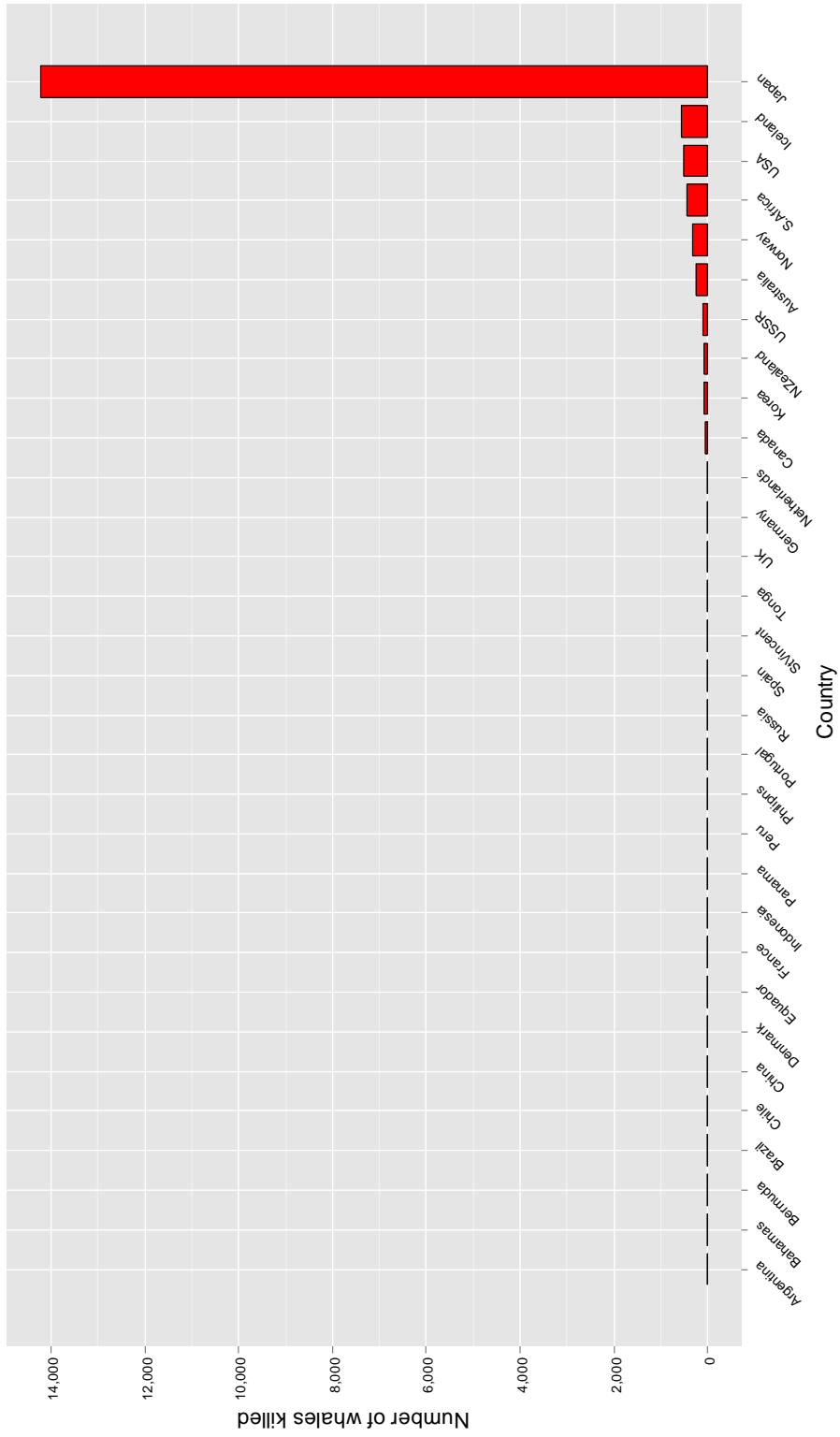
⁹⁹ Ibid.; see also Chapter 3, Section II.B for information on the increase in scale of Japan’s whaling programs.

¹⁰⁰ Resolution on JARPA II, Resolution 2005-1, Annex C, Chair’s Report of the Fifty-Seventh Annual Meeting, *Annual Report of the International Whaling Commission 2005*, 1 (“Resolution 2005-1”) [Annex 40].

2.70 Secondly, unlike other special permit whaling programs, the Japanese programs have not nominated a limit on the number of whales necessary for the purposes of achieving the purported research objectives. Nor does JARPA II specify an end date by which the research will be concluded.¹⁰¹

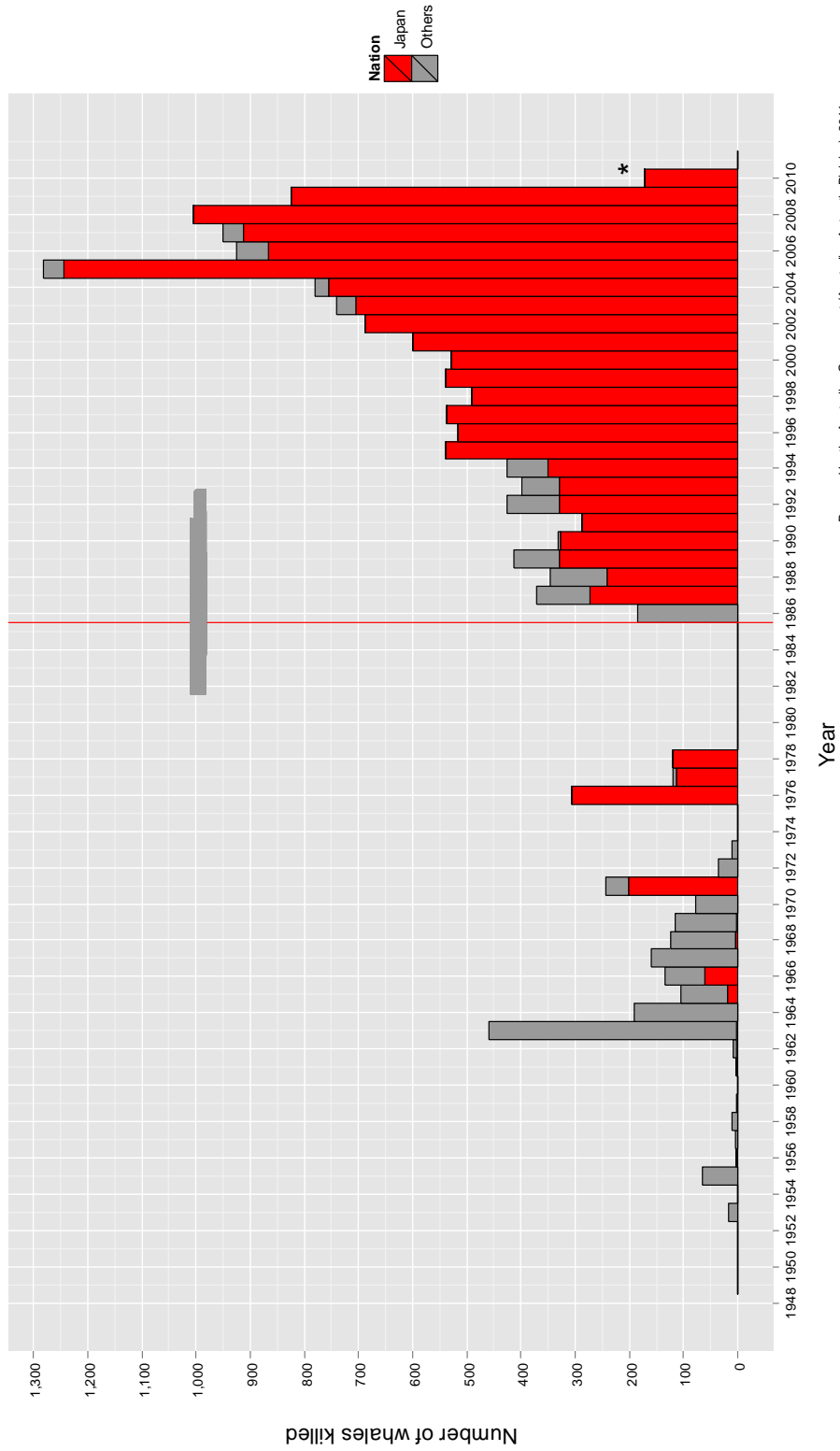
¹⁰¹ See Chapter 5, Section II, for a more detailed critique of JARPA II.

Figure 1 - Special Permit Catches by Country, 1948 to 2010



Prepared by the Australian Government (Australian Antarctic Division), 2011,
based on data provided by the IWC and as reported by Japan 2010/11.

Figure 2 - Special Permit Catches, 1948 to 2010



Prepared by the Australian Government (Australian Antarctic Division), 2011,
 based on data provided by the IWC and as reported by Japan 2010/11.
 *Data not yet available for JARRVII

E. THE DEVELOPMENT OF THE REVISED MANAGEMENT PROCEDURE (1986-1994)

2.71 At the same time as agreeing the commercial whaling moratorium – and inherently related to that decision – the IWC resolved to use the time provided by the moratorium to establish “its best estimate of population sizes together with a suitable procedure to facilitate sustainable catch limits”.¹⁰² This was referred to by the Commission as a “comprehensive assessment” and was incorporated into the amendment to paragraph 10(e) of the Schedule to the ICRW as follows:

This provision [adopting the commercial whaling moratorium] will be kept under review, based upon the best scientific advice, and by 1990 at the latest the Commission will undertake a comprehensive assessment of the effects of this decision on whale stocks and consider modification of this provision and the establishment of other catch limits.

2.72 Although the amendment stated that the comprehensive assessment was to be completed by “1990 at the latest”, a Special Meeting of the Scientific Committee decided in 1986 that the process for undertaking a comprehensive assessment had evolved into a more in-depth evaluation of the status of all whale stocks. The Committee agreed that the term “Comprehensive Assessment” (in upper case) would involve an iterative process requiring work in three major interrelated areas: (i) to review and revise current knowledge concerning methodology, stock identity and data availability; (ii) to plan and conduct the collection of new data; and (iii) to examine alternative management regimes.¹⁰³

2.73 The management procedure ultimately selected in this process was the Revised Management Procedure (“RMP”). Consistent with the evolution of the regime, the RMP is a very conservative management tool, which prefers precaution over exploitation. The specific goals of the RMP are:

¹⁰² Mangel, *Expert Opinion*, para. 3.20 [Appendix 2].

¹⁰³ Report of the Special Meeting of the Scientific Committee on Planning for a Comprehensive Assessment of Whale Stocks, *Rep.int. Whal. Commn* 37, 1987, 147.

- (1) to achieve stable catch limits, thus allowing the orderly development and regulation of the whaling industry;
- (2) to manage acceptable risk and to ensure that a stock is not depleted to the point where the risk of extinction is not negligible; and
- (3) to ensure the highest possible continuing yield from each whale stock.¹⁰⁴

2.74 Unlike the NMP, the RMP is based on a simple model. A primary feature of the RMP is the Catch Limit Algorithm (CLA). The CLA seeks to take into account uncertainty in abundance estimates and does not rely on biological parameters that are difficult to estimate. In this way, the RMP overcomes the difficulties faced by the NMP. In particular, it functions very well in the face of uncertainty about the population dynamics of whale species, as well as variations in environmental factors affecting those dynamics.¹⁰⁵

2.75 The RMP operates without attempting to emulate the dynamics of real whale populations, by using a series of sophisticated models that calculate sustainable catch limits using only minimal information.¹⁰⁶ The RMP is deliberately designed to eliminate the need for data on biological parameters obtained through whaling, which are often unreliable for management purposes.¹⁰⁷

¹⁰⁴ *Mangel, Expert Opinion*, para. 3.21 [Appendix 2].

¹⁰⁵ *Ibid.*, paras. 3.23-3.31 [Appendix 2].

¹⁰⁶ The only required information for the calculation of catch limits under the RMP is the abundance of whale stocks and records of past catches of those stocks: *Mangel, Expert Opinion*, para. 3.25. Kirkwood, Chairman of the Sub-Committee developing the RMP, stated in 1992: “A satisfactory revised management procedure must be able to meet the Commission’s management objectives, and it must do so regardless of existing and continued uncertainties in the basic data, stock identity and dynamics of whale populations. We are seeking a management procedure that is robust to these uncertainties”: G Kirkwood, “Background to the Development of Revised Management Procedures”, Annex I, Report of the Scientific Committee, *Rep. int. Whal. Commn* 42, 237.

¹⁰⁷ *Mangel, Expert Opinion*, para. 3.26 [Appendix 2].

2.76 In 1994, the Commission adopted a Resolution which accepted the RMP, together with the annotation: “[This] completes the main scientific component in the development of a [Revised Management Scheme] for commercial baleen whaling”.¹⁰⁸ In adopting this 1994 Resolution, the Commission agreed that the RMP “should not be modified, reconfigured or adjusted unless expressly instructed by the Commission”.¹⁰⁹

2.77 The RMP is only one aspect of the Revised Management Scheme (“RMS”) which will include other important rules for the conservation and management of whales. The Commission has, however, been unable to finalise other aspects of the RMS, including a necessary inspection and observer scheme. As a result, while the RMP has been accepted by the Commission as the appropriate vehicle for determining any future catch limits, the Commission has not yet amended the Schedule to the ICRW to adopt the RMP.

2.78 Nevertheless, the RMP continues to be recognised by the Commission as the applicable management tool in relation to whales. In 2007, an inter-sessional IWC workshop reviewing the final results of JARPA stated that:

[i]f catch limits were to be set at some time in the future, the present approach the Scientific Committee has agreed to use for providing advice to the Commission on commercial whaling catch limits is that specified by the RMP.¹¹⁰

¹⁰⁸ The technical specification of the RMP is given in: The Revised Management Procedure (RMP) for Baleen Whales, Annex H, Report of the Scientific Committee, *Rep. int. Whal. Commn* 44, 1994, 145-152; A Programme to Implement the Catch Limit Algorithm, Annex I, Report of the Scientific Committee, *Rep. int. Whal. Commn* 44, 1994, 153-167, with annotations as amended by Revisions to Annotations to the Revised Management Procedure (RMP) for Baleen Whales, Annex N, Report of the Scientific Committee, *Rep. int. Whal. Commn* 45, 1995, 214.

¹⁰⁹ Resolution on the Revised Management Scheme, Resolution 1994-5, Appendix 5, Chairman’s Report of the Forty-Sixth Annual Meeting, *Rep. int. Whal. Commn* 45, 1995, 43-44.

¹¹⁰ *Report of the Intersessional Workshop to Review Data and Results from Special Permit Research on Minke Whales in the Antarctic*, Tokyo, 4-8 December 2006, *J. Cetacean Res. Manage* 10 (Suppl.), 2008, 411, (“IWC Final Review of JARPA”) 433.

F. SOUTHERN OCEAN SANCTUARY (1994)

2.79 The designation of whale sanctuaries by the IWC is expressly provided for in Article V(1), of the ICRW which states, *inter alia*, that:

The Commission may amend from time to time the provisions of the Schedule by adopting regulations with respect to the conservation and utilization of whale resources, fixing...open and closed waters, including the designation of sanctuary areas.¹¹¹

2.80 The Commission noted in 2002 that “the establishment of Sanctuaries for conservation purposes represents an integral part of best management practices for wildlife in general”.¹¹² The establishment of sanctuaries reflects also the increasing importance of the precautionary approach in the IWC’s management and conservation of whales.¹¹³

(1) Development and adoption of the Southern Ocean Sanctuary

2.81 In 1990, the IUCN passed a Resolution at its Eighteenth General Assembly, which called upon the IWC to continue to support the Indian Ocean Sanctuary which had been adopted in 1979 and further, to “consider the creation of other sanctuaries within a comprehensive system for the conservation of whales”.¹¹⁴

2.82 Consistent with the IUCN Resolution, Contracting Governments decided to strengthen further the ICRW regime for the conservation of whales by adopting

¹¹¹ The first international efforts to facilitate the creation of whale sanctuaries may be traced back to the *1937 Agreement*. In 1938, a Protocol to that agreement created a sanctuary in the Antarctic: the *1938 Protocol*, Article 2 [Annex 4].

¹¹² Guidance to the Scientific Committee on the Sanctuary Review Process, Annex F, Resolution 2002-1, *Annual Report of the International Whaling Commission 2002*, 89.

¹¹³ *Ibid.*

¹¹⁴ Resolution on Cetacean Conservation and the International Whaling Commission Moratorium, GA Res 18.34, 18th Session, Perth, Australia, 28 November – 5 December 1990, 32.

a sanctuary in respect of the Southern Ocean breeding grounds. France presented a proposal in support of the IUCN Resolution at the Forty-Fourth Annual Meeting of the Commission in 1992 which designated all the waters of the Southern Hemisphere south of 40°S as a whale sanctuary. The proposal focused on two objectives: (i) to protect all whale species of the Southern Hemisphere from commercial whaling on their feeding grounds, thus supplementing the protection afforded by the Indian Ocean Sanctuary to whales on their breeding grounds; and (ii) to supplement the management measures envisaged as part of the RMS with zones where whales would be completely protected.

2.83 Following debates in 1992¹¹⁵ and 1993,¹¹⁶ the Commission adopted the Southern Ocean Sanctuary in 1994, by 23 votes to one with six abstentions.¹¹⁷ The boundary of the Sanctuary was set at 60°S in the Southeast Pacific and far Southwest Atlantic sectors. In the Indian Ocean sector, the amended proposal had a boundary at 55°S, thereby adjacent to but not overlapping with the Indian Ocean Sanctuary. The boundary was set at 40°S in the central and eastern South Atlantic and the western South Pacific. Japan was the sole Contracting Government to vote against the adoption of the Southern Ocean Sanctuary.¹¹⁸

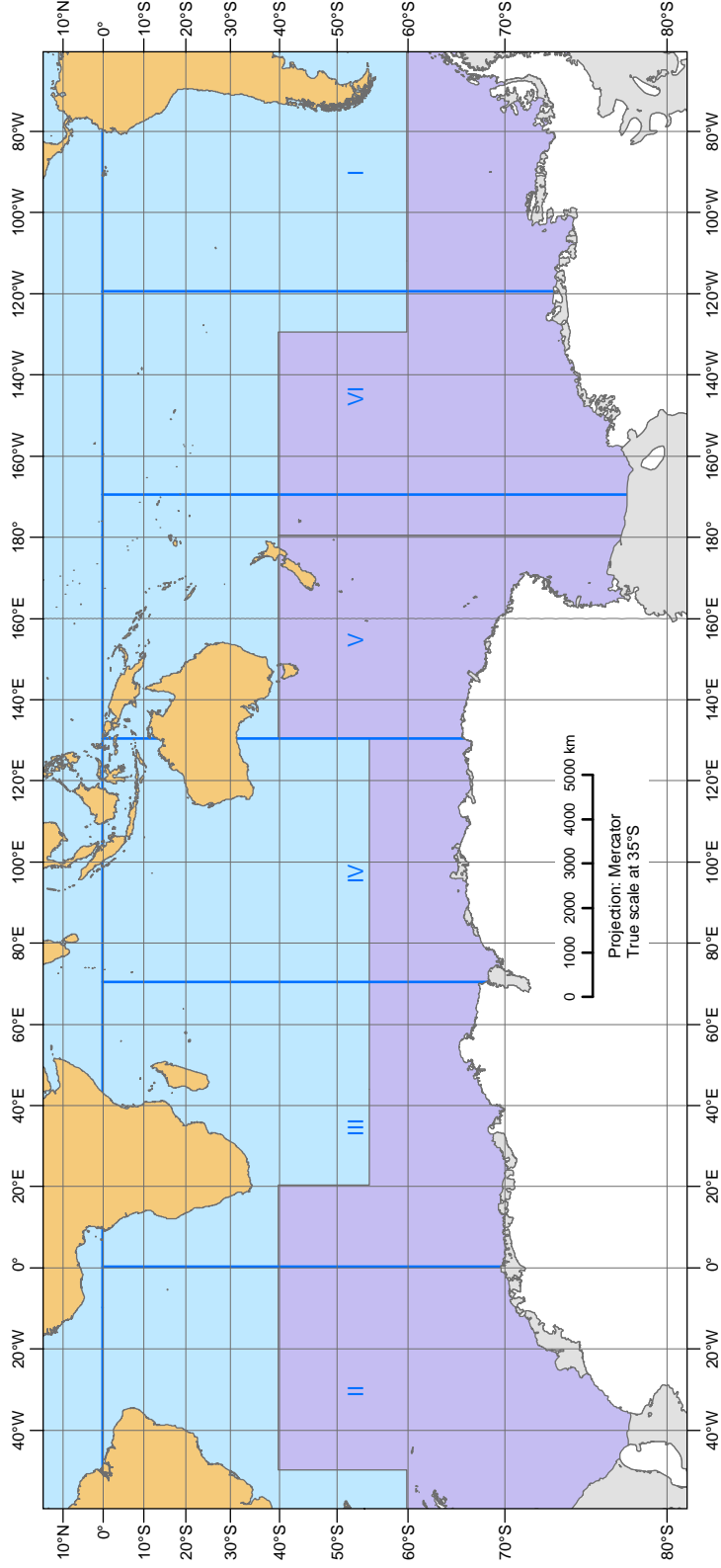
¹¹⁵ Chairman's Report of the Fifty-Fourth Annual Meeting, *Rep. int. Whal. Commn* 43, 1993, 26-27.

¹¹⁶ Chairman's Report of the Fifty-Fifth Annual Meeting, *Rep. int. Whal. Commn* 44, 1994, 20-21; Resolution on a Sanctuary in the Southern Ocean, Appendix 6, Chairman's Report of the Forty-Fifth Annual Meeting, *Rep. int. Whal. Commn* 44, 1994, 32.

¹¹⁷ Chairman's Report of the Forty-Sixth Annual Meeting, *Rep. int. Whal. Commn* 45, 1995, 28.

¹¹⁸ Chairman's Report of the Forty-Sixth Annual Meeting, *Rep. int. Whal. Commn* 45, 1995, 28.

Figure 3 Southern Ocean Sanctuary and Southern Hemisphere Management Areas for baleen whales



Legend
— IWC Management Area Boundary
■ Southern Ocean Sanctuary

Prepared by the Australian Government (Australian Antarctic Division) 2011.

2.84 The Southern Ocean Sanctuary was designated in paragraph 7(b) of the Schedule:

In accordance with Article V(1)(c) of the Convention, commercial whaling...is prohibited in a region designated as the Southern Ocean Sanctuary... This prohibition applies irrespective of the conservation status of baleen and toothed whale stocks in this Sanctuary, as may from time to time be determined by the Commission. However, this prohibition shall be reviewed ten years after its initial adoption and at succeeding ten year intervals[.]¹¹⁹

2.85 In accordance with Article V(3) of the ICRW, the Southern Ocean Sanctuary entered into force on 6 December 1994.

2.86 Japan filed an objection to the application of paragraph 7(b), and thus to the Southern Ocean Sanctuary, on 12 August 1994, within the prescribed 90-day period. That objection was “to the prohibition of commercial whaling in the Southern Ocean Sanctuary to the Antarctic Minke whale stocks”.¹²⁰ That objection by Japan remains in effect.

2.87 In response to a request for clarification from the United Kingdom as to the scope of Japan’s objection,¹²¹ Japan confirmed that:

The objection is presented to new sub-paragraph 7(b), to the extent that this sub-paragraph applies to the Antarctic Minke whales stocks and [Japan] does not dispute that this sub-paragraph will apply to any stock of other species of baleen and toothed whales within the prescribed area.¹²²

Therefore, paragraph 7(b) applies to Japan to prohibit the commercial whaling of all baleen and toothed whales in the Southern Ocean Sanctuary, with the exception of minke whales.

¹¹⁹ Ibid., 28; Chairman’s Report of the Forty-Sixth Annual Meeting, Appendix 21, Amendments to the Schedule, *Rep. int. Whal. Commn* 45, 1995, 52.

¹²⁰ IWC Circular Communication RG/VJH/25435, “Japanese Objection to Southern Ocean Sanctuary”, 15 August 1994, enclosing Note from the Embassy of Japan to the Secretary of the International Whaling Commission, 12 August 1994 [Annex 55].

¹²¹ IWC Circular Communication RG/VJH/25479, “Objection by Japan to new Schedule sub-paragraph 7(b)”, 12 September 1994 with enclosure [Annex 56].

¹²² Ibid.

2.88 In 1998, in response to a request from the Scientific Committee for clarification of the scientific objectives of the Southern Ocean Sanctuary, Australia¹²³ introduced a Resolution setting out agreed objectives for the Sanctuary and promoting increased scientific research and cooperation in the Sanctuary. Adopted by the Commission as Resolution 1998-3 on the Southern Ocean Sanctuary,¹²⁴ the Resolution affirmed that the agreed objectives of the Sanctuary are to provide for:

- (1) recovery of whale stocks, including research and monitoring of depleted stocks;
- (2) the continuation of the Comprehensive Assessment of the effects on whale stocks of zero catch limits; and
- (3) the undertaking of research on the effects of environmental change on whale stocks.

(2) Japanese challenges to the Southern Ocean Sanctuary

2.89 Japan presented legal opinions to the Commission seeking to challenge the legality of the designation of the Southern Ocean Sanctuary by the IWC in 1995,¹²⁵ 1996,¹²⁶ 1997¹²⁷ and 1998.¹²⁸ In particular, these opinions contended that

¹²³ Also on behalf of Austria, Brazil, France, Germany, India, Italy, Monaco, the Netherlands, New Zealand, Oman, South Africa, Spain, Switzerland, the United Kingdom and the United States.

¹²⁴ Resolution on the Southern Ocean Sanctuary, Resolution 1998-3, Appendix 4, Chairman's Report of the Fiftieth Annual Meeting, *Annual Report of the International Whaling Commission 1998*, 42-43. The Resolution was adopted noting Japan's opposition: Chairman's Report of the Fiftieth Annual Meeting, *Annual Report of the International Whaling Commission 1998*, 28.

¹²⁵ Chairman's Report of the Forty-Seventh Annual Meeting, *Rep. int. Whal. Commn* 46, 1996, 28.

¹²⁶ Chairman's Report of the Forty-Eighth Annual Meeting, *Rep. int. Whal. Commn* 47, 1997, 36.

¹²⁷ Chairman's Report of the Forty-Ninth Annual Meeting, *Rep. int. Whal. Commn* 28, 1998, 36.

¹²⁸ Chairman's Report of the Fiftieth Annual Meeting, *Annual Report of the International Whaling Commission 1998*, 27-28.

the Commission exceeded its authority under the Convention and did not comply with Article V(2) of the ICRW. Numerous Contracting Governments¹²⁹ in the Commission responded that the establishment of the Sanctuary was perfectly valid, noting that Japan (the only Contracting Government to vote against the Sanctuary proposal in 1994) had exercised its right to object with respect to only one of the species affected (minke whales) and on no other aspect of the Sanctuary. By lodging that limited objection, Japan must be taken to have accepted the validity of the establishment of the Sanctuary. The Commission did not find it necessary to take any action in regard to these challenges, thereby implicitly rejecting Japan's contentions.

2.90 As noted by a number of delegations, the Commission itself had determined that the criteria in Article V(2) had been met and reached a binding decision. Accordingly, the appropriate course for revision would be to propose a Schedule amendment.¹³⁰ This conclusion was also supported by a legal opinion from Professor Patricia Birnie, tendered by the United Kingdom delegation, which concluded that the Commission's decision on the Sanctuary "taken through the normal voting procedures laid down in Article V is determinative, and must be regarded as having taken account of all the relevant factors, guidelines and its own relevant practice in this field".¹³¹

¹²⁹ Including the United Kingdom, France, the Netherlands, the United States, Brazil, Spain, New Zealand and Australia.

¹³⁰ See Chairman's Report of the Forty-Seventh Annual Meeting, *Rep. int. Whal. Commn* 46, 1996, 29; Chairman's Report of the Forty-Eighth Annual Meeting, *Rep. int. Whal. Commn* 47, 1997, 36-37; Chairman's Report of the Fiftieth Annual Meeting, *Annual Report of the International Whaling Commission 1998*, 27.

¹³¹ Chairman's Report of the Forty-Seventh Annual Meeting, *Rep. int. Whal. Commn* 46, 1996, 28; P Birnie, "Opinion on the Legality of the Southern Ocean Sanctuary by the International Whaling Commission" [Annex 155].

2.91 In 1999, Japan proposed a Schedule amendment to paragraph 7(b), which purported to exclude minke whales from the operation of the Southern Ocean Sanctuary. This was not adopted by the Commission.¹³²

2.92 In 2000,¹³³ 2001¹³⁴ and 2002,¹³⁵ Japan submitted a further proposed amendment which sought to delete the third sentence of paragraph 7(b) (that is, “[t]his prohibition applies irrespective of the conservation status of baleen and toothed whale stocks in this Sanctuary, as may from time to time be determined by the Commission”) and to insert a new sub-paragraph (c) as follows:

The prohibition in sub-paragraph (b) above shall be applied on the advice of the Scientific Committee in accordance with Article V(2) of the Convention.

The proposal was withdrawn by Japan in 2000 in view of the majority against it,¹³⁶ and defeated when put to a vote in the Commission in 2001¹³⁷ and 2002.¹³⁸

¹³² The Resolution was defeated with 9 votes in favour, 22 against and one abstention: Chairman’s Report of the Fifty-First Annual Meeting, *Annual Report of the International Whaling Commission 1999*, 10.

¹³³ Chairman’s Report of the Fifty-Second Annual Meeting, *Annual Report of the International Whaling Commission 2000*, 14.

¹³⁴ Chair’s Report of the Fifty-Third Annual Meeting, *Annual Report of the International Whaling Commission 2001*, 17.

¹³⁵ Chair’s Report of the Fifty-Fourth Annual Meeting, *Annual Report of the International Whaling Commission 2002*, 35.

¹³⁶ Contracting Governments which expressed their opposition to the proposal included the United States, Denmark, the Netherlands, Australia, New Zealand, the United Kingdom, Germany, Finland, Monaco, Italy, Sweden, Australia, France, Spain, Oman, India, Switzerland, Ireland and Chile: Chairman’s Report of the Fifty-Second Annual Meeting, *Annual Report of the International Whaling Commission 2000*, 14.

¹³⁷ In 2001, the proposed amendment was defeated with 13 votes in favour, 23 against and one abstention: Chair’s Report of the Fifty-Third Annual Meeting, *Annual Report of the International Whaling Commission 2001*, 17.

¹³⁸ In 2002, the proposed amendment was defeated with 17 votes in support, 25 against and two abstentions. In relation to the strong opposition to the Japanese proposals, see Chair’s Report of the Fifty-Fourth Annual Meeting, *Annual Report of the International Whaling Commission 2002*, 35.

In 2003, a proposal with a similarly worded amendment was also voted down in the Commission.¹³⁹

2.93 In 2002,¹⁴⁰ 2004,¹⁴¹ 2005¹⁴² and 2006,¹⁴³ Japan also submitted a further proposed Schedule amendment which sought the deletion of paragraph 7(b), with the effect of abolishing the Southern Ocean Sanctuary. These proposals were all rejected by the Commission, and the Southern Ocean Sanctuary remains in place and binding upon Japan except to the extent of its application to commercial whaling of minke whales.

G. THE BERLIN INITIATIVE AND THE CONSERVATION COMMITTEE (2003)

2.94 Since 1976, the Commission has adopted in excess of 130 conservation-oriented Resolutions. The adoption of the Berlin Initiative by the IWC in 2003 (“*Resolution 2003-1*”)¹⁴⁴ represents a particularly critical step in the strengthening of the IWC’s conservation agenda. The preamble to the Berlin Initiative notes that, since 1978, the IWC has devoted an overwhelming part of its

¹³⁹ Chair’s Report of the Fifty-Fifth Annual Meeting, *Annual Report of the International Whaling Commission 2003*, 24.

¹⁴⁰ The proposal was defeated with 16 votes in favour, with 25 against and three abstentions: Chair’s Report of the Fifty-Fourth Annual Meeting, *Annual Report of the International Whaling Commission 2002*, 28-30.

¹⁴¹ This proposal was defeated with 19 votes in favour, 30 against and two abstentions: Chair’s Report of the Fifty-Sixth Annual Meeting, *Annual Report of the International Whaling Commission 2004*, 46-47.

¹⁴² This proposal was defeated with 25 votes in favour, 30 against and two abstentions: Chair’s Report of the Fifty-Seventh Annual Meeting, *Annual Report of the International Whaling Commission 2005*, 45-46.

¹⁴³ This proposal was defeated with 28 votes in favour, 33 against and four abstentions: Chair’s Report of the Fifty-Eighth Annual Meeting, *Annual Report of the International Whaling Commission 2006*, 36-37.

¹⁴⁴ The Resolution was adopted by 25 votes in favour with 20 against: Chair’s Report of the Fifty-Third Annual Meeting, *Annual Report of the International Whaling Commission 2003*, 10.

work to the pursuit of its conservation objective of safeguarding for future generations the great natural resources represented by the whale stocks. As a result, the Commission noted that it had developed into a:

...broad-based conservation organization whose focus now extends beyond the mere regulation of whaling, to address the multitude of threats that cetaceans face and will be facing to an increasing degree.

This broader focus is consistent with the original aims, purpose and mandate of the ICRW. To remain effective in a changing world, the IWC must continue to extend and update the scope of its activities, in order to address the most important and current conservation problems facing whales today and in the future.¹⁴⁵

2.95 This development of a more conservation-oriented regulatory model has been mirrored by a similar transformation in the broader policy and practice of the IWC as an institution. As noted by the Commission in *Resolution 2003-1*:

[T]hrough the adoption of more than a hundred conservation-orientated resolutions, as well as through various Schedule amendments, the Commission has evolved into an organization internationally recognized, among other things, for its meaningful contributions to the conservation of great whales...¹⁴⁶

2.96 In recognition of the increase in diversity of the threats facing cetaceans in the 21st century, the Berlin Initiative also provided for the establishment of the Conservation Committee. This new standing committee of the IWC was tasked with preparing and recommending to the Commission a conservation agenda. It was directed also to explore means of coordinating that conservation agenda through greater collaboration with other organisations. At its inaugural meeting in July 2004, its members by consensus noted that “all members of the IWC should be and were committed to conservation,” and that conservation of whales stocks

¹⁴⁵ The Berlin Initiative on Strengthening the Conservation Agenda of the International Whaling Commission, Resolution 2003-1, Annex C, Chair’s Report of the Fifty-Fifth Annual Meeting, *Annual Report of the International Whaling Commission 2003*, (“Berlin Initiative”), Annex II “IWC Conservation Work”, 58 [Annex 37].

¹⁴⁶ *Ibid.*, preamble. See also Annex I, “Compiled List of IWC Conservation-Oriented Resolutions, 1976-2001”, including, for example, Resolution on Environmental Change and Cetaceans, Resolution 1996-8, Appendix 8, Chairman’s Report of the Forty-Eighth Annual Meeting, *Rep. int. Whal. Commn* 47, 1997, 52; Resolution on Environmental Change and Cetaceans, Resolution 2000-7, Appendix 1, Chairman’s Report of the Fifty-Second Annual Meeting, *Annual Report of the International Whaling Commission 2000*, 6.

remains in the common interest of all the members of the IWC.¹⁴⁷ Japan is not a member of the Conservation Committee and contests its establishment. Japan believes that the Committee's objectives are contrary to what it considers to be the dual objectives of the ICRW, both the conservation and management of whale resources, and has reserved the right not to participate in the work of the Committee or to contribute financially.¹⁴⁸ This view is not shared by the majority of members of the IWC and the Conservation Committee remains an active committee of the IWC.

2.97 The Berlin Initiative also evidences a continuing shift in the IWC's focus to non-consumptive uses of cetaceans, such as whale-watching.¹⁴⁹ The development of this can be traced back to the early 1980s.¹⁵⁰ It continued to develop throughout the 1990s, as the whale-watching industry grew and a clear economic alternative to the lethal utilisation of whales evolved.¹⁵¹ The Berlin Initiative noted that a transition has occurred "from whaling to whale-watching as the prevalent form of economic utilization of whales". It concluded that, in view of the fact that 87 countries are engaged in whale watching operations (a number far greater than were ever involved in whaling activities) the priorities of the IWC must shift.

¹⁴⁷ Report of the Conservation Committee, Annex H, Chair's Report of the Fifty-Sixth Annual Meeting, *Annual Report of the International Whaling Commission 2004*, 1-2.

¹⁴⁸ Chair's Report of the Fifty-Fifth Annual Meeting, *Annual Report of the International Whaling Commission 2003*, 10.

¹⁴⁹ Resolutions listed in "Compiled List of IWC Conservation-Oriented Resolutions, 1976-2001", Annex I of the Berlin Initiative [Annex 37].

¹⁵⁰ Chairman's Report of the Thirty-Fifth Annual Meeting, *Rep. int. Whal. Commn* 34, 1984, 26.

¹⁵¹ See, for example, Chairman's Report of the Forty-Fifth Annual Meeting, *Rep. int. Whal. Commn* 44, 1994, 23-24; Chairman's Report of the Forty-Sixth Annual Meeting, *Rep. int. Whal. Commn* 45, 1995, 32-33; Chairman's Report of the Forty-Ninth Annual Meeting, *Rep. int. Whal. Commn* 48, 1998, 19; Chairman's Report of the Fiftieth Annual Meeting, *Annual Report of the International Whaling Commission 1998*, 5.

CONCLUSION

2.98 At the time of the conclusion of the Convention, the ICRW's objective – the conservation and recovery of all whale stocks – was seen as a means to achieve the orderly development of the whaling industry. However, the past few decades, in particular since the fundamental turning point marked by the Stockholm Conference in 1972, have witnessed an increased emphasis on conservation *per se* in the practice of the IWC. Beginning with the adoption of the NMP in 1974, the IWC has adopted a number of Schedule amendments which reflect the increasing pursuit of conservation objectives by the Commission. The development of this conservation focus in the practice of the IWC is also evidenced by the numerous conservation-orientated Resolutions adopted by the Commission.

2.99 The IWC now pursues conservation of whales as an end itself. In so doing, it places greater reliance on a precautionary approach to conservation and management combined with a focus on non-consumptive use.

SECTION III. THE DIFFERENT TYPES OF WHALING: A COMPREHENSIVE REGIME

2.100 The intention of the drafters of the ICRW to address comprehensively all possible types of whaling operations is indicated by Article I(2) which provides:

This Convention applies to factory ships, land stations and whale catchers under the jurisdiction of the Contracting Governments and to all waters in which whaling is prosecuted by such factory ships, land stations, and whale catchers.

2.101 The ICRW defines the terms “factory ships”, “land stations” and “whale catchers” broadly,¹⁵² so as to cover all of the means by which whaling can be conducted anywhere in the world. Were the regime established under the ICRW not to be comprehensive it would be incapable of giving effect to the objective of the ICRW, of “safeguarding for future generations the great natural resources represented by the whale stocks”.¹⁵³

2.102 In line with this intention, the regime established by the ICRW does in fact regulate comprehensively all types of whaling. In so doing, that regime contemplates only three categories of whaling: (i) commercial whaling,¹⁵⁴ (ii) aboriginal subsistence whaling,¹⁵⁵ and (iii) scientific research whaling conducted under special permit.¹⁵⁶

2.103 The exclusivity of these three categories of whaling – commercial, aboriginal and scientific – and therefore the comprehensive nature of the regime provided for by the ICRW, is evidenced through the IWC’s rejection of proposals to introduce any other category of whaling into the regime. For example, after the introduction of the commercial whaling moratorium, Japan made a number of

¹⁵² ICRW, Article II.

¹⁵³ Ibid., preamble.

¹⁵⁴ Schedule, paras. 7(b), 10(a), (b), (c) and (e).

¹⁵⁵ Schedule, para. 13.

¹⁵⁶ ICRW, Article VIII.

attempts to introduce a further category of whaling to the regime, usually referred to as “small-type coastal whaling”.¹⁵⁷ This category has been rejected consistently by the IWC. It was stated repeatedly in the IWC that the three categories of whaling recognised by the ICRW were the only forms of whaling provided for under the regime of international regulation. As an example, the IWC’s rejection of other forms of whaling is clearly evidenced in the Report of the Technical Committee Working Group on Socio-Economic Implications and Small-type Whaling:

Japan has repeatedly asked the Commission for an emergency quota to alleviate distress in these [small-type whaling] communities. This request has been rejected by the majority of the Commission members as they regard the small-type whaling as commercial, although there are signs of growing sympathy and understanding.¹⁵⁸

2.104 Of the three categories, “commercial whaling”, or whaling for “commercial purposes”, now constitutes the focus of the regulatory scheme. The other two categories – which are in the nature of exceptions – are strictly limited and narrowly defined in scope.

A. COMMERCIAL WHALING

2.105 The term “commercial” was introduced into the Schedule in 1974 with the commencement of the NMP.¹⁵⁹ Importantly, however, the introduction of this term was not intended to narrow or qualify the scope of “whaling” under the terms

¹⁵⁷ See, for example, Report of the Technical Committee Working Group on Socio-Economic Implications and Small-type Coastal Whaling, 26 May 1991, IWC/43/16, 6 [Annex 50]; Government of Japan, “A Critical Evaluation of the Relationship between Cash Economies and Subsistence Activities”, 1992, IWC/44/SEST5 [Annex 103].

¹⁵⁸ Report of the Technical Committee Working Group on Socio-Economic Implications and Small-type Whaling, 29 June 1992, IWC/44/16, 2. See also Chairman’s Report of the Forty-Fourth Annual Meeting, *Rep. int. Whal. Commn* 43, 1993, 16.

¹⁵⁹ Chairman’s Report of the Twenty-Sixth Annual Meeting, *Rep. int. Whal. Commn* 26, 1976, 26.

of the Convention or Schedule. Rather, the term “commercial whaling” was intended to be synonymous with “whaling” as found in the Convention.

B. THE EXCEPTIONS

2.106 The concept of a limited and narrowly defined category of aboriginal subsistence whaling was reflected in the *1931 Convention*¹⁶⁰ and was adopted in the Schedule to the ICRW in 1946. It is currently found in paragraph 13 of the Schedule. Various restrictions on this category of whaling have been developed over time. Specifically, any whales killed under these provisions must be taken by or on behalf of the relevant aboriginal population and the meat and other products must be used exclusively for local consumption.¹⁶¹ Currently, the Schedule to the ICRW includes aboriginal subsistence whaling quotas only for the taking of:

- (1) bowhead whales from the Bering-Chukchi-Beaufort Seas stock;¹⁶²
- (2) gray whales from the Eastern stock in the North Pacific;¹⁶³
- (3) minke whales from the West Greenland and Central stocks;¹⁶⁴
- (4) fin and bowhead whales from the West Greenland stock;¹⁶⁵ and
- (5) humpback whales by the Bequians of St Vincent and Grenadines.¹⁶⁶

¹⁶⁰ The *1931 Convention*, Article 3.

¹⁶¹ Schedule, para. 13(b).

¹⁶² *Ibid.*, para. 13(b)(1).

¹⁶³ *Ibid.*, para. 13(b)(2).

¹⁶⁴ *Ibid.*, para. 13(b)(3).

¹⁶⁵ *Ibid.*, para. 13(b)(3).

¹⁶⁶ *Ibid.*, para. 13(b)(4).

2.107 Previous requests for aboriginal subsistence whaling quotas have been made by Japan, but these requests consistently have been refused by the IWC, reflecting its narrow interpretation of the category.¹⁶⁷

2.108 Whaling under special permit for purposes of scientific research is another limited category of whaling, though it is couched in the form of a limited exception in Article VIII of the ICRW. Under this provision, special permits have been issued by a number of Contracting Governments since 1951, permitting the killing of whales for a range of purported scientific reasons.¹⁶⁸ Whaling under Article VIII will be further discussed in Chapter 4 of this *Memorial*.

CONCLUSIONS

2.109 This Section has shown that the comprehensive regime established under the ICRW now contemplates three forms of whaling. All whaling operations conducted by Contracting Governments to the Convention must be caught by one of these categories. Of these three categories, the primary form of whaling envisaged under the ICRW is commercial whaling. The other two forms are strictly limited and narrowly defined in scope.

2.110 If a whaling operation does not fall to be characterised as either aboriginal subsistence whaling, which is subject to strict and express limitation, or whaling for purposes of scientific research, which is a limited exception within the broader regime, it follows that it must be characterised as commercial whaling. As outlined in Section II, a commercial whaling operation is subject to the limitations introduced on this form of whaling in the recent decades, including the commercial whaling moratorium.

¹⁶⁷ See, for instance, Chairman's Report of the Forty-First Annual Meeting, *Rep. int. Whal. Commn* 40, 1990, 27.

¹⁶⁸ See Section II.D of this Chapter for more detail on special permit programs.

SECTION IV. THE STATE OF THE POPULATIONS

2.111 As has been shown by the preceding Sections, the framework established by the ICRW was intended to regulate comprehensively all types of whaling in an effort to conserve and manage whale stocks for the future. The 20th century saw significant over-exploitation of whale stocks in the world's oceans. A direct correlation can be seen between the increasing awareness of the parlous state of the world's whale populations and increasingly restrictive regulation outlined above.

2.112 This Section will outline the effect of that over-exploitation on relevant stocks of whales and the current state of those populations, drawing on the detailed analysis in *Antarctic Baleen Whale Populations* which is Appendix 1 to this *Memorial*.

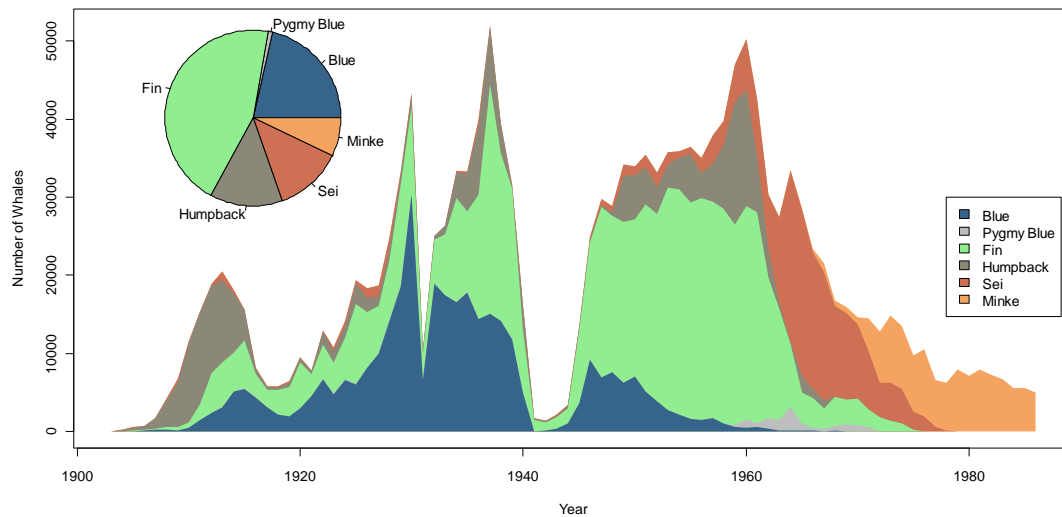
2.113 The term “whale” generally refers to members of the mammalian order *Cetacea* (which comprises whales, dolphins and porpoises). *Cetacea* are divided into two suborders, based on their feeding apparatus: the baleen whales (*Mysteceti*) and toothed whales (*Odontoceti*). Baleen whales use baleen plates in the mouth to filter their food from sea water, while toothed whales all possess teeth.¹⁶⁹

2.114 Japan's “research” program of whaling in the Antarctic which is the subject of these proceedings, JARPA II, involves the taking of three species of baleen whale: Antarctic minke whales (*Balaenoptera bonaerensis*), fin whales (*Balaenoptera physalus*) and humpback whales (*Megaptera noveangliae*). A detailed assessment of the relevant populations of these species reveals that once significant populations of whales in the Southern Hemisphere have been

¹⁶⁹ Schedule, para. 1; J Bannister, *Great Whales* (CSIRO Publishing, 2008), 1.

decimated through decades of over-exploitation.¹⁷⁰ It also establishes profound uncertainty in relation to the possible recovery of a number of these populations and sub-populations.¹⁷¹

Figure 4 - Total annual commercial catch of selected Southern Hemisphere whale species



Data from IWC Summary Catch Database, v 5.0

A. ANTARCTIC MINKE WHALES

2.115 The Antarctic minke whale was officially recognised as a separate species by the IWC in 1999.¹⁷² No generally accepted estimate of pre-exploitation abundance (i.e. before any whaling commenced) exists for Antarctic minke whales. However, estimates presented to the Scientific Committee in the early

¹⁷⁰ Figure 4 – Total annual commercial catch of selected Southern Hemisphere whale species, shows the scale of whaling conducted over the course of the 20th century.

¹⁷¹ *de la Mare et al., Antarctic Baleen Whale Populations* [Appendix 1].

¹⁷² *Ibid.*, para. 6.1.

1970s suggested a circumpolar abundance estimate in the range of 150,000 to 200,000.¹⁷³ A revised estimate of 299,000 was presented in 1974.¹⁷⁴

2.116 The Scientific Committee last endorsed a circumpolar minke whale abundance estimate in 1993. This estimate of 761,000 animals was derived using data obtained from the International Decade for Cetacean Research and Southern Ocean Whale and Ecosystem Research programs (IDCR/SOWER) surveys conducted under the auspices of the IWC. Since that time updated estimates (also derived from data obtained from the three IDCR/SOWER circumpolar surveys) have been presented to the Scientific Committee using three different methods: the “standard” method; the “SPLINTR” method; and the “OK” method.¹⁷⁵ These methods have yielded vastly contradictory results, providing current abundance estimates for Antarctic minke whales ranging from 338,000 to 1,486,000.¹⁷⁶ The reasons for these significant differences are, as yet, undetermined. However, all these methods demonstrate a significant decline in circumpolar minke whale abundance south of 60°S between 1985 and 2004.¹⁷⁷

2.117 The circumpolar population of Antarctic minke whales is currently listed as Data Deficient by the IUCN. Despite this uncertainty, Antarctic minke whales are listed under Appendix I of CITES, which includes “all species threatened with extinction which are or may be affected by trade.”

¹⁷³ Ibid., para. 6.12 [Appendix 1].

¹⁷⁴ Ibid.

¹⁷⁵ Ibid., paras. 6.14, 6.17 [Appendix 1].

¹⁷⁶ Ibid., para. 6.18 [Appendix 1].

¹⁷⁷ Ibid., para. 6.18 [Appendix 1].

B. FIN WHALES

2.118 There is currently no pre-exploitation abundance estimate for fin whales that has been endorsed by the Scientific Committee, although numbers between 235,000 and 325,000 have been suggested.¹⁷⁸ According to the IWC, approximately 725,000 fin whales were killed in the Southern Hemisphere between 1903 and 2010.¹⁷⁹

2.119 The most current estimates of circumpolar (and south of 60°S) fin whale abundance accepted by the Scientific Committee range from 5,455 to 8,036. These estimates were derived from the third circumpolar survey of IDCR/SOWER, which occurred between 1991/92 and 2003/04.¹⁸⁰

2.120 Very little is known about the stock structure of fin whales in the Southern Hemisphere.¹⁸¹ They are listed as Endangered by the IUCN, and are also listed under Appendix I of CITES.

C. HUMPBACK WHALES

2.121 There is no agreed pre-exploitation abundance estimate for humpback whales. Between 1904 and 1973 approximately 220,000 humpback whales were taken from Antarctic stocks. Humpback whale stocks were significantly damaged as a result of this over-exploitation, in particular by the illegal and unreported take of 48,702 humpback whales by the USSR between 1947 and 1972.¹⁸²

¹⁷⁸ Ibid., para. 4.12 [Appendix 1].

¹⁷⁹ Ibid., para. 4.7 [Appendix 1].

¹⁸⁰ Ibid., para. 4.11 [Appendix 1].

¹⁸¹ Ibid., para. 4.10 [Appendix 1].

¹⁸² *de la Mare et al., Antarctic Baleen Whale Populations*, paras. 5.11-5.12 [Appendix 1].

2.122 The Scientific Committee currently recognises eight distinct Southern Hemisphere humpback whale breeding stocks. Three of these stocks are linked to feeding grounds potentially exploited by JARPA II.¹⁸³ Uncertainties exist as to the amount of mixing between the eight Southern Hemisphere humpback stocks (in terms of breeding) and, at the population level, physical mixing on the feeding grounds. This makes the assignment of historical catches of humpback stocks difficult.¹⁸⁴ However, in relation to those stocks potentially exploited by JARPA II, it is generally accepted that the populations have been reduced to a fraction of their pre-exploitation levels.¹⁸⁵

2.123 It is believed that the current total population of Southern Hemisphere humpback whales is in the order of 50,000 with a rate of increase of 9.6% per year. However, concern remains for certain small subpopulations where little information is known and recovery has been slow.¹⁸⁶ The Pacific Ocean sub-stocks (which are potentially targeted by JARPA II), in particular, are vulnerable to depletion. Two such breeding stocks are listed as Endangered by the IUCN.¹⁸⁷ Humpback whales are also listed under Appendix I to CITES.

¹⁸³ Ibid., para. 5.16 [Appendix 1].

¹⁸⁴ Ibid., para. 5.24 [Appendix 1].

¹⁸⁵ Ibid., para. 5.21 [Appendix 1].

¹⁸⁶ Ibid., para. 5.19 [Appendix 1].

¹⁸⁷ Ibid., para. 5.26 [Appendix 1].

SECTION V. CONCLUSIONS

2.124 In 1946, the international community established the ICRW in recognition of the fact that continued viability of the whaling industry depended upon the conservation of the world's whale stocks. The framework established under the ICRW provided for the evolutionary development of management tools through the incorporation of a Schedule of regulations. That Schedule evolved over the 20th century as the IWC responded to changing needs in the conservation and management of whales. That evolution reveals an ever-tightening system of regulation with the eventual introduction of a commercial whaling moratorium, responding to an increased international consciousness of the vulnerability of the natural environment.

2.125 As a consequence, the international legal regime for the regulation of whaling has evolved from a system primarily designed to manage the exploitation of a natural resource to an increasingly conservation-oriented regime.

2.126 The regime divides whaling into three categories: aboriginal subsistence whaling, whaling under special permit and commercial whaling. These are the only authorised forms of whaling under the ICRW. Of these three categories, the primary form of whaling envisaged under the ICRW is commercial whaling. The other two forms are strictly limited and narrowly defined in scope.

2.127 It is against this background of a comprehensive regime for the regulation of whaling – which exists within an increasingly conservation-oriented context – that the legality of Japan's so-called "scientific" whaling programs falls to be determined.

CHAPTER 3 - JAPAN'S "SCIENTIFIC" WHALING IN THE SOUTHERN OCEAN

3.1 In this Chapter, Australia sets out the facts of this dispute. Section I describes how, in January 1988, Japan commenced so-called "scientific" whaling in the Southern Ocean as a means to continue whaling and to protect its whaling industry after it accepted the commercial whaling moratorium. Section II describes the key participants in Japan's whaling industry, the conduct of Japan's whaling in the Southern Ocean and the production, distribution and sale of whale products. Section III describes the "scientific" whaling business model, under which revenue from the sale of whale meat funds ongoing whaling operations and benefits key stakeholders and sets out how these economic interests affect the conduct of Japan's "research".

3.2 This Chapter refers to evidence including documents submitted by Japan to the IWC, and in particular its special permits, "research" proposals and annual cruise reports detailing the conduct of JARPA and JARPA II; public statements and correspondence by Japanese Ministers and officials, including in the Japanese Diet; and books, journal articles and newspaper articles.

3.3 The evidence establishes that Japan commenced and continues "scientific" whaling not to address important scientific questions using proper scientific methods, but to enable Japan to continue whaling indefinitely despite the moratorium on commercial whaling. The proceeds from selling whale meat derived from Japan's purported "scientific research" fund continuing whaling operations. It is this economic interest that drives the "research". Japan uses lethal methods of "research" to ensure the production of saleable whale meat and thereby to achieve its aim of continued whaling. Consistent with the necessity to sell meat to fund its ongoing whaling, Japan adjusts its catches in response to demand for whale meat. Continued whaling financially sustains participants in

Japan's whaling industry, maintains pelagic whaling skills and technologies, and benefits Government officials. This provides additional incentive for interested Government officials and the industry to perpetuate "scientific" whaling despite its consistent lack of scientific results.

SECTION I. THE COMMENCEMENT OF JAPAN'S "SCIENTIFIC" WHALING IN THE SOUTHERN OCEAN

3.4 In January 1988, Japan commenced so-called "scientific" whaling in the Southern Ocean under JARPA. It is no coincidence that this was the very first Southern Ocean whaling season after the commercial whaling moratorium took effect for Japan's pelagic whaling operations. In fact, the evidence establishes that after the moratorium Japan was determined to continue whaling, in its own words, in "some form or another",¹⁸⁸ and that "scientific" whaling was merely a guise under which to do so.

A. JAPAN'S DECISION TO OBJECT TO THE COMMERCIAL WHALING MORATORIUM

3.5 The economic significance of Japan's whaling industry peaked in the 1960s. By the early 1980s, it had declined markedly, reflecting gravely depleted stocks due to massive over-exploitation, reduced IWC quotas and declining profitability. Nonetheless, whaling remained a significant and symbolically important industry in Japan. The total value of Japan's annual whale catch around this time was estimated at some ¥13 billion (approximately US\$55 million¹⁸⁹).¹⁹⁰

¹⁸⁸ As noted in Section I.C of this Chapter, Japanese Government Ministers and officials regularly reiterated Japan's determination to continue whaling and maintain the industry "in some form or another" after the commercial whaling moratorium was adopted.

¹⁸⁹ All conversions of Japanese Yen to United States Dollars in this *Memorial* are based on the historical exchange rate around the time the Japanese Yen amount is referenced, and do not incorporate subsequent inflation or deflation. The conversions are based on Organisation for Economic Co-operation and Development statistics on exchange rates (USD monthly averages): OECD, 2011, "Stat Extracts", at <<http://stats.oecd.org/Index.aspx>> on 1 April 2011.

¹⁹⁰ Government of Japan, *National Diet Debates*, House of Councillors - Foreign Affairs Committee - No. 11, 16 May 1985, Speaker: 231/329 (Tadashi Imai, Director, Far Seas Division, Marine Fisheries Department, Fisheries Agency) [Annex 96]. (Tadashi Imai later became a Director of Kyodo Senpaku Kaisha Limited, the company which conducts Japan's "scientific" whaling: Government of Japan, Tokyo Legal Affairs Bureau Nakano Branch, *Certified Record of*

Some 1,300 people were employed directly in Japan's whaling operations,¹⁹¹ including, as of 1982, some 747 individuals employed by Japan's main pelagic whaling company, Nippon Kyodo Hogeï ("Kyodo Hogeï").¹⁹² Further individuals were employed in related industries such as whale meat processing, distribution and sale. The Japan Whaling Association estimated in 1986 that some 50,000 people and their families depended on whaling and whaling-related industries for their livelihoods.¹⁹³ Moreover, whaling remained politically important: on 17 March 1982, then Prime Minister Zenkō Suzuki affirmed in the Japanese Diet that Japan's whaling industry had "an extremely long history" and that whale meat occupied "an important role in the Japanese diet".¹⁹⁴ Prime Minister Suzuki referred to moves within the IWC at that time to negotiate the commercial whaling moratorium, and in light of these moves affirmed that:

The Government intends to place *even greater efforts than it has to date* into the protection and growth of the whaling industry into the future.¹⁹⁵
[emphasis added]

3.6 Accordingly, it was no surprise that Japan was among the small group of six Contracting Governments which voted against the commercial whaling moratorium when it was adopted on 23 July 1982. Japan made clear that, despite the moratorium, it was determined to maintain its whaling industry into the future.

All Closed Register Particulars: Kyodo Senpaku Kaisha Ltd., Corporate Registration No. 0100-01-041436, (22 December 2010) [Annex 108], 2).

¹⁹¹ Government of Japan, *National Diet Debates*, House of Councillors - Foreign Affairs Committee - No. 11, 16 May 1985, Speaker: 231/329 (Tadashi Imai, Director, Far Seas Division, Marine Fisheries Department, Fisheries Agency) [Annex 96].

¹⁹² Government of Japan, "Report to the Working Group on Socio-Economic Implications of a Zero Catch Limit" (1989) IWC/41/21, 41 [Annex 102].

¹⁹³ Z Doi, "Don't put out the light of whaling. My view: Takehiko Takayama", *Asahi Shimbun*, 1 June 1986 (morning edition), 4 [Annex 125].

¹⁹⁴ Government of Japan, *National Diet Debates*, House of Councillors - Budget Committee - No. 10, 17 March 1982, Speaker: 23/360 (Zenkō Suzuki, Prime Minister) [Annex 88].

¹⁹⁵ *Ibid.*

On 4 August 1982, Japan's Minister for Agriculture, Forestry and Fisheries, Kichirō Tazawa, reported to the Japanese Diet that:

It is the Prime Minister's view that precisely since the problems facing whaling in Japan are so extremely significant, and as there are so many people who are reliant primarily on this industry for their livelihood, we must actively continue to build an environment where whaling can be practiced... [The Prime Minister] was of the view that we ought to push harder ahead with a response on whaling... And so, for my part too, since there are people who are unable to get jobs elsewhere in the fishing industry other than in whaling, as you have pointed out, I intend to redouble efforts in actively dealing with the whaling problem and to live up to the expectations which have been placed upon me.¹⁹⁶

3.7 The Government of Japan clearly was committed to maintaining its whaling industry; at no time did it indicate that it was prepared to halt the industry in line with the requirements of the moratorium.

3.8 Consistent with the Government's strong public commitments to support Japan's whaling industry, Japan objected to the moratorium under Article V(3) of the ICRW on 4 November 1982. In the formal notification of its objection, Japan argued that the moratorium did not take into account "the important role played by the whale products and the whaling industry in the Japanese traditional diet and in the socio-economy of certain local communities in Japan".¹⁹⁷ Japan also highlighted the fact that whaling provided employment "for many persons".¹⁹⁸

¹⁹⁶ Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 24, 4 August 1982, Speaker: 110/277 (Kichirō Tazawa, Minister for Agriculture, Forestry and Fisheries) [Annex 89].

¹⁹⁷ IWC Circular Communication RG/EE/4613, "Amendments to the Schedule adopted at the 34th Annual Meeting and an Objection by the Government of Japan", 5 November 1982 enclosing Note from the Ambassador of Japan to the United Kingdom to the Secretary of the International Whaling Commission, 4 November 1982, 2 [Annex 53].

¹⁹⁸ *Ibid.*, 6.

B. PRESSURE ON JAPAN TO WITHDRAW ITS OBJECTION TO THE COMMERCIAL WHALING MORATORIUM

3.9 Japan could lawfully have maintained its whaling industry, and continued commercial whaling, on the basis of its objection to the moratorium. However, Japan was under considerable international pressure to withdraw its objection. Contracting Governments (including Australia) urged the few countries still engaged in commercial whaling (including Japan) to accept and comply with the moratorium.

3.10 Of immediate concern to Japan was that, if it did not withdraw its objection to the moratorium, substantial sanctions on Japan's fishing industry might be imposed under laws of the United States. The United States Commissioner to the IWC, John Byrne, highlighted these possible sanctions in letters to IWC Commissioners of whaling countries after the IWC adopted the moratorium. In those letters, Commissioner Byrne stressed that:

[I]t is our very serious intent to achieve [compliance with] the moratorium and to use the tools available to us to do that.¹⁹⁹

3.11 The "tools" referred to by Commissioner Byrne were in the form of United States legislation: the 1971 Pelly Amendment to the *Fisherman's Protective Act* of 1967²⁰⁰ (the "*Pelly Amendment*"), and the 1979 Packwood-Magnuson Amendment to the *Fishery Conservation and Management Act* of 1976,²⁰¹ (the "*Packwood-Magnuson Amendment*"). These

¹⁹⁹ United States IWC Commissioner Byrne confirmed this in evidence to the United States House of Representatives: Government of the United States, Subcommittee on Human Rights and International Organizations of the Committee on Foreign Affairs, United States House of Representatives, *Review of the 34th International Whaling Commission Meeting*, (16 September 1982), 28 [Annex 73].

²⁰⁰ Government of the United States, 1971 Pelly Amendment to the *Fisherman's Protective Act of 1967*, 22 USC § 1978 ("*Pelly Amendment*") [Annex 71].

²⁰¹ Government of the United States, 1979 Packwood-Magnuson Amendment to the *Fishery Conservation and Management Act of 1976*, 16 USC § 1821 ("*Packwood-Magnuson Amendment*") [Annex 72].

amendments applied where the United States Secretary of Commerce certified that the actions of a foreign country were “diminishing the effectiveness” of, *inter alia*, the ICRW.²⁰² Upon such certification, the Secretary of State was obliged, under the *Packwood-Magnuson Amendment*, to reduce the offending nation’s fishery allocation in the United States exclusive economic zone²⁰³ by at least 50%.²⁰⁴ Under the *Pelly Amendment*, a certification gave rise to a discretion on the part of the President to direct that a prohibition of fisheries imports from the relevant nation be implemented.²⁰⁵

3.12 The threat of United States trade sanctions, particularly the possibility of being denied access to valuable fishing grounds in the United States’ exclusive economic zone under the *Packwood-Magnuson Amendment*, was a significant concern for Japan. In evidence to the National Diet on 4 August 1982, the Director-General of the Japan Fisheries Agency, Akira Matsuura, described the *Packwood-Magnuson Amendment* as a “huge problem”, stating that “[i]t will be extremely important to seek the understanding of the United States with regard to issues like continuing with our whaling”.²⁰⁶ The extent of Japan’s concerns about the potential loss of access to the United States’ exclusive economic zone was outlined by Tadashi Imai, Director of the Far Seas Fisheries Division of the Japan Fisheries Agency, on 16 May 1985, when he noted that:

[O]verall, the situation of Japanese fishing in the United States’ 200-nautical mile zone is that there is more than 250 vessels with a total catch exceeding one million

²⁰² *Pelly Amendment* 22 USC § 1978(a)(1) [Annex 71]; *Packwood-Magnuson Amendment* 16 USC § 1821(e)(2)(A)(i) [Annex 72].

²⁰³ The United States proclaimed an exclusive economic zone of 200 nautical miles on 10 March 1983.

²⁰⁴ *Packwood-Magnuson Amendment* 16 USC § 1821(e)(2)(B) [Annex 72].

²⁰⁵ *Pelly Amendment* 22 USC § 1978(a)(4) [Annex 71].

²⁰⁶ Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 24, 4 August 1982, Speaker: 92/277 (Akira Matsuura, Director-General, Japan Fisheries Agency) [Annex 89].

tonnes. In monetary terms, it would be worth considerably more than 100 billion yen [approximately US\$419 million]. These operations directly employ somewhere well in excess of 10,000 people. Whaling, on the other hand...would be worth about 13 billion yen [approximately US\$54 million], of which around 8 billion yen [approximately US\$34 million] would be from Antarctic whaling and 5 billion yen [approximately \$20 million] from Japanese coastal waters... Overall, therefore, the ratio of the scale of fishing in American waters to our whaling is about 10 to one.²⁰⁷

C. JAPAN'S DECISION TO COMMENCE "SCIENTIFIC" WHALING AND WITHDRAW ITS OBJECTION

3.13 Japan was determined to avoid United States sanctions on its fishing industry. At the same time, Japan was determined to continue whaling. On 11 October 1983 Japan's Minister for Agriculture, Forestry and Fisheries, Iawazo Kaneko, was asked in the Japanese Diet whether Japan should choose to abandon whaling or allow its United States fishing allocation to be cut, under the *Packwood-Magnuson Amendment*. Minister Kaneko replied:

And, if I'm right, your question was, ought we to take those fish or ought we to let go of the whales? I say that we take both of them. We will certainly not write off whaling... So my view is that we will continue to persist in our negotiations, and that we don't have any intention to abandon either one or the other.²⁰⁸

3.14 On the same day, the Director-General of the Japan Fisheries Agency, Fumio Watanabe, reiterated clearly the Government's fundamental position on the issue:

[D]uring the roughly two years until the [moratorium] decision comes into effect the Government will make the utmost efforts to obtain the understanding of the countries concerned to ensure that our whaling can continue *in some form or another*.²⁰⁹
[emphasis added]

²⁰⁷ Government of Japan, *National Diet Debates*, House of Councillors - Foreign Affairs Committee - No. 11, 16 May 1985, Speaker: 231/329 (Tadashi Imai, Director, Far Seas Fisheries Division, Marine Fisheries Department, Fisheries Agency) [Annex 96].

²⁰⁸ Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 2, 11 October 1983, Speaker: 43/163 (Iawzo Kaneko, Minister for Agriculture, Forestry and Fisheries) [Annex 90].

²⁰⁹ *Ibid.*, Speaker: 41/163 (Fumio Watanabe, Director-General, Fisheries Agency).

3.15 Japanese Ministers and officials regularly reiterated this commitment to continue Japan's whaling industry "in some form or another" in the ensuing years. It was in this context that, in October 1983, Director-General Watanabe commissioned an expert panel called the Whaling Issues Study Group to make recommendations for the future of Japanese whaling.

3.16 The Study Group delivered its Report to the Government in July 1984.²¹⁰ The Study Group's fundamental conclusion was that "[t]he continuation of whaling ought rightly to be accepted".²¹¹ This conclusion was based on the Study Group's view that the IWC's decision to prohibit commercial whaling under the moratorium was "illegitimate", and its finding that whaling was important to support employment and regional economies, fostering Japan's whale meat eating culture and enabling whaling skills and techniques to be passed on to future generations.²¹² While the Study Group was of the view that "there is absolutely no reason for Japan to abandon its whaling industry",²¹³ it also noted the threat of United States sanctions on its fishing industry if Japan did not withdraw its objection to the moratorium:

[T]he United States Government is strongly pressing Japan to withdraw its objection by linking the whaling issue to its allocation to Japan of fishing quotas within the United States' 200 nautical mile zone in the northern Pacific. Of particular concern was the fact that last year the United States reduced its fishing quota allocation to Japan, citing as its reason that Japan did not withdraw its objection... [T]he United States has already enacted a law that makes it possible to reduce to zero the fishing quota allocated to Japan within a two year period in the event that Japan were to continue its commercial whaling after the prohibition of commercial whaling comes into effect from the 1985-86 whaling season.²¹⁴

²¹⁰ Whaling Issues Study Group, *Report on Preferred Future Directions for Japan's Whaling* (July 1984) in *New Policy Monthly* (August 1984) 108 ("Report of the Whaling Issues Study Group") [Annex 98].

²¹¹ *Ibid.*, para. 5.

²¹² *Ibid.*, paras. 3, 5.

²¹³ *Ibid.*, para. 3.

²¹⁴ *Ibid.*, para. 4.

3.17 In light of these considerations, the Study Group recommended that “in order to continue whaling in the Southern Ocean...we should seek the understanding of relevant countries for Japan to undertake scientific whaling”.²¹⁵ This statement encapsulates the true purpose of subsequent Japanese whaling in the Southern Ocean – the continuation of whaling, not scientific research. This recommendation ultimately set the course for Japan to withdraw its objection to the moratorium (thereby avoiding United States sanctions on its fishing industry) and at the same time enabled Japan to continue whaling in the Southern Ocean under the guise of “scientific research”.

3.18 The manner in which the Government reported the findings of the Study Group highlights two fundamental points. First, the Government reiterated its clear commitment to continue Japan’s whaling industry “in some form or another”. On 1 August 1984, the Japan Fisheries Agency stated that:

Our intention is to use the [Study Group’s] report as a reference...and to make our utmost efforts to ensure that our whaling will be able to continue both in the Antarctic and as coastal whaling, *in some form or another*.²¹⁶
[emphasis added]

²¹⁵ Ibid., para. 5.

²¹⁶ Government of Japan, *National Diet Debates*, House of Representatives - Foreign Affairs Committee - No. 18, 1 August 1984, Speaker: 144/196 (Keiichi Nakajima, Head, Ocean Fisheries Department, Fisheries Agency) [Annex 91]. Keiichi Nakajima was later President of the Japan Whaling Association: “A Message to the World: Sustainable Whaling. Three Whaling Groups’ New Year’s Press Conference”, *The Fishing & Food Industry Weekly*, 1559 (25 February 2010), 19 [Annex 128].

See also, Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 27, 2 August 1984, Speaker: 211/342 (Hiroya Sano, Director-General, Fisheries Agency) [Annex 92].

3.19 On 2 August 1984, the Minister for Agriculture, Forestry and Fisheries, Shinjirō Yamamura, reiterated the Government’s commitment to continue Japan’s whaling:

As the Minister for Foreign Affairs has said, and as the Director-General of the [Japan] Fisheries Agency just now also said, I intend to do my utmost to ensure that Japanese whaling continues *in some form or another*.²¹⁷
[emphasis added]

The Minister repeated this commitment on 7 August 1984.²¹⁸ At no time did the Government raise the possibility of Japan stopping whaling altogether or closing its whaling industry.

3.20 Secondly, it is evident that the Government saw “scientific” whaling as the manner in which Japan could continue whaling while acceding to international pressure to withdraw Japan’s objection to the moratorium. This was intended to enable Japan to avoid possible United States sanctions, particularly under the *Packwood-Magnuson Amendment*. Director-General Sano of the Japan Fisheries Agency made the Government’s views clear in describing the Whaling Issues Study Group’s recommendations in the Diet on 2 August 1984:

[T]he United States Government has created a link between the whaling issue and the fishing quotas it allocates to Japan within the United States’ 200 nautical mile zone in the northern Pacific Ocean and it is pressuring Japan strongly to withdraw our objection...

²¹⁷ Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 27, 2 August 1984, Speaker: 217/342 (Shinjirō Yamamura, Minister for Agriculture, Forestry and Fisheries) [Annex 92].

²¹⁸ On 7 August 1984, Shinjirō Yamamura reaffirmed that his Ministry “has done everything possible, and we will continue to make our utmost efforts, to ensure that Japanese whaling can continue in some form or another into the future”. Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 28, 7 August 1984, Speaker: 138/377 (Shinjirō Yamamura, Minister for Agriculture, Forestry and Fisheries) [Annex 93].

[I]n the current environment...after the moratorium commences, the path to ensure the continuation of whaling would be, for Southern Ocean whaling, *to position it as a research whaling activity* which has a scientific nature...[and] the continuation of whaling ought to be planned for while we seek the understanding of the relevant countries...²¹⁹
[emphasis added]

3.21 For the Japanese Government, as noted by Director-General Sano, the *Report of the Whaling Issues Study Group* had provided “valuable recommendations for ensuring the continuation of whaling after the moratorium has come into effect”,²²⁰ in a way “that would be acceptable to both sides”, that is, to both Japan and the United States.²²¹ Director-General Sano re-emphasised this point on 4 September 1984, referring to recent negotiations with the United States over the issue:

At the time when we held the talks with the Americans the other day, we had the report submitted by the Whaling Issues Study Group which recommends the idea of undertaking the continuation of whaling activities in the form of research, *given the difficulties of challenging the commercial whaling moratorium head-on...*²²²
[emphasis added]

3.22 Putting it another way, Sano stated in the Diet on 18 December 1984 that “we should make maximum use” of the recommendations of the Whaling Issues Study Group to “keep Japanese whaling alive under these very challenging circumstances”.²²³

²¹⁹ Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 27, 2 August 1984, Speaker: 211/342 (Hiroya Sano, Director-General, Fisheries Agency) [Annex 92].

²²⁰ Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 28, 7 August 1984, Speaker: 130/377 (Hiroya Sano, Director-General, Fisheries Agency) [Annex 93].

²²¹ *Ibid.*, Speaker: 134/377 (Hiroya Sano, Director-General, Fisheries Agency) [Annex 93].

²²² Government of Japan, *National Diet Debates*, House of Councillors - Agriculture, Forestry and Fisheries Committee / Closed - No. 1, 4 September 1984, Speaker: 106/194 (Hiroya Sano, Director-General, Fisheries Agency) [Annex 94].

²²³ Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 2, 18 December 1984, Speaker: 208/234 (Hiroya Sano, Director-General, Fisheries Agency) [Annex 95].

3.23 Plainly, the Government of Japan saw “scientific” whaling as a way around the moratorium; “science” was not Japan’s real purpose. As Goroku Satake, appointed Director-General of the Japan Fisheries Agency in 1986, recalled:

[T]he negotiations over the scientific whaling problem...was the last job I did in my bureaucratic career... The implementation of scientific whaling was viewed as the only method available to carry on with the traditions of whaling.²²⁴

3.24 Satake made the genuine purpose of Japan’s proposed “scientific” whaling plans clear when, in April 1987, he addressed the crew of Japan’s pelagic factory ship on its return to port following the last season of authorised commercial whaling in the Southern Ocean, saying:

“We will make every effort to strive for the continuation of whaling, with its long history and traditions”... I honestly felt that “Whatever the issues for which Japan’s past whaling deserves criticism, the crew are not to blame. I want to somehow retain the work and workplaces, where these men have spent their whole lives, in the form of scientific whaling”.²²⁵

3.25 In November 1984, four months after the Whaling Issues Study Group delivered its Report, Japan reached an arrangement with the United States by which it undertook to withdraw its objection to the moratorium in return for certain concessions to its whaling industry which would operate in the period before its withdrawal took effect. The arrangement was set out in a high-level exchange of letters between the United States Secretary of Commerce, Malcolm Baldrige, and Japan’s *Charge d’Affaires* in Washington, Yasushi Murazumi. The essential terms of the Baldrige-Murazumi agreement were:

- (1) Japan agreed to withdraw its objection to the moratorium with effect following the 1987 coastal whaling season and the 1986/87 pelagic

²²⁴ G Satake, *Japanese Fisheries and Overseas Fisheries Cooperation in the Era of Globalisation* (Seizankdo-Shoten Publishing Co. Ltd, 1997), 113 [Annex 75].

²²⁵ *Ibid.*, 115 [Annex 75].

whaling season (in effect, allowing a two year delay in the moratorium coming into force for Japan);

- (2) The United States agreed to permit Japan to take certain catches of whales in the period before the moratorium took effect for it; and
- (3) The United States agreed that it would not certify Japan's whaling under the *Pelly Amendment* or the *Packwood-Magnuson Amendment*.²²⁶

3.26 Pursuant to this arrangement, the United States Secretary of Commerce did not certify Japan under either the *Pelly* or *Packwood-Magnuson Amendments*. This decision not to certify was challenged by United States environmental groups but was upheld on appeal by the United States Supreme Court on 30 June 1986.²²⁷ On the following day, 1 July 1986, Japan withdrew its objection to the commercial whaling moratorium.²²⁸ Despite outwardly accepting the moratorium, Japan was determined to continue whaling and the Government had already begun planning to continue Southern Ocean whaling under the guise of “scientific research”. In January 1988, the very first pelagic whaling season after the moratorium came into force for it, Japan commenced “scientific” whaling in the Southern Ocean under JARPA.

²²⁶ *Agreement between the United States of America and Japan concerning commercial sperm whaling in the western division stock of the North Pacific (with record of discussion)*, (contained in Letter from Yasushi Murazumi, *Chargé d’Affaires ad interim* of Japan to Malcolm Baldrige, United States Secretary of Commerce, 13 November 1984, and letter from Malcolm Baldrige to Yasushi Murazumi, 13 November 1984), 2039 UNTS 35266 (Washington, 13 November 1984) [Annex 63].

²²⁷ *Japan Whaling Association and Japan Fisheries Association, Petitioners, v. American Cetacean Society et al., Petitioners. Malcolm Baldrige, Secretary of Commerce, et al., Petitioners v. American Cetacean Society et al.*, 478 U.S. 22, 106 S.Ct. 2860 (1986).

²²⁸ IWC Circular Communication RG/VJH/16129, “Withdrawal of Objection to Schedule Paragraph 10(e) by Japan”, 1 July 1986 enclosing Note from the Ambassador of Japan to the United Kingdom to the Secretary of the International Whaling Commission, 1 July 1986 [Annex 54].

D. EARLY DEVELOPMENT OF THE “SCIENTIFIC” WHALING BUSINESS MODEL

3.27 Japan was determined to use its purported objective of “scientific research” as a means to enable whaling to continue on a long-term and largely self-funding basis. These requirements underpin the “scientific” whaling business model, under which revenue from the sale of whale meat funds continued whaling and supports key participants in the whaling industry.

3.28 Direct evidence of how Japan developed its commercial requirements for its “scientific” whaling is provided by a respected Japanese scientist, Dr Toshio Kasuya, who was among the small group charged with developing the program which was ultimately implemented as JARPA.

3.29 In the first half of 1984, “several months” before the July 1984 *Report of the Whaling Issues Study Group* was finalised, Japan’s Commissioner to the IWC convened a meeting which was attended by representatives of the Japan Fisheries Agency and Japan’s main pelagic whaling company, Kyodo Hogeï, together with scientists from Japan’s Far Seas Fisheries Research Laboratory (including Dr Kasuya). The agenda for the meeting included the “feasibility of scientific whaling in the Antarctic and North Pacific”; that is, from the outset, the Government made clear that it envisaged a “scientific” program necessarily premised on continued pelagic whaling.²²⁹ The Government then asked a select group of individuals to create the plan, and stipulated two fundamental conditions for this whaling project:

- (1) the project had to be “self-sustainable”, in that it could fund its continued operations through the sale of whale meat; and

²²⁹ T Kasuya, “Japanese Whaling and Other Cetacean Fisheries”, (2007) 14(1) *Env Sci Pollut Res* 39, 45-6 [Annex 77].

(2) the project was to require a “long period perhaps until the reopening of commercial whaling”.²³⁰

3.30 In short, as Dr Kasuya noted:

[T]he parameters we were given were to “draft research that will allow the whaling of a sufficient number of whales to cover costs and which will not be completed in a short time-frame”.²³¹

3.31 These requirements underpin Japan’s “scientific” whaling business model which has remained in place to this day.

3.32 The original JARPA “research” proposal dated March 1987 was consistent with the Government’s requirements for the construction of a “scientific” whaling program.²³² The proposal involved large annual targets for lethal whaling (825 minke whales and 50 sperm whales each year). This was deemed sufficient to sustain the operation through revenue obtained from the sale of this meat. As noted by Dr Kasuya, the final target sample size under the original JARPA proposal was finalised only after “the industry side judged that 825 minke whales could sustain the operation”.²³³

3.33 Moreover, the original JARPA proposal called for lethal whaling on an indefinite basis, meeting the Government’s requirement that the “research” program provide for long-term whaling. The plan itself specified no end date and, as subsequently clarified in the Scientific Committee, “it was intended the programme would be continued indefinitely”.²³⁴ Ultimately, Japan continued

²³⁰ Ibid.

²³¹ “Debate: Pros and Cons of Scientific Whaling”, *Mainichi Shimbun*, 3 October 2005, 3 [column by T Kasuya] [Annex 129].

²³² Government of Japan, “The Program for Research on the Southern Hemisphere Minke Whale and for Preliminary Research on the Marine Ecosystem in the Antarctic”, 1987, SC/39/04 (“*JARPA proposal, 1987*”) [Annex 156].

²³³ T Kasuya, “Japanese Whaling and Other Cetacean Fisheries”, (2007) 14(1) *Env Sci Pollut Res* 39, 45-6 [Annex 77].

²³⁴ Report of the Scientific Committee, *Rep. Int. Whal. Commn* 38, 1988, 55.

whaling under JARPA for 18 years and has since continued whaling without interruption under JARPA II, which also has no specified end date.

3.34 The original JARPA proposal of March 1987 provided target quotas of 825 minke whales and 50 sperm whales. The then Prime Minister of Japan, Yasuhiro Nakasone, informed the Director-General of the Japan Fisheries Agency, Goruko Satake, that: “[m]y gut feeling is that 875 whales is somewhat excessive. Don’t create an impression that we’re being unfair”.²³⁵ In response, the “research” plan was subsequently recast as a “feasibility study” with a reduced target of 300 minke whales and no sperm whales.²³⁶ This decision was made “for political reasons”.²³⁷ Japan’s target increased progressively over the 18 year duration of JARPA, reaching a maximum 440 minke whales from the 1994/95 season. Despite having previously claimed that a target of 825 minke and 50 sperm whales was necessary to achieve its “scientific” objectives, Japan then argued that it could still achieve the same objectives with much reduced “sample sizes” for minke whales, and with no take at all of sperm whales.

3.35 Japan commenced whaling in the Southern Ocean under the guise of JARPA “research” from January 1988 and, as outlined in Section II of this Chapter, has continued so-called “scientific” whaling, currently under JARPA II, each season since then.

²³⁵ G Satake, *Japanese Fisheries and Overseas Fisheries Cooperation in the Era of Globalisation* (Seizankdo-Shoten Publishing Co. Ltd, 1997), 115 [Annex 75]; see also, “Fisheries Agency Director-General Told by Prime Minister: Do Scientific Whaling that Won’t be Criticised”, *Asahi Shimbun*, 26 April 1987 (morning edition), 2 [Annex 127].

²³⁶ Government of Japan, “The Research Plan for the Feasibility Study on ‘The Program for Research on the Southern Hemisphere Minke Whale and for Preliminary Research on the Marine Ecosystem in the Antarctic’”, October 1987, SC/D87/1 (“*JARPA Feasibility Study Proposal, 1987*”).

²³⁷ T Kasuya, “Japanese Whaling and Other Cetacean Fisheries”, (2007) 14(1) *Env Sci Pollut Res* 39, 45-6 [Annex 77].

SECTION II. JAPAN’S PELAGIC WHALING INDUSTRY AND THE WHALE MEAT MARKET

A. THE KEY PARTICIPANTS IN JAPAN’S PELAGIC WHALING INDUSTRY

3.36 In 1987, Japan restructured its whaling industry to implement “scientific” whaling. In summary, a new company called Kyodo Senpaku Kaisha Ltd (“Kyodo Senpaku”) was established to undertake the whaling and to distribute the whale meat, while the Institute of Cetacean Research was established to undertake the “scientific research”. Kyodo Senpaku and the Institute of Cetacean Research were formally established as new entities in 1987 but both organisations were, in different forms, key participants in the whaling industry up to that point. The commencement of “scientific” whaling enabled Japan’s pelagic whaling fleet to continue whaling in the Southern Ocean without interruption, albeit at a reduced level, following Japan’s acceptance of the moratorium on commercial whaling.

3.37 The following Sections set out the role, organisational status and relevant history of Kyodo Senpaku and the Institute of Cetacean Research, as well as the roles of key Government agencies. As outlined below, it is evident that there are close and long-standing links between each of these organisations.

(1) Kyodo Senpaku

3.38 *Role:* Kyodo Senpaku owns and operates Japan’s pelagic whaling fleet, and provides the vessels and crew for whaling operations under JARPA II (as well as, previously, under JARPA). Kyodo Senpaku also has undertaken many, though not all, of Japan’s “scientific” whaling operations under its Japanese Whale Research Program under Special Permit in the Northwest Pacific, Second Phase

(“JARPN II”) program.²³⁸ In addition to undertaking whaling, Kyodo Senpaku manages the market distribution and sale of whale meat on commission pursuant to contractual arrangements with the Institute of Cetacean Research.²³⁹ Revenue from these sales constitutes Kyodo Senpaku’s predominant income.²⁴⁰

3.39 *Organisational status and history:* Kyodo Senpaku was established on 5 November 1987.²⁴¹ The company is the direct successor of Kyodo Hogei, which was Japan’s main pelagic whaling company in the period from 1976 to 1987. In particular, the majority of Kyodo Senpaku’s staff, as well as valuable assets including a factory ship (the *Nisshin-Maru*) and various whale catcher boats, were transferred directly from Kyodo Hogei to Kyodo Senpaku. Similarly, the directors of Kyodo Senpaku were drawn from the board of Kyodo Hogei. In addition, the shareholders in Kyodo Hogei (which included three of Japan’s largest fishing companies) became the major shareholders in the successor company Kyodo Senpaku on its establishment.²⁴² “Scientific” whaling enabled Japan’s pelagic whaling fleet (now owned by Kyodo Senpaku) to continue whaling in the Southern Ocean without interruption.

3.40 Ownership of Kyodo Senpaku changed substantially in 2006, when shares were transferred at no cost from the private fishing companies which formerly owned it to five so-called “public interest” corporations, each of which received a

²³⁸ In particular, some whaling operations in the Northwest Pacific in one coastal component of JARPN II are undertaken by coastal whaling companies, rather than Kyodo Senpaku.

²³⁹ Kyodo Senpaku’s role in the sale and distribution of whale meat is set out further in Section II.C of this Chapter below.

²⁴⁰ Kyodo Senpaku also has generated income from undertaking other vessel chartering work for the Government of Japan, including for example marine surveys on commission for Government.

²⁴¹ Government of Japan, Tokyo Legal Affairs Bureau Nakano Branch, *Certified Record of All Historical Register Particulars: Kyodo Senpaku Kaisha Ltd., Corporate Registration No. 0100-01-041436* (22 December 2010), 1 [Annex 109].

²⁴² Information on the organisational history of Kyodo Senpaku is provided in S Ward, *Biological Samples and Balance Sheets* (Institute of Cetacean Research, 1992), 10, 15 [Annex 112].

19.4% stake.²⁴³ One of these new shareholders is the Institute of Cetacean Research.²⁴⁴ Another new shareholder is the Shimonoseki Marine Sciences Academy, which is part of the Shimonoseki City municipality (Shimonoseki City has close links with Japan’s Southern Ocean whaling).²⁴⁵ The remaining 3% of shares in Kyodo Senpaku are now owned by the directors of the company.²⁴⁶

3.41 The decision of the private fishing companies to divest their ownership of Kyodo Senpaku has been explained as a response to the declining demand for whale meat and to concerns about their international reputation being damaged by their association with whaling.²⁴⁷ The official explanation given was that the decision was taken “in view of the scientific and public-interest nature of the activities *now* carried out by our company” [emphasis added],²⁴⁸ a surprising

²⁴³ “Kyodo Senpaku: 980 Shares Each to Five Foundations in Total Share Transfer”, *Nikkei Sangyo Shimbun*, 4 July 2006, 18 [Annex 132].

²⁴⁴ Kyodo Senpaku Kaisha, Ltd, “Subject: Changes in the Shareholder Composition”, (Press Release, 24 March 2006) at Japan Whaling Association website, <<http://www.whaling.jp/english/articles/060324news.html>> on 9 March 2011 [Annex 115].

²⁴⁵ “Shimonoseki City Operator of Shimonoseki Kaikyokan Aquarium Becomes Scientific Whaling Major Shareholder; City to Support Re-start of Commercial Whaling”, *Nihon Keizai Shimbun – Regional Economy Section: Chugoku A*, 4 July 2006, 11 [Annex 131].

²⁴⁶ “Kyodo Senpaku: 980 Shares Each to Five Foundations in Total Share Transfer”, *Nikkei Sangyo Shimbun*, 4 July 2006, 18 [Annex 132].

²⁴⁷ For example the seafood products of Nippon Suisan’s internationally affiliated companies in the United States and Europe were exposed to international boycott campaigns because of the company’s involvement in whaling, and Nippon Suisan President, Naoya Gakizoe, explained that “[o]ur very involvement in whaling leads to business risks”: K Nakano, “To Protect Whale Eating Culture, The Japan Fisheries Agency Supports A Meat Wholesaler to Develop Sales Channels Targeting School Lunches”, *Nikkei Sangyo Shimbun*, 29 May 2006, 21 [Annex 130]. See also K Oyamada, “Commentary: Difficult Situation Reflected in Whale Meat Consumption”, *Nishi Nippon Shimbun*, 15 June 2008 (morning edition), 12 [Annex 139].

²⁴⁸ Kyodo Senpaku Kaisha, Ltd, “Subject: Changes in the Shareholder Composition”, (Press Release, 24 March 2006) at Japan Whaling Association website, <<http://www.whaling.jp/english/articles/060324news.html>> on 9 March 2011 [Annex 115].

explanation given that the company had purportedly been conducting “scientific research” in the public interest for the previous 19 years.

(2) Institute of Cetacean Research

3.42 *Role*: The Institute of Cetacean Research is authorised by the Government of Japan to implement so-called “scientific” whaling.²⁴⁹ Pursuant to the special permits issued by the Ministry of Agriculture, Forestry and Fisheries, the Institute of Cetacean Research is permitted to kill specified numbers of whales “for scientific purposes”.²⁵⁰ The Institute generates the bulk of its revenue, and largely covers the expenses of continued whaling operations, through the commercial sale of whale meat “by-products” from this “research”. The Institute has a key role in the distribution and public promotion of whale meat.²⁵¹

3.43 *Organisational status and history*: Up to 1987, the Institute was known as the Whales Research Institute and was part of the Japan Whaling Association, the industry representative body for the whaling industry.²⁵² In 1987, the Institute

²⁴⁹ The Institute’s responsibility for implementation of “scientific” whaling was set out in Guidelines issued on 17 December 1987 by order of the Administrative Vice-Minister for Agriculture, Forestry and Fisheries: Government of Japan, *Cetacean Research Capture Project Implementation Guidelines*, Directive issued by order of the Administrative Vice-Minister for Agriculture, Forestry and Fisheries, 62 Sea Fisheries No. 3775, (17 December 1987), para. 2 [Annex 100]. As noted below, this document also sets out the role of the Japan Fisheries Agency in the program.

²⁵⁰ See, for example, Special Permit No. 22-SUIKAN-1577 of 29 November 2010 [Annex 87], granted to the Institute of Cetacean Research, which authorises within a particular area the killing of 850 Antarctic minke whales (or up to 935 “if it is so required for the purpose to implement [sic] the research”), 50 fin whales and 50 humpback whales.

²⁵¹ The Institute of Cetacean Research’s role in the promotion and distribution of whale meat is set out in Section II.C, below.

²⁵² Information on the organisational history of the Institute of Cetacean Research is provided in J Morikawa, *Whaling in Japan: Power, Politics and Diplomacy* (Columbia University Press, 2009), 37-38.

split from the Japan Whaling Association²⁵³ and, with the addition of further personnel from the dissolved whaling company, Kyodo Hogeï, was re-established in its current form pursuant to a Deed of Endowment with the Ministry of Agriculture, Forestry and Fisheries.²⁵⁴ The Deed gives the Government a broad degree of control over the Institute’s activities,²⁵⁵ and the Institute works closely with the Japan Fisheries Agency in developing and implementing Japan’s “scientific” whaling.

(3) Links between key participants in the whaling industry

3.44 Building on its formal historical links with the Japan Whaling Association and Kyodo Hogeï, the Institute of Cetacean Research has continued to work closely with participants in the whaling industry in the implementation of “scientific” whaling. The Institute and Kyodo Senpaku work closely in undertaking whaling and (as outlined further below) in the subsequent sale and distribution of whale meat. Each organisation shares a common interest in the continuation of Japanese “scientific” whaling and the maintenance of Japan’s whaling industry.

3.45 In order to facilitate the commencement of “scientific” whaling, in 1987 Kyodo Senpaku provided a “donation” of some ¥1.25 billion (approximately

²⁵³ The Japan Whaling Association was reformed in 1988 and continues to represent Japan’s whaling industry.

²⁵⁴ *Institute of Cetacean Research (Juridical Foundation) - Deed of Endowment* (30 October 1987 as amended on 20 October 1999), at Institute of Cetacean Research website, <<http://www.icrwhale.org/kifu.pdf>> on 16 April 2011 [Annex 99].

²⁵⁵ For example, under the Deed of Endowment the approval of the Minister for Agriculture, Forestry and Fisheries is required before the Institute may undertake certain activities including finalising its Business and Operations Statement [Article 9] and disposing of certain “Basic Assets” or providing them as collateral [Article 10]; *Ibid.* Under Article 14 the Institute is required to submit detailed annual business plans to the Minister for Agriculture, Forestry and Fisheries: *Ibid.*, Article 14.

US\$8.6 million) to fund the establishment of the Institute.²⁵⁶ Through owning 19.4% of Kyodo Senpaku shares,²⁵⁷ the Institute now holds a direct financial stake in the profitability and long-term viability of Kyodo Senpaku.

3.46 The close links between the Institute of Cetacean Research and Kyodo Senpaku and the Japan Whaling Association are fostered by senior executive officers having positions at two or more organisations. For example, the current Director-General of the Institute of Cetacean Research, Yoshihiro Fujise, was appointed a Director of Kyodo Senpaku on 28 January 2010.²⁵⁸ Another current Director of the Institute,²⁵⁹ Kazuo Yamamura, is the President of Kyodo Senpaku and current Vice-President of the Japan Whaling Association.²⁶⁰ As of 30 September 2010, Makato Ito was a Director of the Institute of Cetacean Research as well as, simultaneously, both Kyodo Senpaku and the Japan Whaling Association.²⁶¹ The organisations share the same address in Tokyo.

²⁵⁶ S Ward, *Biological Samples and Balance Sheets*, (Institute of Cetacean Research, 1992), 16 [Annex 112].

²⁵⁷ See Section II.A(1) above.

²⁵⁸ Government of Japan, Tokyo Legal Affairs Bureau Nakano Branch, *Certified Record of All Historical Register Particulars: Kyodo Senpaku Kaisha Ltd., Corporate Registration No. 0100-01-041436*, (22 December 2010), 4 [Annex 109].

²⁵⁹ Institute of Cetacean Research, *Board Members* (16 September 2009), at Institute of Cetacean Research website, <<http://www.icrwhale.org/YakuinList.pdf>> on 14 January 2011 [Annex 121].

²⁶⁰ “Three Whaling-Related Organisations: Promoting Whale Meat by Strengthening the Sales Structure”, *Minato Shimbun*, 24 January 2011, 6 [Annex 152].

Kazuo Yamamura was also, previously, a leading member of the Institute of Cetacean Research’s “research” personnel in JARPA: in particular, in 1989/90, Yamamura was “cruise leader” with responsibility for “general management of the scientific researches”: see Y Fujise *et al.*, *Cruise Report of the Research on Southern Minke Whales in 1989/90 under the Japanese Proposal to the Scientific Permit*, SC/42/SHMi25, (Appendix 2), 55.

²⁶¹ Institute of Cetacean Research, *FY2009 Business Report* (30 September 2010) at Institute of Cetacean Research website, <<http://www.icrwhale.org/H21jigyo.pdf>> on 16 April 2011, section 4(2), “Directors and Council Members” [Annex 123]; Government of Japan, Tokyo Legal Affairs Bureau Nakano Branch, *Certified Record of All Historical Register Particulars: Kyodo Senpaku Kaisha Ltd., Corporate Registration No. 0100-01-041436*, (22 December 2010), 2 [Annex 109].

3.47 The Institute of Cetacean Research, Kyodo Senpaku and the Japan Whaling Association also regularly take joint political positions on Japan's whaling policy, which reflect their common interest in the maintenance and expansion of "scientific" whaling. On 10 June 2010, for example, heads of each organisation, as well as the Chairman of the Japan Small-Type Whaling Association, presented a joint petition to the Japanese Government.²⁶² The heads of each organisation have also regularly held joint "New Year's press conferences" at which they outline their mutual objectives and interests over the coming year.²⁶³

(4) The Japan Fisheries Agency and the Ministry of Agriculture, Forestry and Fisheries

3.48 The Japan Fisheries Agency and the Ministry of Agriculture, Forestry and Fisheries have primary bureaucratic responsibility for Japan's "scientific" whaling within the Government of Japan. In 1987, the Administrative Vice-Minister for the Ministry issued the *Cetacean Research Capture Project Implementation Guidelines* setting out basic responsibilities for the conduct of Japan's "scientific research".²⁶⁴ Each year, the Minister for Agriculture, Forestry and Fisheries issues special permits to the Institute of Cetacean Research stipulating the

²⁶² "Whaling Issue Petitions", *Nikkan Suisan Keizai Shimbun*, 10 June 2010, 3 [Annex 146].

²⁶³ The most recent such press conference was held on 20 January 2011, with Yoshihiro Fujise, President of the Institute of Cetacean Research and Kazuo Yamamura, who is both Chief Executive Officer of Kyodo Senpaku and Vice-President of the Japan Whaling Association: "Three Whaling-Related Organisations: Promoting Whale Meat by Strengthening the Sales Structure", *Minato Shimbun*, 24 January 2011, 6 [Annex 152].

²⁶⁴ Government of Japan, *Cetacean Research Capture Project Implementation Guidelines*, Directive issued by order of the Administrative Vice-Minister for Agriculture, Forestry and Fisheries, 62 Sea Fisheries No. 3775, (17 December 1987) [Annex 100].

maximum number of whales that the fleet is permitted to take under its “scientific” whaling programs.²⁶⁵

3.49 The Japan Fisheries Agency, an external arm of the Ministry of Agriculture, Forestry and Fisheries, is responsible for the overall administration of Japan’s “scientific” whaling. Under the Guidelines referred to in the previous paragraph, the Japan Fisheries Agency is responsible for providing “the necessary direction and supervision for implementation” of the “research” program, while the Institute of Cetacean Research is responsible for the actual “implementation” of the program.²⁶⁶ The Guidelines also provide that the Director-General of the Japan Fisheries Agency is responsible for stipulating the “specific survey content and implementation methods”.²⁶⁷ The Guidelines therefore give the Japan

²⁶⁵ The special permits issued by Japan in respect of JARPA II form Annexes 82 to 87 of this *Memorial*: Special Permit No. 17-SUIKAN-2389 of 1 November 2005 [Annex 82]; Special Permit No. 18-SUIKAN-2610 of 13 November 2006 [Annex 83]; Special Permit No. 19-SUIKAN-1911 of 7 November 2007 [Annex 84]; Special Permit No. 20-SUIKAN-1727 of 5 November 2008 [Annex 85]; Special Permit No. 21-SUIKAN-1605 of 12 November 2009 [Annex 86]; Special Permit No. 22-SUIKAN-1577 of 29 November 2010 [Annex 87], (collectively, “*JARPA II Special Permits*”).

In respect of Japan’s whaling under JARPA, Japan issued the following permits: 1987 [copy of original not available; see IWC Circular Communication RG/VJH/17315, “Special Permit – Japan”, 17 December 1988]; Special Permit No. 63-SUIKAI-4084 of 16 December 1988; Special Permit No. 1-SUIKAI-3046 of 4 November 1989; Special Permit No. 2-SUIKAI-3077 of 22 November 1990; Special Permit No. 3-SUIKAI-2694 of 13 November 1991; Special Permit No. 4-SUIKAI-2790 of 4 November 1992; Special Permit No. 5-SUIKAI-2582 of 9 November 1993; Special Permit No. 6-SUIKAI-2580 of 7 November 1994; Special Permit No. 7-SUIKAI-2315 of 30 October 1995; Special Permit No. 8-SUIKAI-2116 of 5 November 1996; Special Permit No. 9-SUIKAN-194 of 5 November 1997; Special Permit No. 10-SUIKAN-2808 of 4 November 1998; Special Permit No. 11-SUIKAN-2609 of 4 November 1999; Special Permit No. 12-SUIKAN-2421 of 15 November 2000; Special Permit No. 13-SUIKAN-2302 of 29 October 2001; Special Permit No. 14-SUIKAN-2513 of 29 October 2002; Special Permit No. 15-SUIKAN-2348 of 29 October 2003; Special Permit No. 16-SUIKAN-2402 of 9 November 2004.

²⁶⁶ Government of Japan, *Cetacean Research Capture Project Implementation Guidelines*, Directive issued by order of the Administrative Vice-Minister for Agriculture, Forestry and Fisheries, 62 Sea Fisheries No. 3775, (17 December 1987), paras. 2-4 [Annex 100].

²⁶⁷ *Ibid.*, para. 3 [Annex 100].

Fisheries Agency detailed responsibility for the “scientific program”, to the point of stipulating targets and methods of “research”. The Japan Fisheries Agency also oversees the whale meat sales and distribution process, pursuant to a set of subsidiary guidelines issued by the Administrative Vice-Minister for Agriculture, Forestry and Fisheries.²⁶⁸

B. OVERVIEW OF JAPAN’S “SCIENTIFIC” WHALING IN THE SOUTHERN OCEAN

3.50 This Section outlines when, where and how Japan conducts its special permit whaling and the unprecedented scale of such hunting under JARPA and JARPA II. The subsequent Sections detail how Japan kills and processes whales in its purported “research” and how the meat is processed, sold and distributed to consumers in Japan.

3.51 Japan has undertaken annual whaling operations in the Southern Ocean continuously since it commenced JARPA in January 1988. JARPA concluded in 2005. That same year, Japan launched a second phase: JARPA II,²⁶⁹ the subject of these proceedings. Japan specified that JARPA II would be reviewed in 2011 (after six years).²⁷⁰

3.52 The whale species targeted by Japan under JARPA II – the Antarctic minke whale, humpback whale and fin whale – are highly migratory. These species spend part of the year in temperate and sub-tropical waters where they

²⁶⁸ Government of Japan, *Re: Implementation of the Cetacean Research Capture Project*, Directive of the Director-General of the Japan Fisheries Agency, 1987 Sea Fisheries No. 3777, (17 December 1987 as updated on 28 March 2007) [Annex 101].

²⁶⁹ Government of Japan, “Plan for the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) – Monitoring of the Antarctic Ecosystem and Development of New Management Objectives for Whale Resources”, 2005, SC/57/O1 (“*JARPA II proposal*”) [Annex 105].

²⁷⁰ *Ibid.*, 13 [Annex 105].

breed and calve, before migrating thousands of kilometres to the Southern Ocean, where they spend the Southern Hemisphere summer feeding on Antarctic krill.²⁷¹ Japan conducts its lethal “research” while the whales are in their polar feeding grounds, between November and April.²⁷²

3.53 The area in which Japan conducts JARPA II spans 4,560 nautical miles or 8,450 kilometres of ocean at around 65°S. This is entirely within the Southern Ocean Sanctuary (see Figure 5). Not coincidentally, Japan’s areas of whaling under JARPA II to a large extent overlap with the productive whaling grounds in which Japan conducted much of its commercial whaling before 1988.²⁷³ The particular whaling grounds under JARPA II alternate each season, with continued whaling each season in an overlapping area in the middle.²⁷⁴ This is depicted in Figure 5; Japan alternates between whaling in areas A and B in one year and in areas B and C the next year.²⁷⁵

²⁷¹ *de la Mare et al., Antarctic Baleen Whale Populations* [Appendix 1].

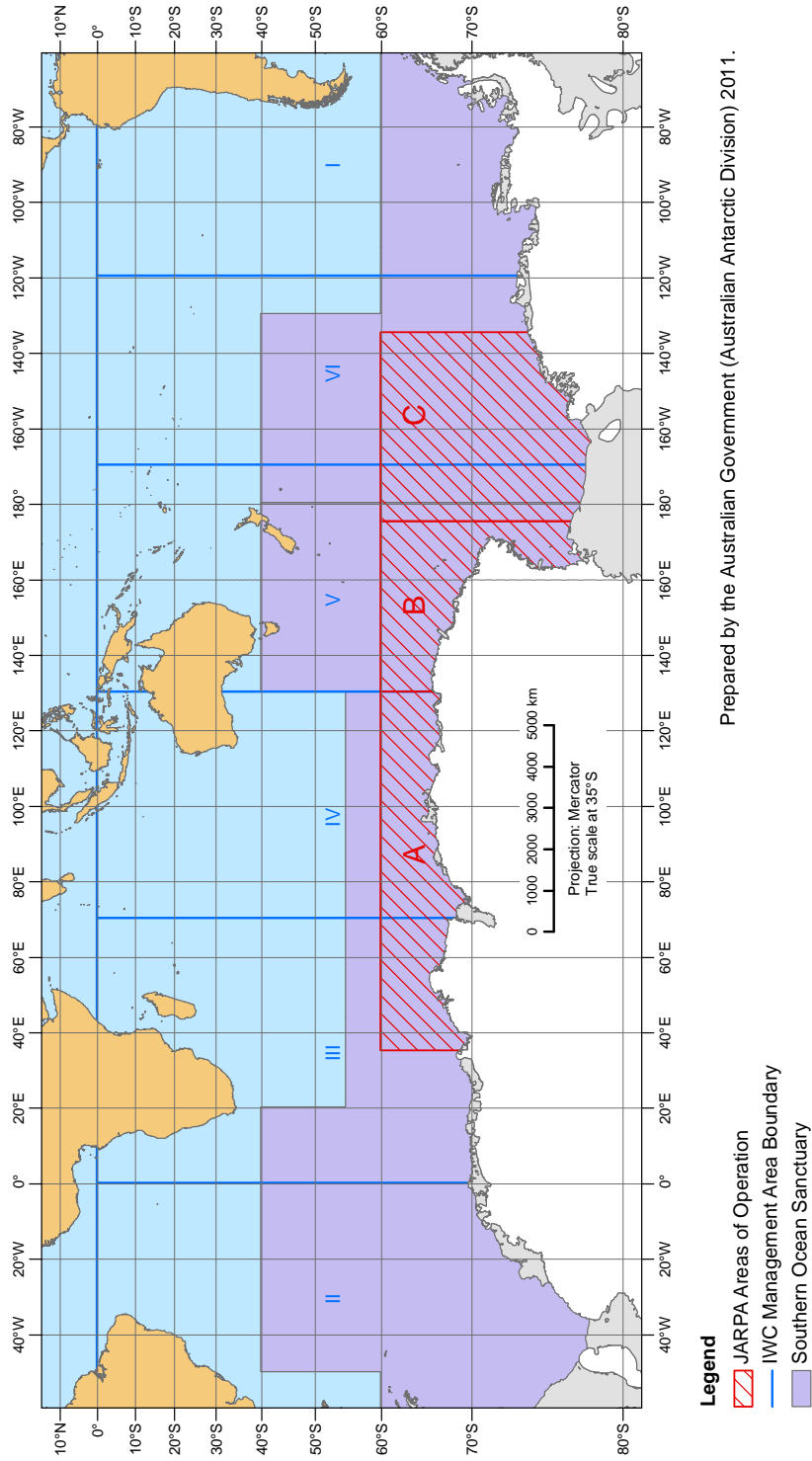
²⁷² The permits issued by Japan under JARPA II authorised whaling from 8 November 2005 to 18 April 2006; from 15 November 2006 to 11 April 2007; from 12 November 2007 to 16 April 2008; from 12 November 2008 to 30 April 2009; from 19 November 2009 to 30 April 2010; and from 2 December to 31 March 2011: *JARPA II Special Permits* [Annexes 82 to 87]. However, Japan conducts most of its whaling in January and February, which it describes as the “peak migration season” for Antarctic minke whales: S Nishiwaki *et al.*, “Review of general methodology and survey procedure under the JARPA”, SC/D06/J2, 2.

²⁷³ As shown in Figure 5, JARPA II is largely conducted in IWC Areas IV and V. Between 1978/79 and 1985/86, the Japanese fleet caught more than twice the number of minke whales in Areas IV and V than its catch in Areas I, II, III and VI combined (16,534 whales as opposed to 7,670 whales). Upon commencing JARPA, Japan claimed that it was “more efficient” to continue whaling in this area: *JARPA proposal, 1987*, 8 [Annex 156].

²⁷⁴ *JARPA II proposal*, 13 [Annex 105].

²⁷⁵ Japan broke with this pattern in the most recent season (2010/11) when it issued a special permit authorising takes in areas A, B and C: Special Permit No. 22-SUIKAN-1577 of 29 November 2010 covered the entire area of “the waters south of 60 S, east of 35 E, west of 145 W” [Annex 87].

Figure 5 Japan's Areas of Whaling Operations under JARPA II



Prepared by the Australian Government (Australian Antarctic Division) 2011.

- Legend**
- JARPA Areas of Operation
 - IWC Management Area Boundary
 - Southern Ocean Sanctuary

3.54 Up to the end of the 2010/11 whaling season, Japan killed over 10,000 whales under JARPA and JARPA II, over 24 years, including nearly 3,300 whales under the first six whaling seasons of JARPA II. This number of whales killed under both programs, as reported by Japan, is illustrated in Figure 6.²⁷⁶

²⁷⁶ Figure 6 reflects the number of whales killed by Japan under JARPA and JARPA II as reported by Japan in its various Cruise Reports and a Japan Fisheries Agency press release detailing catches in the 2010/11 season, as follows. In respect of annual catches by Japan from the 1987/88 season to the 2004/05 season, see: H Kato *et al.*, *Preliminary Report of the Feasibility Study on Southern Minke Whale under the Japanese Proposal to the Special Permit*, SC/40/Mi18; H Kato *et al.*, *Cruise Report and Preliminary Analyses of the Feasibility Study on Southern Minke Whales in 1988/89 under the Japanese Proposal to the Scientific Permit*, SC/41/SHMi14; Y Fujise *et al.*, *Cruise Report of the Research on Southern Minke Whales in 1989/90 under the Japanese Proposal to the Scientific Permit*, SC/42/SHMi25; F Kasamatsu *et al.*, *Report of the 1990/91 Southern Minke Whale Research Cruise under Scientific Permit in Area V*, SC/43/Mi11; Y Fujise *et al.*, *Cruise Report of the 1991/92 Japanese Research under the Special Permit for Southern Hemisphere Minke Whales*, SC/44/SHB11; Y Fujise *et al.*, *Cruise Report of the 1992/93 Japanese Research under the Special Permit for Southern Hemisphere Minke Whales*, SC/45/SHBa12; S Nishiwaki *et al.*, *Report of the 1993/94 Cruise of the Japanese Whale Research Programme Under Special Permit in the Antarctic Area IV*, SC/46/SH15; S Nishiwaki *et al.*, *Report of the 1994/95 Cruise of the Japanese Whale Research Programme under Special Permit (JARPA) in the Antarctic Area V*, SC/47/SH5; S Nishiwaki *et al.*, *Report of the 1995/96 Japanese Whale Research Programme under Special Permit in the Antarctic (JARPA) in Area IV and eastern part of Area III*, SC/48/SH12; S Nishiwaki *et al.*, *Report of the 1996/97 Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) in Area V and western part of Area VI*, SC/49/SH10; H Ishikawa *et al.*, *Cruise Report of the Japanese Whale Research Program under a Special Permit in the Antarctic (JARPA) in Area IV and Eastern Part of Area III in 1997/98*, SC/50/CAWS8; S Nishiwaki *et al.*, *Cruise Report of the Japanese Whale Research Program under a Special Permit in the Antarctic (JARPA) Area V and Western Part of Area VI in 1998/99*, SC/51/CAWS10; H Ishikawa *et al.*, *Cruise Report of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) Area IV and Eastern Part of Area III in 1999/2000*, SC/52/O20; S Nishiwaki *et al.*, *Cruise Report of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) Area V and Western Part of Area VI in 2000/2001*, SC/53/O11; H Ishikawa *et al.*, *Cruise Report of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) Area IV and Eastern Part of Area III in 2001/2002*, SC/54/O18; S Nishiwaki *et al.*, *Report of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) Area V and Western Part of Area VI in 2002/2003*, SC/55/O6; H Ishikawa *et al.*, *Cruise Report of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) Area IV and Eastern Part of Area III in 2003/2004*, SC/56/O12; S Nishiwaki *et al.*, *Cruise Report of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) Area V and Western Part of Area VI in 2004/2005*, SC/57/O5. These Cruise Reports are found at: Institute of Cetacean Research website, “Cruise Report of the

Figure 6 – Whales Killed under JARPA and JARPA II

| | |
|--|----------------------------|
| Whales killed under JARPA (minke whales only) | 6,777²⁷⁷ |
| Whales killed under JARPA II (all species) | |
| <i>Minke whales</i> | 3264 |
| <i>Fin whales</i> | 19 |
| <i>Humpback whales</i> | 0 |
| All species | 3,283 |
| Whales killed under JARPA and JARPA II (all species) | 10,060 |

3.55 Japan’s Southern Ocean whaling has expanded progressively since 1988. Until the 1994/95 season, Japan took an average of 303 minke whales each season. From the 1995/96 season until the conclusion of JARPA in the 2004/05

Japanese Whale Research Program under Special Permit in the Antarctic (JARPA/JARPA II)”, <<http://www.icrwhale.org/CruiseReportJARPA.htm>> on 30 March 2011.

In respect of annual catches from the 2005/06 to 2009/10 seasons, see: S Nishiwaki *et al.*, *Cruise Report of the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) in 2005/2006 – Feasibility Study*, SC/58/07; S Nishiwaki *et al.*, *Cruise Report of the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) in 2006/2007 – Feasibility Study*, SC/59/04; H Ishikawa *et al.*, *Cruise Report of the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) in 2007/2008*, SC/60/04; S Nishiwaki *et al.*, *Cruise Report of the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) in 2008/2009*, SC/61/03; S Nishiwaki *et al.*, *Cruise Report of the Japanese Whale Research Program under Special Permit in the Antarctic – Second Phase (JARPA II) in 2009/2010*, SC/62/03 (collectively, “*JARPA II Cruise Reports*”. Individual Cruise Reports for particular seasons of JARPA II are cited as, for example, “*JARPA II Cruise Report 2008/09*”). [Annexes 57 to 61].

In respect of catches in the 2010/11 season, see Government of Japan, Japan Fisheries Agency, “Results of the 24th Antarctic Ocean Cetacean Capture Survey (JARPA II) in FY2010” (Press Release, 21 March 2011) at Ministry of Agriculture, Forestry and Fisheries website, <<http://www.jfa.maff.go.jp/j/press/enyou/110321.html>> on 18 April 2011 [Annex 110].

²⁷⁷ There is a discrepancy between this figure and the IWC records, which state that 6,793 minke whales were killed under JARPA. The latter figure is cited in *de la Mare et al.*, *Antarctic Baleen Whale Populations* [Appendix 1].

season Japan increased its target takes to 400 minke whales (plus or minus 10%) and took an average of just over 435 minke whales each season.

3.56 Under JARPA II, Japan has more than doubled its target take to 850 minke whales (plus or minus 10%).²⁷⁸ In addition, Japan has expanded the range of species targeted to include fin and humpback whales. Japan issues permits for an annual take of 50 animals from each of these species.²⁷⁹ In the six whaling seasons from 2005/06 to 2010/11 under JARPA II Japan took an average of around 544 minke whales per season and a total of 19 fin whales.

3.57 Japan has not taken any humpback whales to date and has issued statements before each particular season explaining that it will not take humpback whales for diplomatic reasons. However, Japan has not amended the JARPA II plan to remove humpback whales from the list of targeted species and it issues permits each year authorising their killing.

3.58 Japan conducts its whale hunts under JARPA II using the same methods that it employed under JARPA.²⁸⁰ Japan's fleet is spearheaded by a factory ship, the *Nisshin-Maru*, which is the largest vessel and is used to process killed whales and store whale meat. The *Nisshin-Maru* is accompanied by a number of smaller vessels that are used for chasing and harpooning whales ("whale catcher boats") and conducting sighting surveys. Between 2006/07 and 2008/09, five such

²⁷⁸ *JARPA II proposal*, 1 [Annex 105]; see also *JARPA II Special Permits* [Annexes 82 to 87].

²⁷⁹ This is the target take for the full JARPA II program, which commenced in 2007. During the preceding two-year "feasibility study", Japan authorised takes of 10 fin whales only and did not authorise any take of humpback whales: *JARPA II proposal* [Annex 105], 1; see also *JARPA II Special Permits* [Annexes 82 to 87].

²⁸⁰ Japan states that its methods in JARPA II are "basically the same as the previous JARPA with some modifications" which are not specified and not otherwise apparent: *JARPA II proposal*, 1 [Annex 105].

smaller vessels were used in whaling under JARPA II, although this was reduced to four in 2009/10 and three in the most recent season, 2010/11.²⁸¹

3.59 Japan divides the whaling area into units and allocates a target number of whales to be caught in each unit. Japan claims that its whale catcher boats then “sample” (that is, kill) one or two whales in each school sighted.²⁸² To kill a whale targeted for “sampling”, a catcher boat engages in pursuit and fires a harpoon tipped with an explosive grenade.²⁸³ If the whale is struck, the grenade detonates inside it. Most whales are not killed instantaneously; the process can take up to 25 minutes.²⁸⁴ In addition, some whales are struck by harpoons but not ultimately captured by the catcher boat (these whales are referred to as being “struck and lost”).²⁸⁵

3.60 The whalers secure the animal to the side of the catcher boat using a rope attached to the harpoon. If the whale is not dead at the end of this retrieval process it is shot in the brain with a rifle.²⁸⁶ The dead whales are then pulled to the factory ship, the *Nisshin-Maru*, and hauled on board through a slipway at the rear of the vessel. The *Nisshin-Maru* is not adequately equipped to haul on board whales above around 18 metres; for example, in the 2006/07 season “[t]he head and part of the body of one fin whale was torn off and sank into the sea” as it was

²⁸¹ The vessels that conduct the whale hunt each year are recorded in the special permits issued: *JARPA II Special Permits* [Annexes 82 to 87].

²⁸² Japan states that “[a] maximum of two minke whales per school sighted” are sampled: *JARPA II proposal*, 14 [Annex 105].

²⁸³ *JARPA II proposal*, 21 [Annex 105].

²⁸⁴ N Gales *et al.*, (2008) “Is Japan’s whaling humane?” 32 *Marine Policy* 408, 409.

²⁸⁵ See, for example, *JARPA II Cruise Report 2006/2007*, 6, where Japan states that “struck and lost occurred in only 3 cases”.

²⁸⁶ The use of a rifle to kill a whale is illustrated in Photo 3 below. Japan’s special permits authorise the secondary use of a rifle: *JARPA II Special Permits* [Annexes 82 to 87]; see also *JARPA II proposal*, 21 [Annex 105].

pulled aboard the *Nisshin-Maru*.²⁸⁷ Accordingly Japan now only targets smaller-sized fin whales²⁸⁸ (as noted in Chapter 5 of this *Memorial*, this creates biases in Japan's sampling of fin whales, which is one of many concerns raised within the Scientific Committee about Japan's "research").²⁸⁹

3.61 Killing a large animal moving at high speed is difficult and the process may have a range of impacts upon the data that can be collected from the whale. These impacts include damage from the exploding grenade to the body tissues and internal organs or vomiting by the whale which empties its stomach.

3.62 The following photographs, taken by Australian officials in the course of direct observation of Japan's whaling in the Southern Ocean in 2007/08, demonstrate the process.²⁹⁰

²⁸⁷ *JARPA II Cruise Report 2006/07*, 6.

²⁸⁸ For example, in 2009 Japan stated that it only targeted fin whales with an estimated body length less than 18 metres "due to the limitation on NM facility [the *Nisshin-Maru*] for pulling up the animal onboard": S Nishiwaki *et al.*, *Cruise Report of the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) in 2008/2009*, SC/61/03, 4.

²⁸⁹ See Chapter 5, Section II.C(2) below.

²⁹⁰ These photographs were taken by Australian Government officials in February 2008, during a surveillance operation in the Southern Ocean conducted by a Government-chartered vessel, the *MV Oceanic Viking*.

Photo 1: A harpoon gun on one of Japan's whale catcher boats



Photo 2: A whale being harpooned by one of Japan's whale catcher boats



Photo 3: A harpooned whale being hauled to the side of one of Japan's whale catcher boats, while a Japanese whaler aims a rifle at it



Photo 4: A harpooned whale being hauled to the side of one of Japan's whale catcher boats,



Photo 5: A harpooned whale being tied to one of Japan's whale catcher boats



Photo 6: Two harpooned whales tied to one of Japan's whale catcher boats



Photo 7: Two harpooned whales being towed to Japan's factory ship, the *Nisshin-Maru*



Photo 8: A harpooned whale being hauled up the stern slipway of Japan's factory ship, the *Nisshin-Maru*



3.63 After a dead whale is landed on the deck of the *Nisshin-Maru*, the whalers record basic data such as its sex, length, weight and blubber thickness.²⁹¹ The whalers remove the blubber from the whale (a process known as “flensing”), extract certain internal organs (principally its ear canal, stomach and liver, and the ovaries of females and the testes of males) and take samples of other tissues. The whale carcass is then processed (for example, parts are salted or frozen as whale meat for consumption). Kyodo Senpaku crew members have reported that, since Japan expanded its catches from the 2005/06 season under JARPA II, large quantities of lesser quality meat are discarded overboard daily because of limitations in freezer storage capacity.²⁹²

3.64 As stated by Professor Mangel, lethal whaling operations are a “disproportionate focus” of JARPA II.²⁹³ In addition, Japan conducts some non-lethal “research” including sighting surveys, collecting oceanographic measurements such as water and air temperatures, taking photographs of whales, recording rubbish floating in the water, conducting surveys of krill distribution, and taking biopsy samples of various species including blue, fin and humpback whales.

²⁹¹ Japan refers to the activities conducted on the *Nisshin-Maru* as “biological surveys”: S Nishiwaki *et al.*, “Review of general methodology and survey procedure under the JARPA”, SC/D06/J2, 5.

²⁹² The *Asahi Shimbun* reported that a former Kyodo Senpaku crew member stated in 2010 that:

“When too many whales were caught, they just kept throwing the meat overboard into the sea. My fellow crew members and I said to each other that if they have enough to throw overboard they shouldn’t be catching so much in the first place.” The former crew member recalls that, when the target quota rose sharply between 2005 and 2006, “even saleable quality meat was frequently thrown away”.

A Ideta, “Feature: The Greenpeace Theft Trial”, *Chunichi Shimbun*, 26 August 2010 (morning edition), 12 [Annex 149].

This is corroborated in Greenpeace Japan, *Whaling on Trial: Japan's whale meat scandal and the trial of the Tokyo Two*, (August 2010) at <<http://www.greenpeace.org/international/en/publications/reports/whaling-on-trial/>> on 2 March 2011.

²⁹³ Mangel, *Expert Opinion*, para. 5.27 [Appendix 2].

C. PRODUCTION, DISTRIBUTION AND SALE OF WHALE MEAT AND OIL

3.65 Several thousand tonnes of meat are produced annually from Japan's so-called "scientific" whaling. This is illustrated in Figure 7, which shows annual whale meat production from JARPA and JARPA II for those years in which Japan has officially reported its whale meat production.

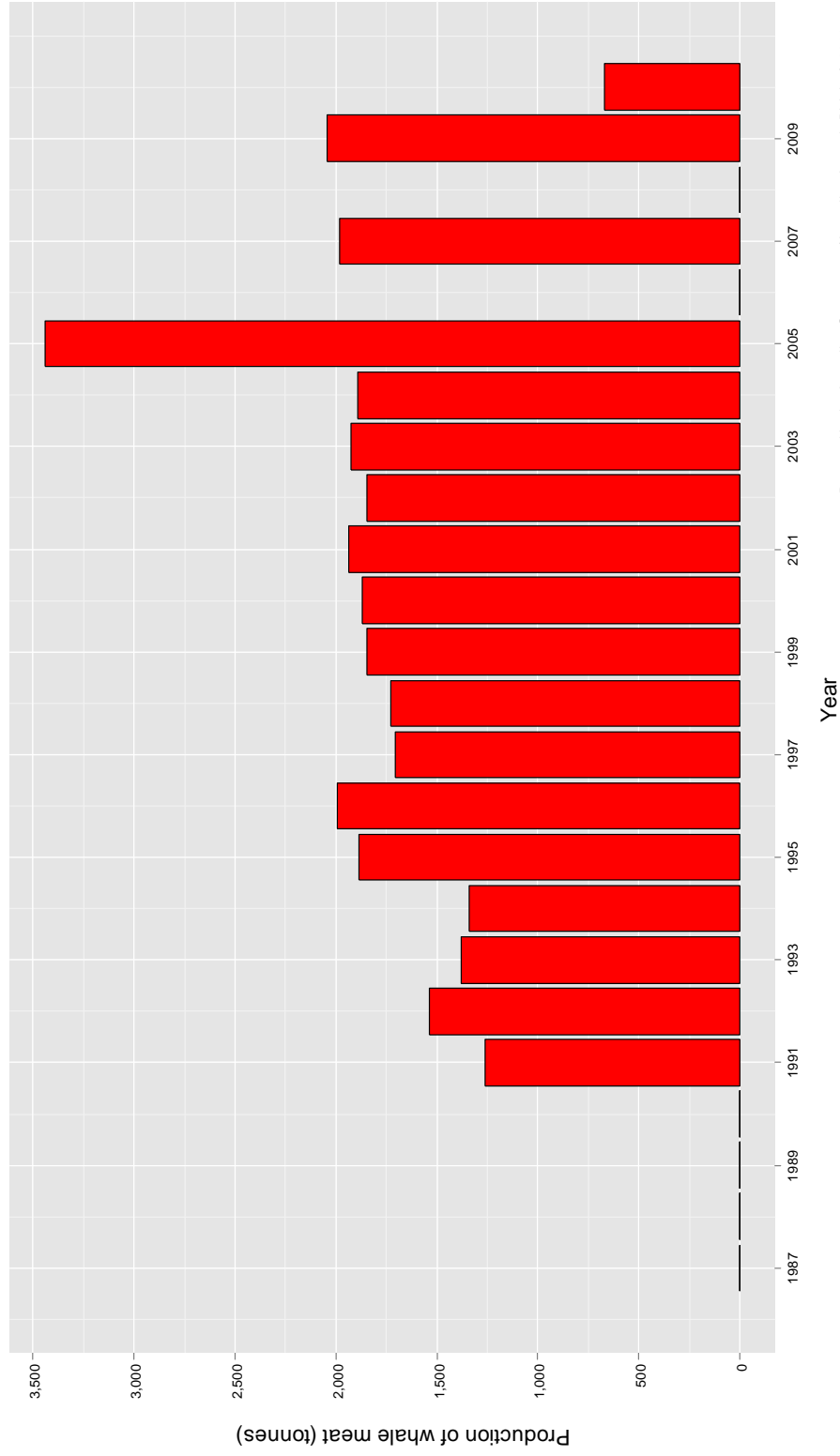
3.66 The authorised distribution of this meat is illustrated in Figure 8. The Institute of Cetacean Research sells meat on consignment through the "Sales Agents", principally Kyodo Senpaku as well as, in recent years, another company called the Geishoku Rabo (the "Whale Cuisine Laboratory").²⁹⁴ Under the 2006/07 "By-Product Consignment Sales Agreement" with Kyodo Senpaku, the Institute of Cetacean Research paid a commission of 5.58% of the sales proceeds (exclusive of consumption tax) to Kyodo Senpaku for its services in distributing the whale meat.²⁹⁵ As illustrated by Figure 8, the meat is then distributed either for "public interest purposes", including to schools, hospitals and for whale meat "education initiatives"; or for "commercial purposes", including to local and wholesale markets. One of the aims of establishing Geishoku Rabo was to develop new sales channels that were not in competition with those of Kyodo Senpaku; in 2006, for example, Geishoku Rabo commenced trial sales of whale meat to livestock producers.²⁹⁶

²⁹⁴ Geishoku Rabo was established in 2006 to promote whale meat sales. It was established with the support of the Japan Fisheries Agency, Kyodo Senpaku and the Institute of Cetacean Research. See Institute of Cetacean Research and Geishoku Rabo, "New organisation for whale meat sales promotion", (Press Release, March 2006) at Japan Whaling Association website, <http://whaling.jp/press/press06_05.html> on 9 March 2011 [Annex 116], and "Japan Fisheries Agency and ICR Establish Whale Meat Retailing Company, Develop New Sales Channels", *Isana* 26 (Japan Whaling Association), 2006 [Annex 117].

²⁹⁵ Institute of Cetacean Research and Kyodo Senpaku Kaisha Ltd, *By-Product Consignment Sales Agreement* (5 June 2007), Article 7 [Annex 118].

²⁹⁶ "Whale meat sales to livestock producers: Targeting non-fisheries sales channels", *Nikkan Minato Shimbun*, 27 November 2006, at Japan Whaling Association website, <<http://www.whaling.jp/news/061127m.html>> on 21 February 2011 [Annex 134].

Figure 7 - Japan's Reported Production of Whale Meat under JARPA and JARPA II*



Prepared by the Australian Government (Australian Antarctic Division), 2011,
based on data reported by Japan. *Data for 1987/88 to 1990/91, 2006/07
and 2008/09 whaling seasons are not available.

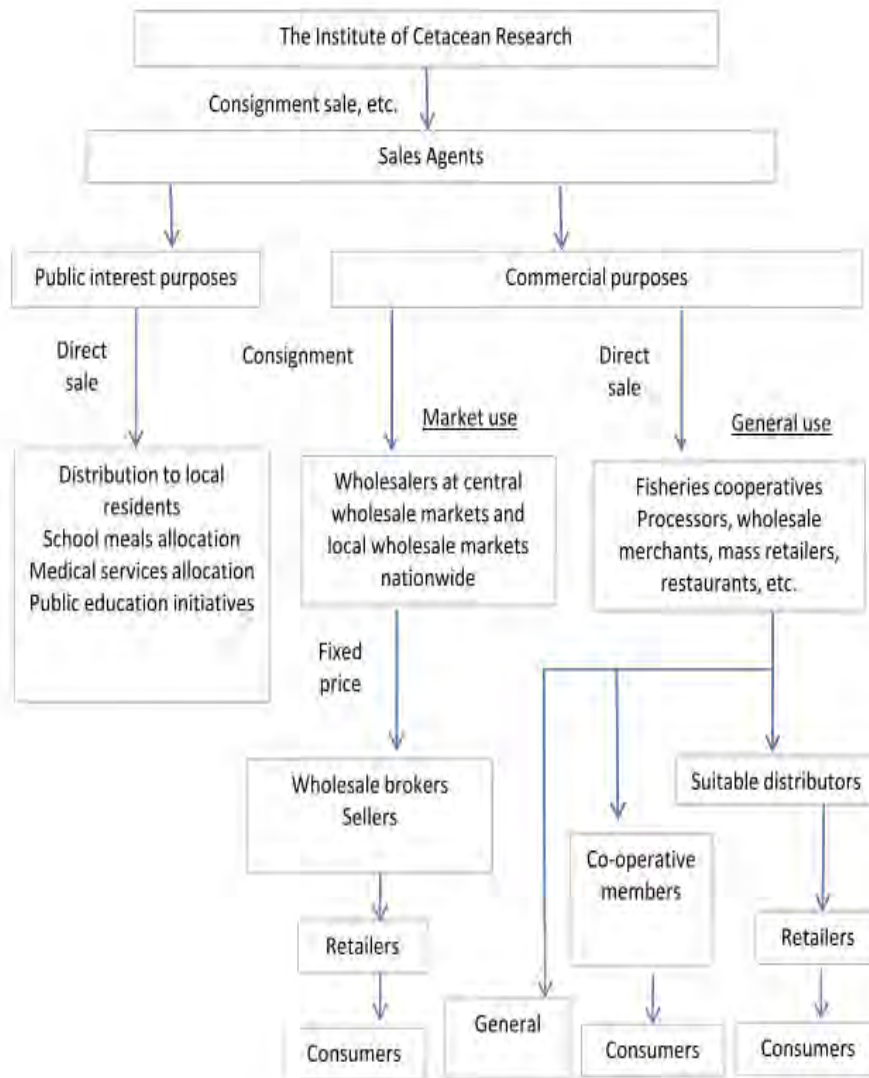
3.67 The authorised distribution of this meat is illustrated in Figure 8. The Institute of Cetacean Research sells meat on consignment through the “Sales Agents”, principally Kyodo Senpaku as well as, in recent years, another company called the Geishoku Rabo (the “Whale Cuisine Laboratory”).²⁹⁷ Under the 2006/07 “By-Product Consignment Sales Agreement” with Kyodo Senpaku, the Institute of Cetacean Research paid a commission of 5.58% of the sales proceeds (exclusive of consumption tax) to Kyodo Senpaku for its services in distributing the whale meat.²⁹⁸ As illustrated by Figure 8, the meat is then distributed either for “public interest purposes”, including to schools, hospitals and for whale meat “education initiatives”; or for “commercial purposes”, including to local and wholesale markets. One of the aims of establishing Geishoku Rabo was to develop new sales channels that were not in competition with those of Kyodo Senpaku; in 2006, for example, Geishoku Rabo commenced trial sales of whale meat to livestock producers.²⁹⁹

²⁹⁷ Geishoku Rabo was established in 2006 to promote whale meat sales. It was established with the support of the Japan Fisheries Agency, Kyodo Senpaku and the Institute of Cetacean Research. See Institute of Cetacean Research and Geishoku Rabo, “New organisation for whale meat sales promotion”, (Press Release, March 2006) at Japan Whaling Association website, <http://whaling.jp/press/press06_05.html> on 9 March 2011 [Annex 116], and “Japan Fisheries Agency and ICR Establish Whale Meat Retailing Company, Develop New Sales Channels”, *Isana* 26 (Japan Whaling Association), 2006 [Annex 117].

²⁹⁸ Institute of Cetacean Research and Kyodo Senpaku Kaisha Ltd, *By-Product Consignment Sales Agreement* (5 June 2007), Article 7 [Annex 118].

²⁹⁹ “Whale meat sales to livestock producers: Targeting non-fisheries sales channels”, *Nikkan Minato Shimbun*, 27 November 2006, at Japan Whaling Association website, <<http://www.whaling.jp/news/061127m.html>> on 21 February 2011 [Annex 134].

Figure 8 – Whale meat “By-Product” Sales Distribution Chain



Source: Institute of Cetacean Research, “2007 Fiscal Year Antarctic Ocean Cetacean Capture Research Program: Request for Authorisation of Sale of Whale Products”, (ICR No. 1026, 22 May 2008), 4 [Annex 119].

3.68 The Institute of Cetacean Research is required to obtain annual approval from the Director-General of the Japan Fisheries Agency to sell whale meat

produced during its “research”.³⁰⁰ The authorised sales period for whale meat produced under JARPA II is around one month from July to August each year,³⁰¹ new “early buyer discount” periods in April and May were introduced in 2010.³⁰² Annual sales prices are set in advance by the Institute of Cetacean Research “under the direction of the [Japan] Fisheries Agency”.³⁰³ Pursuant to the Guidelines issued by the Administrative Vice-Minister for Agriculture, Forestry and Fisheries,³⁰⁴ the Institute is required to report annually to the Japan Fisheries Agency on its sales of whale meat.³⁰⁵

3.69 It is important to note that Figure 8 represents the authorised sales and distribution of whale meat from Japan’s “scientific” whaling. There are also reports of unauthorised transfers and sales of whale meat produced through Japan’s “scientific” whaling. In 2008, reports emerged that significant quantities of whale meat prime cuts were covertly taken from the *Nisshin-Maru* on its return

³⁰⁰ Government of Japan, *Re: Implementation of the Cetacean Research Capture Project*, Directive of the Director-General of the Japan Fisheries Agency, 1987 Sea Fisheries No 3777 (17 December 1987 as updated to 28 March 2007), Article II(1) [Annex 101]; *Special Survey Projects Business and Service Document* (24 November 1988), Article 13(i) [Annex 111].

³⁰¹ For example, see Institute of Cetacean Research, *2007 Fiscal Year Southern Ocean Cetacean Research Capture Program: Report on Sale of Whale Products* (ICR No. 1036, 1 September 2008) [Annex 120].

³⁰² Institute of Cetacean Research, “2009–10 Southern Ocean Research Whaling By-Product Sales” (Press Release, 14 April 2010) at Institute of Cetacean Research website, <<http://www.icrwhale.org/100414ReleaseJp.htm>> on 16 April 2011 [Annex 122].

³⁰³ Institute of Cetacean Research, *Rules for the Processing and Sale of By-Products of the Cetacean Capture Research Program* (ICR No. 570, 12 January 2001 and as amended to 31 May 2006), rule III(3) [Annex 114].

³⁰⁴ Government of Japan, *Cetacean Research Capture Project Implementation Guidelines*, Directive issued by order of the Administrative Vice-Minister for Agriculture, Forestry and Fisheries, (62 Sea Fisheries No. 3775, 17 December 1987), para. 5 [Annex 100]; see also *Special Survey Projects Business and Service Document* (24 November 1988), Article 13(iii) [Annex 111].

³⁰⁵ For example, see Institute of Cetacean Research, *2007 Fiscal Year Antarctic Ocean Cetacean Research Capture Program: Report on Sale of Whale Products* (ICR No. 1036, 1 September 2008) [Annex 120].

from annual Southern Ocean whaling operations.³⁰⁶ The meat was allegedly received by Kyodo Senpaku crew members and Institute of Cetacean Research employees and in many cases sold to local retailers and suppliers in contravention of official rules on the distribution of whale meat. The Institute of Cetacean Research and Kyodo Senpaku reported that under a long-standing practice each of the 215 Kyodo Senpaku crew members and the 26 Institute of Cetacean Research personnel in the fleet had received nearly 10 kilograms of whale meat “gifts”.³⁰⁷ Although it defended these practices, the Institute announced that henceforth its personnel would no longer accept this meat.³⁰⁸ The following year, after the 2009/10 whaling season under JARPA II, Kyodo Senpaku reported publicly that over 1.7 tonnes of whale meat had been distributed to its crew members.³⁰⁹

3.70 Government officials involved in Japan’s “scientific” whaling have also received whale meat “gifts”. In 2010, the Government reprimanded five Japan Fisheries Agency officials who had received whale meat “gifts” from Kyodo Senpaku since around 1999, provided “strong warnings” to two senior

³⁰⁶ “Suspicion Arises over Research Whaling Program. Former Crew Member Says Company Approved”, *Asahi Shimbun*, 15 May 2008 (morning edition), 3 [Annex 138]. See also “Fisheries Agency Personnel Disciplined for Accepting Whale meat. Five Supervisors on Research Whaling Vessel”, *Hokkaido Shimbun*, 23 December 2010, 25 [Annex 150]. Further information about this is provided in Greenpeace Japan, *Whaling on Trial: Japan's whale meat scandal and the trial of the Tokyo Two* (August 2010) at <<http://www.greenpeace.org/international/en/publications/reports/whaling-on-trial/>> on 2 March 2011. Greenpeace Japan also intercepted a package containing over 23 kilograms of *unesu* whale meat (a prime cut) sent to one particular crew member and provided it to Japanese authorities as evidence of alleged embezzlement. Two Greenpeace Japan investigators were subsequently arrested, detained and convicted of theft. Their conviction is currently under appeal.

³⁰⁷ ““No On-selling of Whale Meat”: ICR Investigation Report. Allegations of Unauthorised Removal of Whale Meat”, *Asahi Shimbun*, 19 July 2008 [Annex 140].

³⁰⁸ *Ibid.*

³⁰⁹ Kyodo Senpaku, “Production and handling of souvenirs and dispensations from the 23rd Antarctic Ocean Cetacean Research Capture Program”, (Press Release, 11 May 2010) at Japan Whaling Association website, <<http://whaling.jp/press/press100511.html>> on 9 March 2011 [Annex 124].

officials in connection with the matter, and requested both the Institute of Cetacean Research and Kyodo Senpaku to stop sending such gifts to its officials.³¹⁰ In addition, Japanese Government members and other Diet Members attend large whale meat eating events hosted by the Society for the Protection of Whale Culinary Culture at which they sample prime cuts. The twenty-second annual *Event for the Promotion of Whale Culinary Culture* held in May 2010, for example, included some 600 guests comprising a large number of Diet Members from all political parties, including then Minister for Agriculture, Forestry and Fisheries, Hirotaka Akamatsu.³¹¹

3.71 In addition to the production of whale meat, Japan has also produced whale oil during its Southern Ocean whaling operations. It has used this whale oil as fuel for the *Nisshin-Maru*, the factory ship used in these operations. For example, in each of the whaling seasons from 1993/94 to 1997/98, Japan reported producing between 18 tonnes and 66.7 tonnes of whale oil,³¹² which it reported

³¹⁰ “Fisheries Agency Personnel Disciplined for Accepting Whale meat. Five Supervisors on Research Whaling Vessel”, *Hokkaido Shimbun*, 23 December 2010, 25 [Annex 150]; see also “Fisheries agency warned not to accept whale meat gifts”, *Japan Today*, 24 December 2010, at <<http://www.japantoday.com/category/national/view/fisheries-agency-warned-not-to-accept-whale-meat-gifts>> on 18 April 2011.

³¹¹ “Vows to Fight the Good Fight at IWC Meeting”, *Minato Shimbun*, 24 May 2010, 3 [Annex 144]; “Reaffirmation of Whale Meat Culinary Culture”, *Suisan-Keizai*, 24 May 2010, 6 [Annex 145].

³¹² S Nishiwaki *et al.*, *Report of the 1993/94 Cruise of the Japanese Whale Research Programme Under Special Permit in the Antarctic Area IV*, SC/46/SH15, 28; S Nishiwaki *et al.*, *Report of the 1994/95 Cruise of the Japanese Whale Research Programme Under Special Permit (JARPA) in the Antarctic Area V*, SC/47/SH5, 26; S Nishiwaki *et al.*, *Report of the 1995/96 Japanese Whale Research Programme Under Special Permit in the Antarctic (JARPA) in Area IV and eastern part of Area III*, SC/48/SH12, 46; S Nishiwaki *et al.*, *Report of the 1996/97 Japanese Whale Research Program Under Special Permit in the Antarctic (JARPA) in Area V and the western part of Area VI*, 24; H Ishikawa *et al.*, *Cruise Report of the Japanese Whale Research Program under a Special Permit in the Antarctic (JARPA) Area IV and Eastern Part of Area III in 1997/98*, SC/50/CAWS8, 7.

was “consumed as fuel of *Nisshin-Maru* [sic]”.³¹³ In the year of highest production (1996/97), Japan produced an average of 155.6 kilograms of whale oil per minke whale caught.

³¹³ S Nishiwaki *et al.*, *Report of the 1993/94 Cruise of the Japanese Whale Research Programme Under Special Permit in the Antarctic Area IV*, SC/46/SH15, 28; S Nishiwaki *et al.*, *Report of the 1994/95 Cruise of the Japanese Whale Research Programme Under Special Permit (JARPA) in the Antarctic Area V*, SC/47/SH5, 26; S Nishiwaki *et al.*, *Report of the 1995/96 Japanese Whale Research Programme Under Special Permit in the Antarctic (JARPA) in Area IV and eastern part of Area III*, SC/48/SH12, 46; S Nishiwaki *et al.*, *Report of the 1996/97 Japanese Whale Research Program Under Special Permit in the Antarctic (JARPA) in Area V and the western part of Area VI*, 24 [original reports in English].

SECTION III. THE “SCIENTIFIC” WHALING BUSINESS MODEL

3.72 The basic structure of Japan’s “scientific” whaling business model was set in the initial development of its “research” program as early as 1984 and remains in place today. As noted above, the Government stipulated that the purported “scientific” whaling program was to enable continued whaling, over a long period, on a self-funding basis.³¹⁴ This underpins Japan’s “scientific” whaling business model, by which the revenue from the sale of whale meat by-products largely funds ongoing whaling operations. In short, without revenue from whale meat sales, continued “scientific” whaling operations would not be viable and Kyodo Senpaku and the Institute of Cetacean Research would lose the bulk of their income.

3.73 This Section examines that business model, focussing on how the model requires lethal methods and how economic considerations have driven both official catch targets and actual catches of whales. It will be seen that, in commencing JARPA II in 2005/06, Japan increased its officially stated catch targets as part of an effort to increase production of whale meat, to promote whale meat consumption through better marketing and accordingly to generate increased revenue for key stakeholders. It will also be seen that – following the failure of attempts to increase demand for whale meat – Japan has now moved to limit its actual catches to well below these officially stated targets. Finally, this Section examines how the business model of “scientific” whaling is intended to ensure the maintenance of the industry’s pelagic whaling capacity and to provide retirement opportunities for senior Government bureaucrats.

3.74 The design and conduct of Japan’s purported “research” under JARPA II is driven by the economic considerations which underpin the “scientific” whaling business model. It is clear that, in giving effect to these overriding commercial

³¹⁴ See Section I.D of this Chapter above.

considerations, JARPA II is in fundamental conflict with the requirements of established scientific process.

A. NECESSITY TO KILL WHALES AS PART OF THE “RESEARCH”

3.75 As noted earlier, the business model of “scientific” whaling established by Japan relies on the production and sale of whale meat to fund continued whaling operations. This means that the Institute of Cetacean Research is required by economic necessity to use lethal methods. This is despite the fact that, as outlined in Chapter 5 of this *Memorial*, the data collected by Japan through its continued whaling is neither useful nor reliable: killing whales is simply not the most effective way to obtain knowledge that is important for the conservation and management of whales.

3.76 In this respect it is relevant to note that one of the justifications provided by Japan for killing whales as a purported method of “research” is that this method produces whale meat which can be sold to fund ongoing whaling. Also, proponents for JARPA note that “[t]he offsetting of costs is not possible using non-lethal techniques”.³¹⁵ In a 2007 paper to the Scientific Committee, Japan set out four “practical considerations” favouring lethal methods of research, *three* of which highlight the high costs of research. Japan expressly justifies lethal “research” on the grounds that it permits “cost recovery”: “lethal methods which could earn research cost [sic] are most desirable”.³¹⁶ The paper posited another “advantage” of lethal methods as being that, unlike non-lethal research, killing

³¹⁵ Annex H, “Summary Statements Supporting the Use of Lethal Removal and Refuting its Use, as it Pertains to the Collection of Information on Stock Structure”, *Report of the Intersessional Working Group to Review Data and Results from Special Permit Research on Minke Whales in the Antarctic, Tokyo, 12-16 May 1997, Rep. int. Whal. Commn* 48, 1998, 412.

³¹⁶ S Ohsumi, M Goto and S Otani, “Necessity of combining lethal and non-lethal methods for whale population research and their application in JARPA”, SC/59/O2, 2-3.

whales allows the “utilization of resources”.³¹⁷ These statements highlight the economic interests underpinning the “scientific” whaling business model and its reliance on revenue from continued “research” whaling to fund that whaling. Plainly, as other members of the Scientific Committee have pointed out, these economic considerations have the potential to compromise the scientific validity of the purported “research”.³¹⁸

3.77 Advocates for Japan’s “research” whaling have similarly justified it on the basis that lethal “research” whaling generates revenue to recoup costs. In doing so, however, at least one such advocate, Professor Douglas Butterworth, a long-term member of the Scientific Committee, has highlighted how the necessity to generate revenue has dictated the use of methods for which there is “poor” empirical evidence of their value to an improved management procedure:

As far as the lethal components of these research programmes [those of Iceland, Japan and Norway] are concerned, the empirical evidence thus far of their value towards an improved basis for management is poor. However, the [non-lethal] sighting survey component of this research to provide estimates of abundance is agreed to be essential. Potentially the strongest defence for ‘scientific whaling’ is that because surveys are enormously expensive, it is not unreasonable to recover the costs through harvests that are sufficiently low to pose no risk to the stock. But the countries concerned have never argued this, perhaps because they preferred the combination of a legally stronger, but scientifically weaker, case.³¹⁹

3.78 Professor Butterworth’s statement highlights the non-scientific purposes of Japan’s lethal “research” whaling. Clearly, the recovery of costs from “research” whaling is by no means a sufficient, or indeed any, “defence” for the use of lethal methods of “research” allegedly pursuant to Article VIII of the ICRW.

3.79 A paper seeking to justify Japan’s “research”, published by the Institute of Cetacean Research in 1992, similarly argued that although “[t]he scientists employed at the ICR are genuinely interested in science for its own sake... [T]he

³¹⁷ Ibid., Table 1, 4.

³¹⁸ *J. Cetacean Res. Manage. 10 (Suppl.), 2008*, 343.

³¹⁹ D Butterworth, “Science and sentimentality”, *Nature* 357 (18 June 1992) 532, 532.

scientists are ultimately pawns. It is not they who decide whether whales are caught or how many... One reality which administrators must face is that, regardless of the scientific merit of catching samples, the research could not continue without the income from selling the by-products”.³²⁰

B. INCREASE IN SCALE OF JAPAN’S “SCIENTIFIC” WHALING TARGETS FROM 1987/88

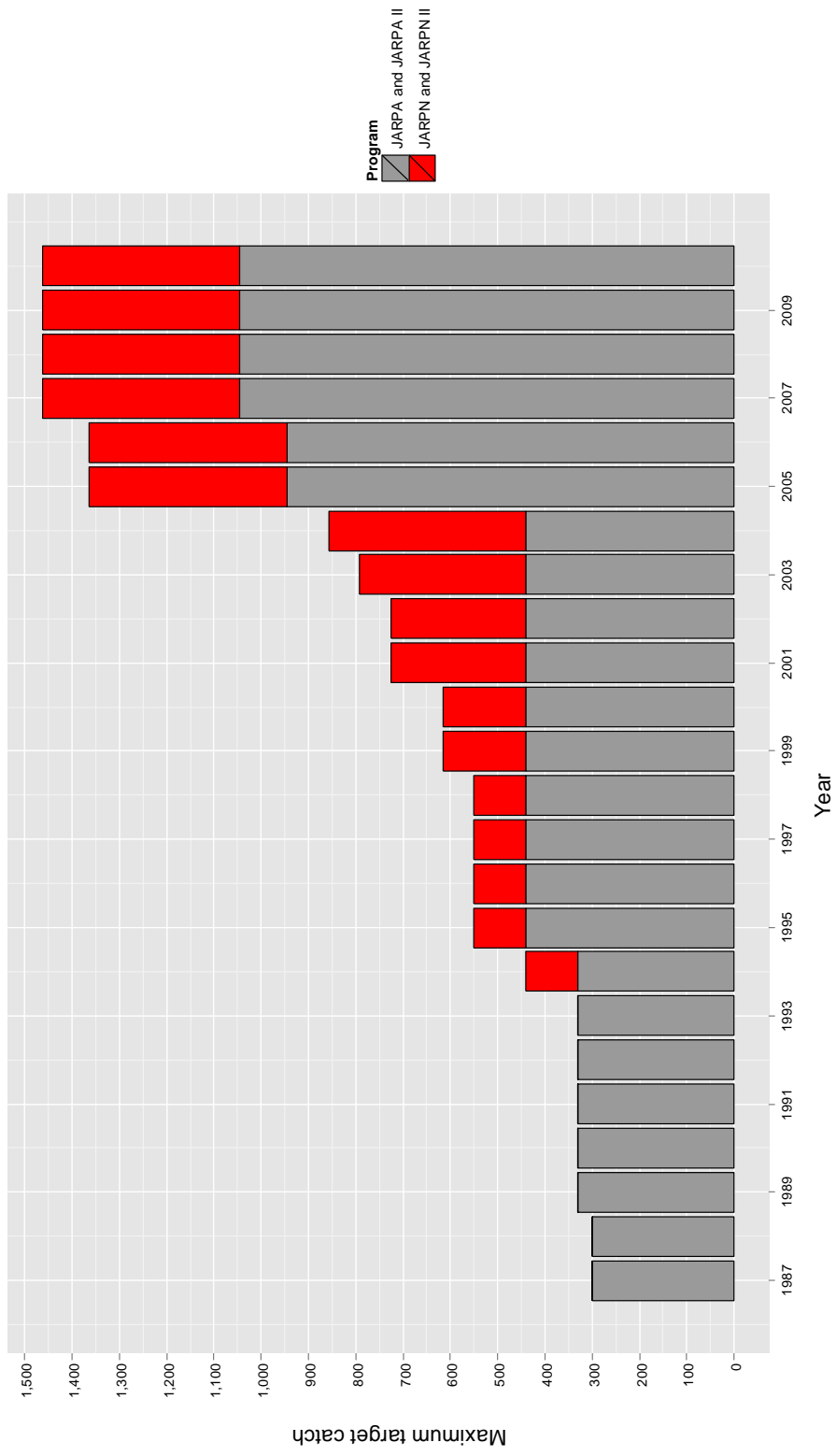
3.80 The original JARPA proposal had, as noted above, provided for annual catches of 825 minke whales and 50 sperm whales, which the whaling industry had deemed sufficient to sustain its operations.³²¹ Following political pressure, the scale of the plan was significantly reduced to 300 minke whales per year (with no sperm whales targeted) in an initial two year “feasibility study”.³²² Since that time, Japan has progressively increased its official “scientific” whaling catch targets under JARPA and JARPA II, and from 1994 commenced and subsequently expanded “scientific” whaling in the North Pacific under JARPN and JARPN II, as illustrated in Figure 9. This has provided an opportunity for the industry to increase its production of whale meat and, accordingly, for Kyodo Senpaku and the Institute of Cetacean Research to increase their revenue. Indeed, the current JARPA II target catches of 850 minke whales (plus or minus 10%) as well as 50 fin and 50 humpback whales are above the initial targets in the original JARPA proposal.

³²⁰ S Ward, *Biological Samples and Balance Sheets* (Institute of Cetacean Research, 1992), 35 [Annex 112].

³²¹ T Kasuya, “Japanese Whaling and Other Cetacean Fisheries”, (2007) 14(1) *Env Sci Pollut Res* 39, 45-6 [Annex 77].

³²² See Section I.D of this Chapter above.

Figure 9 - Japan's 'Scientific' Whaling Maximum Catch Targets, 1987/88 to 2010/11



Prepared by the Australian Government (Australian Antarctic Division), 2011, based on data reported by Japan.

3.81 Japan has provided no cogent scientific justification for this increase in proposed catches under JARPA II.³²³ This is because no cogent scientific justification exists. This was revealed by Japan’s Minister for Agriculture, Forestry and Fisheries, Hirotaka Akamatsu, who stated in a press conference on 9 March 2010:

[W]ith regard to the whales in the Antarctic Ocean, let’s say the catch is 800 whales, well we don’t actually need 800; I mean it’s more than we need – we would have enough material for research with that or less than that number of whales.³²⁴

3.82 A similar admission was made by Toshirou Shirasu, Administrative Vice-Minister, Ministry of Agriculture, Forestry and Fisheries, in a press conference on 14 April 2008. Reporting on the most recent whaling season under JARPA II (2007/08), Shirasu stated that “the required research was done” despite the fact that Japan caught just 60% of its target for minke whales.³²⁵ These are stark admissions at the highest levels of Japan’s Government that Japan’s target catches under JARPA II are not based on scientific considerations.

3.83 In fact, Japan’s decision to significantly increase its stated targets at the commencement of JARPA II was driven by the economic interests of key participants in Japan’s pelagic whaling industry. The aim was to increase the amount of whale meat produced under the program and to generate more revenue through increased sales. In the first year of JARPA II (2005/06), Japan produced 3,441 tonnes of whale meat, a significant increase from the final year of JARPA (2004/05) when Japan produced a total of 1,892 tonnes.³²⁶ The amount of whale meat produced under JARPA II was to rise further with the proposed take of

³²³ See Chapter 5, Section II.B(3).

³²⁴ Government of Japan, Minister for Agriculture, Forestry and Fisheries (H Akamatsu), Transcript of Press Conference, 9 March 2010 [Annex 107].

³²⁵ Government of Japan, Administrative Vice-Minister, Ministry of Agriculture, Forestry and Fisheries (T Shirasu), Transcript of Press Conference, 14 April 2008 [Annex 106].

³²⁶ Figure 7 – Japan’s Reported Production of Whale Meat under JARPA and JARPA II: Section II.C of this Chapter.

50 fin and 50 humpback whales from 2007/08. Together with additional production from expanded catch targets in Japan's northern Pacific whaling under JARPN II, total production of meat under Japan's "scientific" whaling was predicted to increase to some 7,000 to 8,000 tonnes per year from 2007.³²⁷

3.84 Given the reliance on revenue from the sale of this meat to fund continued operations, it was critical for the viability of Japan's "scientific" whaling business that consumption of and demand for whale meat in Japan increased commensurately with expanded production. Accordingly, from the commencement of JARPA II, the pelagic whaling industry together with the Government intensified efforts to promote whale meat consumption.³²⁸ In December 2005, the Institute of Cetacean Research cut the wholesale price of whale meat by 20%, to around ¥2,000 per kilogram (approximately US\$16.50) (for red meat).³²⁹ The Institute of Cetacean Research, the Japan Fisheries Agency and Kyodo Senpaku also cooperated in the establishment in May 2006 of a new company, Geishoku Rabo, with the expressed aim to "open up new sales channels" for whale meat alongside the existing retail sales channels used by Kyodo Senpaku.³³⁰ Kyodo Senpaku made a loan of ¥20 million (approximately

³²⁷ T Miyazaki, "So That's Why! Economics: Marketing Power-up, Boosting Excess Consumption at Pubs and School Lunches", *Yomiuri Shimbun*, 5 September 2006 (morning edition), 11 [Annex 133].

³²⁸ Ibid.

³²⁹ Ibid.; K Nakano, "To Protect Whale Eating Culture, The Japan Fisheries Agency Supports A Meat Wholesaler to Develop Sales Channels Targeting School Lunches", *Nikkei Sangyo Shimbun*, 29 May 2006, 21 [Annex 130].

³³⁰ "Japan Fisheries Agency and ICR Establish Whale Meat Retail Company, Develop New Sales Channels", *Isana* 26 (Japan Whaling Association, June 2006) [Annex 117]; see also K Nakano, "To Protect Whale Eating Culture, The Japan Fisheries Agency Supports A Meat Wholesaler to Develop Sales Channels Targeting School Lunches", *Nikkei Sangyo Shimbun*, 29 May 2006, 21 [Annex 130].

US\$170,000) to provide start-up operating capital for Geishoku Rabo,³³¹ while the rules governing the sales of “by-products” were amended to relax conditions on the distribution of whale meat.³³²

3.85 The intention was to increase whale meat production while at the same time promoting consumption to generate increased revenue. Masayuki Komatsu, until 2005 a senior Japan Fisheries Agency official with responsibility for “scientific” whaling, explained:

The expansion of scientific whaling [under JARPA II and JARPN II] has now also boosted the hopes of those waiting for whale meat. They will be able to buy whale meat at cheaper prices with an increase in the amount coming onto the market as a result of the increased quota...

The distribution of whale product also benefits the government. Proceeds from the whale product substantially improved the hitherto insufficient fiscal administration of the Institute of Cetacean Research and Kyodo Senpaku. This was not so much the case following the whaling conducted in the north-west Pacific, but the effect was particularly marked following the [increase in] Antarctic Ocean whaling where the minke whales are quite large in size.³³³

3.86 As set out in the following Section, this plan has failed. Japan has remained unable to resuscitate demand for whale meat. Frozen stockpiles of unsold whale meat have increased considerably. This threatens the financial viability of “scientific” whaling, and has led Japan to change the way it conducts its “research” – notably, cutting actual catches to well below stated targets to reduce production – and to redouble efforts to promote whale meat consumption.

³³¹ K Nakano, “To Protect Whale Eating Culture, The Japan Fisheries Agency Supports A Meat Wholesaler to Develop Sales Channels Targeting School Lunches”, *Nikkei Sangyo Shimbun*, 29 May 2006, 21 [Annex 130].

³³² Institute of Cetacean Research and Geishoku Rabo, LLC, “New organisation for whale meat sales promotion”, (Press Release, May 2006) at Japan Whaling Association website, <http://whaling.jp/press/press06_05.html> on 9 March 2011 [Annex 116]; see also Institute of Cetacean Research, *Rules for the Processing and Sale of By-Products of the Cetacean Capture Research Program*, (ICR No. 570, 12 January 2001 and as amended to 31 May 2006) [Annex 114].

³³³ M Komatsu, *International Whale Wars* (PHP Institute Co. Ltd., 2010), 112 [Annex 80].

C. UNSOLD WHALE MEAT AND ITS EFFECT ON THE CONDUCT ON “SCIENTIFIC” WHALING

(1) Increased stockpiles of unsold frozen whale meat from Japan’s “research”

3.87 Japan’s “scientific” whaling business depends not only on the production of whale meat through continued whaling operations but also on the ability to sell the meat. However, consumption of whale meat in Japan has dropped considerably and demand remains very low. At the peak, in 1962, Japanese people consumed around 2.4 kilograms of whale meat *per capita* each year, dropping to 200 grams in 1985 (before Japan withdrew its objection to the moratorium).³³⁴ Average consumption is currently around 50 grams *per capita*.³³⁵

3.88 Since Japan expanded its whaling under JARPN II and, particularly, under JARPA II, the whaling industry has been unable to sell all the meat “by-products” of its “research”. The unsold products are stored at high cost in vast frozen stockpiles in freezer warehouses across the country. A recent report estimated, based on official Government statistics, that as of December 2010 around 5,500 tonnes of whale meat were stored in some 500 freezer warehouses. The report assessed that additional whale meat – bringing the total stockpile to over 6,000 tonnes – may be held in around 150 additional warehouses which the Government excluded from its 2010 statistics.³³⁶ Estimated stockpiles of whale meat from 1997 are illustrated in Figure 10. The value of this whale meat

³³⁴ Government of Japan, Japan Fisheries Agency, “Whale Meat Consumption Per Capita in Japan”, under cover of facsimile from Takanori Ohashi, Japan Fisheries Agency, to Mr Puplick, Chairman, National Task Force on Whaling, Government of Australia, 18 April 1997 [Annex 104].

³³⁵ T Miyazaki, “So That’s Why! Economics: Marketing Power-up, Boosting Excess Consumption at Pubs and School Lunches”, *Yomiuri Shimbun*, 5 September 2006 (morning edition), 11 [Annex 133].

³³⁶ J Sakuma, “Rapidly rising whale meat stockpiles and the emergence of hidden reserves: Freezers excluded from official statistics and Icelandic fin whale meat”, *IKA-NET News* 47 (January 2011) [Annex 81].

stockpile is difficult to estimate without knowing the types and quality of the meat. However, at the 2006 price of ¥2,000 per kilogram, a whale meat stockpile of 5,500 tonnes would be worth some ¥12 billion (approximately US\$145 million).

3.89 Japan's large stockpiles of frozen whale meat have grown largely because demand for whale meat has remained very low, while the supply of "research by-product" has increased. It had been hoped that Geishoku Rabo alone would be able to sell up to 3,000 tonnes of whale meat annually, accounting for much of the additional production under JARPA II,³³⁷ yet by 2008 it was reported that Geishoku Rabo had "achieved only a fraction of its sales".³³⁸ In 2009 and 2011, the other "Sales Agent", Kyodo Senpaku, reported significant falls in whale meat sales.³³⁹ Figure 10 shows how increased production has led to concomitant increases in whale meat stockpiles; in 2006 for example, following the first season of JARPA II in which an unprecedented number of whales were killed, stockpiles jumped to some 6,000 tonnes. While this increased production was intended to lead to increased revenue, in fact it did not. The problem for Japan's "scientific" whaling business model was that Japanese people did not increase correspondingly their consumption of whale meat.

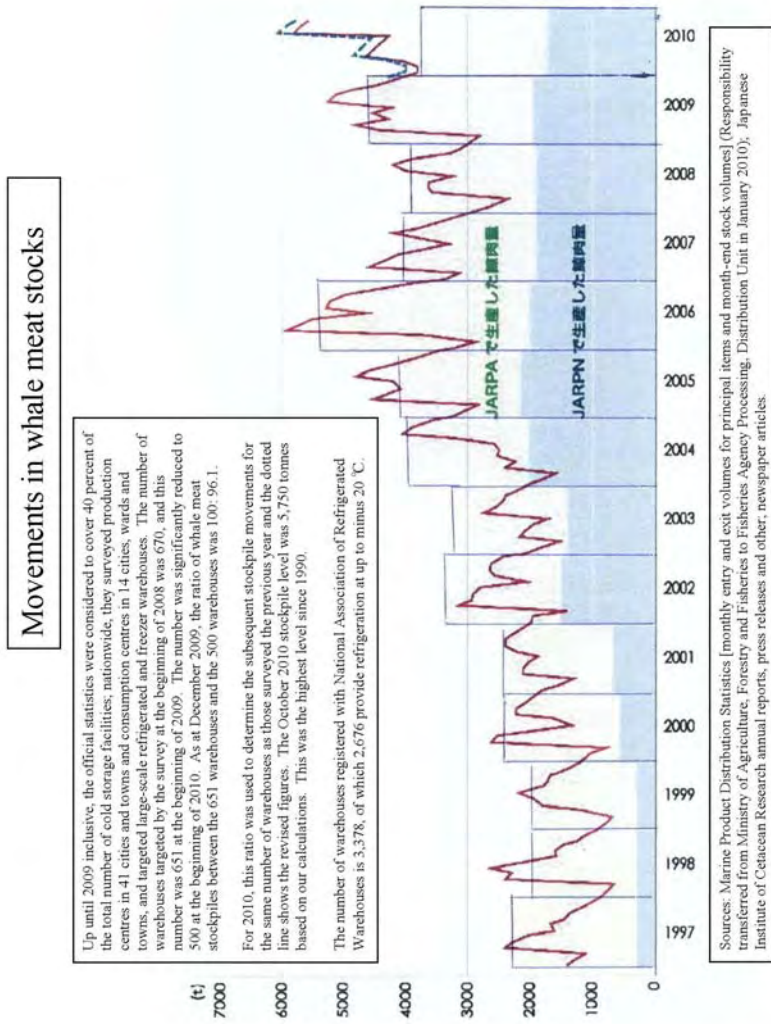
³³⁷ K Nakano, "To Protect Whale Eating Culture, The Japan Fisheries Agency Supports A Meat Wholesaler to Develop Sales Channels Targeting School Lunches", *Nikkei Sangyo Shimbun*, 29 May 2006, 21 [Annex 130].

³³⁸ K Oyamada, "(From the coalface) Whale Meat Goes Unsold. Supplies Increasing, But Distribution Channels Not Expanding. Government-Backed Distributor Operating at Loss", *Asahi Shimbun*, 19 February 2008 (morning edition), 8 [Annex 137].

³³⁹ "IWC: Last Chance for Normalisation. Three Whaling Organisation Chiefs", *Seafood Sector Journal*, 1490 (March 2009) 26 [Annex 142]; "Three Whaling-Related Organisations: Promoting Whale Meat by Strengthening the Sales Structure", *Minato Shimbun*, 24 January 2011, 6 [Annex 152]; see also Section III.C(2) of this Chapter below.

Figure 10 – Stockpiles of Frozen Whale Meat, 1997 to 2010

Source: J Sakuma, “Rapidly rising whale meat stockpiles and the emergence of hidden reserves: Freezers excluded from official statistics and Icelandic fin whale meat”, *IKA-NET News* 47 (January 2011) [Annex 81].



(2) Effect of inability to sell whale meat on viability of “scientific” whaling

3.90 Low demand for whale meat in Japan and the industry’s inability to sell whale meat “by-products” threatens the financial viability of key participants in Japan’s pelagic whaling industry. As set out in its most recent Business Report, covering the 2009/10 financial year, the Institute of Cetacean Research’s total costs for undertaking “scientific” whaling under JARPA II and JARPN II for that year were over ¥6 billion (approximately US\$68 million), while it generated around ¥5.5 billion (approximately US\$63 million) in revenue from the sale of whale meat.³⁴⁰ This was a reduction from the previous financial year, in which revenue from by-product sales amounted to almost ¥6.5 billion (approximately US\$69 million).³⁴¹ The Institute relied on other sources of revenue, including annual Government subsidies of around ¥800 million (just under approximately US\$10 million) to cover the financial loss and to fund its other activities.³⁴² In addition to providing annual subsidies, the Government has also provided low interest or interest-free loans to the Institute. As at 2008, the Overseas Fishery Cooperation Foundation (an entity under the supervision of the Ministry of Agriculture, Forestry and Fisheries) had lent ¥3.6 billion (nearly US\$35 million) to the Institute, of which it was unable to pay back ¥1 billion (nearly US\$10 million) as scheduled.³⁴³ The 2009/10 Business Report stated that the Institute’s

³⁴⁰ Institute of Cetacean Research, *FY2009 Business Report* (30 September 2010) at Institute of Cetacean Research website, <<http://www.icrwhale.org/H21jigyo.pdf>> on 16 April 2011, Statement of Changes in Net Assets [Annex 123].

³⁴¹ *Ibid.*

³⁴² *Ibid.*

³⁴³ K Oyamada, “Scientific Whaling: Financial Pressure. ICR misses ¥1 Billion Financing Repayment in 2006/07 Account Settlement”, *Asahi Shimbun*, 2 February 2008 (morning edition), 9 [Annex 136].

borrowings in that financial year exceeded ¥4.5 billion (approximately US\$50 million).³⁴⁴

3.91 Kyodo Senpaku's viability and continued operation is also threatened by reduced levels of whale meat sales in Japan. According to a 2009 estimate, Kyodo Senpaku is reported to generate annual profits of around ¥10-20 million (approximately US\$107,000 - US\$214,000).³⁴⁵ This was considered insufficient to justify necessary investments in new whaling infrastructure, particularly the necessary purchase of a new whaling factory ship to replace the *Nisshin-Maru*.³⁴⁶ Any drop in whale meat sales revenue would impact Kyodo Senpaku's financial condition significantly. The company President, Kazuo Yamamura, noted on 19 January 2009 that since autumn 2008 "sales have sharply declined"; the company "is facing difficult conditions, and so we are presently advancing a business improvement plan".³⁴⁷ By January 2011, President Yamamura reported further that "the income produced through by-product sales in the first period dropped 30 percent".³⁴⁸ Clearly, the financial viability of the Institute of Cetacean

³⁴⁴ Institute of Cetacean Research, *FY2009 Business Report* (30 September 2010) at Institute of Cetacean Research website, <<http://www.icrwhale.org/H21jigyo.pdf>> on 16 April 2011, Balance Sheet [Annex 123].

³⁴⁵ T Taniguchi, "Opinion. The Inside Story of Japan's Whaling – What the Media Doesn't Tell Us. Taxpayer's Money Spent, Friends Lost.", *Wedge* (20 January 2009) at <<http://wedge.ismedia.jp/articles/-/721>> on 15 April 2011 [Annex 79]. The *Asahi Shimbun* reported that in the financial year ending October 2007, Kyodo Senpaku posted sales in the order of ¥6 billion (approximately US\$51 million) and net profit of ¥5 million (approximately US\$42,000): K Oyamada, "Scientific Whaling: Financial Pressure. ICR misses ¥1 Billion Financing Repayment in 2006/07 Account Settlement", *Asahi Shimbun*, 2 February 2008 (morning edition), 9 [Annex 136].

³⁴⁶ T Taniguchi, "Opinion. The Inside Story of Japan's Whaling – What the Media Doesn't Tell Us. Taxpayer's Money Spent, Friends Lost.", *Wedge* (20 January 2009) at <<http://wedge.ismedia.jp/articles/-/721>> on 15 April 2011 [Annex 79].

³⁴⁷ "IWC: Last Chance for Normalisation. Three Whaling Organisation Chiefs", *Seafood Sector Journal* 1490 (March 2009) 26 [Annex 142].

³⁴⁸ "Three Whaling-Related Organisations: Promoting Whale Meat by Strengthening the Sales Structure", *Minato Shimbun*, 24 January 2011, 6 [Annex 152].

Research and Kyodo Senpaku, and of the “scientific” whaling business generally, is under threat.

3.92 The Secretary-General of the Japan Whaling Association, Makato Ito, stated in 2006: “unless [the whale meat] sells well, there will be a significant impact on continued whaling”.³⁴⁹ The economic imperative encapsulated in this statement drives how Japan operates its “scientific” whaling business. In response to the reduced demand, Japan has now moved to limit its production of meat under JARPA II. It has done so by reducing its actual catches to well below its official targets in the manner set out in the following section. This has enabled the industry both to reduce costs and to ensure its production is more closely aligned to low levels of demand for whale meat.

3.93 In addition to reducing production, Japan has also attempted to boost demand by continued and further attempts to promote whale meat among the public. The Institute of Cetacean Research introduced a range of new sales methods in 2010, in order “to have more people appreciate whale meat”, including an “early buyer” discount and sales of smaller sized products.³⁵⁰ Use of a website for sales to the general public was also considered.³⁵¹ On 20 January 2011, the Institute of Cetacean Research, Kyodo Senpaku and the Japan Whaling Association announced further measures to strengthen and promote whale meat sales.³⁵² These include reforming the way in which prices are set and changing

³⁴⁹ K Nakano, “To Protect Whale Eating Culture, The Japan Fisheries Agency Supports A Meat Wholesaler to Develop Sales Channels Targeting School Lunches”, *Nikkei Sangyo Shimbun*, 29 May 2006, 21 [Annex 130].

³⁵⁰ Institute of Cetacean Research, “2009 – 10 Southern Ocean Research Whaling By-Product Sales” (Press Release, 14 April 2010) at Institute of Cetacean Research website, <<http://www.icrwhale.org/100414ReleaseJp.htm>> on 18 April 2011 [Annex 122].

³⁵¹ *Ibid.*

³⁵² “Three Whaling-Related Organisations: Promoting Whale Meat by Strengthening the Sales Structure”, *Minato Shimbun*, 24 January 2011, 6 [Annex 152].

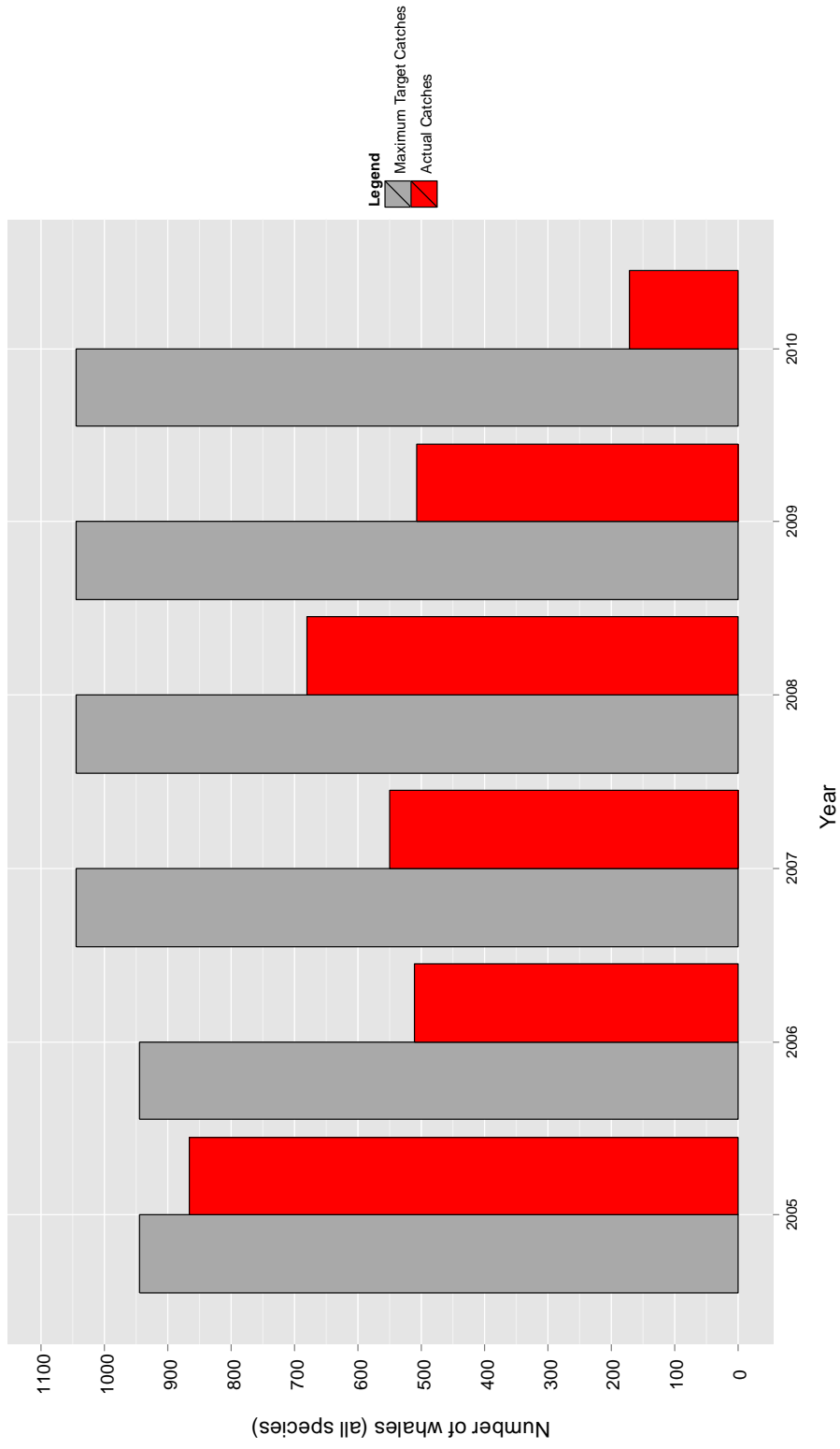
distribution methods.³⁵³ Japan's response to the low demand for whale meat reflects the economic imperatives underpinning the "scientific" whaling business model and demonstrates that the business is driven by economic rather than scientific considerations.

(3) Japan's reduction in actual catches under JARPA II

3.94 Japan has caught significantly fewer whales than its official stated targets under JARPA II, as demonstrated in Figure 11. The exception was the first season of JARPA II, in 2005/06, when Japan caught 853 minke whales (within its quota range of 850 plus or minus 10%) as well as 10 fin whales (exactly the quota for fin whales under the feasibility study). Subsequently, Japan's catches have fallen well below the officially stated targets.

³⁵³ Ibid.

Figure 11 - Japan's Maximum Target and Actual Catches under JARPA II, 2005/06 to 2010/11



Prepared by the Australian Government (Australian Antarctic Division), 2011, based on data reported by Japan.

3.95 Japan has attributed the subsequent shortfall in its catches to obstructive activities of the Sea Shepherd Conservation Society, and indeed has claimed that these activities forced it to cut short its 2010/11 season after killing just 20% of its target of minke whales and just 4% (two whales) of its target of fin whales.³⁵⁴ Japan has highlighted also other reasons for its reduced catch, including weather conditions and the 2006/07 fire on board the *Nisshin-Maru*.³⁵⁵ It is evident, however, that Japan deliberately has reduced its intended take of whales so as not to “flood” the whale meat market with additional supply and in order to reduce the costs of its whaling operations.

3.96 In the 2007/08 whaling season, Japan caught 551 minke whales, around 65% of its official target of 850 animals, and caught no fin or humpback whales. Asked in a press conference on 14 April 2008 about the effect this “shortfall” would have on the “research” plans for the next year, the Vice-Minister of the Ministry of Agriculture, Forestry and Fisheries, Toshirou Shirasu, explained that this issue needs to be examined taking into account “this year’s exact capture figures *and sales of whales*” [emphasis added].³⁵⁶ In this response, Vice-Minister Shirasu revealed that Japan’s purported “scientific” whaling catches are driven by market forces, particularly demand for whale meat. This is consistent with the fact that, under the business model, “scientific” whaling is funded by revenue from whale meat sales.

³⁵⁴ Government of Japan, Japan Fisheries Agency, “Results of the 24th Antarctic Ocean Cetacean Capture Survey (JARPA II) in FY2010” (Press Release, 21 March 2011) at Ministry of Agriculture, Forestry and Fisheries website, <<http://www.jfa.maff.go.jp/j/press/enyou/110321.html>> on 18 April 2011 [Annex 110].

³⁵⁵ *JARPA II Cruise Report 2006/07*, 1 [Annex 58].

³⁵⁶ Government of Japan, Administrative Vice-Minister, Ministry of Agriculture, Forestry and Fisheries (T Shirasu), Transcript of Press Conference, 14 April 2008 [Annex 106].

3.97 As outlined above, whale meat demand in Japan has remained low and Japan did not seek to make up for the 2007/08 “shortfall” in JARPA II catches. Indeed, on 13 November 2008, the *Asahi Shimbun* reported that Japan had for the first time adopted a catch target under JARPA II which was *less* than the stated targets under the JARPA II proposal:

On 12 November, it was announced that the target for the government’s scientific whaling catch will be cut for the first time. The Antarctic Ocean whaling target for the next season’s fleet, which will soon depart, will be cut by about 20% to around 750 whales... [A]nti-whaling group activities and sluggish demand for whale meat featured in the decision.³⁵⁷

3.98 According to the newspaper, the background to the decision included “the escalated obstructionist activities by American anti-whaling groups”, although:

The sluggish demand for whale meat has also forced the Government’s hand. Although there is some structural resistance to lowering catch targets since the proceeds from the sale of whale meat, annually ¥5-7 billion [approximately US\$48-68 million], are used to finance scientific whaling, the gap between the supply of whale meat from scientific whaling and sluggish domestic demand has presented a serious problem.³⁵⁸

The article also reported the reduced target catch as being 700 minke whales.

3.99 The *Asahi Shimbun* later retracted its statement that “the target for the government’s scientific whaling catch will be cut for the first time”.³⁵⁹ The correction also stated that the quoted number of 700 minke whales is not a reduced catch target but instead “one of the estimate values used to calculate the level of annual catch in the Antarctic Ocean required to keep the scientific whaling operation financially viable”.³⁶⁰

3.100 It is important to note that in the season referred to (2008/09), Japan caught 679 minke whales, just under the reported reduced target catch.

³⁵⁷ K Oyamada, “Sluggish Demand and Protests Encourage First Cut to Scientific Whaling Target (Corrected copy)”, *Asahi Shimbun*, 13 November 2008 (morning edition), 1 [Annex 141].

³⁵⁸ Ibid.

³⁵⁹ Ibid.

³⁶⁰ Ibid.

3.101 The Japanese Government subsequently admitted that, in respect of the following season (2009/10), it also had adopted a confidential catch target well below its previously claimed catch targets under the JARPA II proposal. This was revealed in 7 April 2010 by Japan's Minister for Agriculture, Forestry and Fisheries, Hirotaka Akamatsu, speaking in the Japanese Diet. Questioned about the effect of Sea Shepherd disruption on Japan's operations under JARPA II, Minister Akamatsu informed the Japanese Diet that:

[T]he research whaling catch we were able to obtain was pretty much as planned – please understand that it is our practice not to state the number of whales – but I can say it was approximately the number we had planned.³⁶¹

In the season referred to by Minister Akamatsu (2009/10), Japan had caught 506 minke whales, which according to the Minister must have been “approximately the number [Japan] had planned”.³⁶²

3.102 Minister Akamatsu's statement is consistent with the views of Masayuki Komatsu, a former senior official with responsibility for whaling policy in the Japan Fisheries Agency when the JARPA II proposal was developed. Mr Komatsu stated on 31 May 2010 that:

According to plans, Japan was supposed to catch up to 935 minke whales in the Antarctic Ocean, but actually it caught only 506 in fiscal [year] 2009. This is because of sluggish sales of whale meat. Since it is unpopular with consumers, in an effort to cover whaling costs, Japan reduced the number of catches to maintain prices at high levels. As a result, the expensive meat does not sell. It is a vicious circle.³⁶³

³⁶¹ Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 6, 7 April 2010, Speaker: 13/76 (Hirotaka Akamatsu, Minister for Agriculture, Forestry and Fisheries) [Annex 97].

³⁶² *Ibid.*

³⁶³ H Sugimoto, “Interview / Masayuki Komatsu: Commercial whaling could be sustainably resumed”, *Asahi Shimbun*, 31 May 2010, at <<http://www.asahi.com/english/TKY201005300214.html>> on 9 March 2011 [Annex 143]. Komatsu later confirmed this view in an Australia television interview: Transcript, Australian Broadcasting Corporation Television, “Former Japanese fisheries boss joins Lateline”, *Lateline* 17 June 2010 at <<http://www.abc.net.au/lateline/content/2010/s2930193.htm>> on 9 March 2011 [Annex 148].

3.103 Japan attributed its shortened 2010/11 whaling season, in which 170 minke whales and 2 fin whales were killed, to obstructive activities by the Sea Shepherd Conservation Society.³⁶⁴ The *Mainichi Shimbun* newspaper in Japan reported that:

The government cited Sea Shepherd's violent protests as the reason for aborting the current research whaling mission. However, a drastic change in Japanese people's eating habits is also believed to be behind the decision. The change in Japanese people's dietary habits is a more important factor behind the decision than Sea Shepherd's protests.³⁶⁵

3.104 In explaining the Government's decision to cut short the season, Komatsu "said determination to continue the hunt might have been undermined in part by concerns about Japan's growing stockpile of unsold whale meat, which is dwindling in popularity among younger consumers".³⁶⁶ Indeed, in early 2010 before the aborted 2010/11 season, Komatsu predicted that:

[I]n the near future, whaling might even be extinguished as a result of external pressures and the slump in sales of whale meat, the quality of which is deteriorating by the year. As a face-saving device, the option of abandoning scientific whaling might even be placed on the table – *with obstruction by the Sea Shepherd organisation presented as the excuse*.³⁶⁷
[emphasis added]

3.105 Japan's reduced catches over recent seasons under JARPA II have resulted in the production of significantly less whale meat than would have resulted if Japan had caught its publicly stated catch targets. This has meant that Japan has added significantly less meat to its existing stockpiles of frozen, unsold meat.

³⁶⁴ Government of Japan, Japan Fisheries Agency, "Results of the 24th Antarctic Ocean Cetacean Capture Survey (JARPA II) in FY2010", (Press Release, 21 March 2011) at Ministry of Agriculture, Forestry and Fisheries website, <<http://www.jfa.maff.go.jp/j/press/enyou/110321.html>> on 18 April 2011 [Annex 110].

³⁶⁵ "Halt of Japan's whaling mission provides food for thought", *Mainichi Daily News*, 19 February 2011, at <<http://mdn.mainichi.jp/perspectives/editorial/news/20110219p2a00m0na001000c.html>> on 22 March 2011 [Annex 154].

³⁶⁶ M Dickie and P Smith, "Stay of execution: Japan suspends whale hunt", *Financial Times*, 17 February 2011 [Annex 153].

³⁶⁷ M Komatsu, *International Whale Wars* (PHP Institute Co. Ltd., 2010), 62-63 [Annex 80].

Clearly, despite the best efforts of the Government and the pelagic whaling industry to promote whale meat, there is insufficient demand within Japan for the level of production that would result if Japan were to catch its full targets under its expanded “scientific” whaling targets.

3.106 Confirming the view that Japan deliberately catches fewer whales than its stated targets under JARPA II, there are genuine doubts about whether Japan in fact equips its “research” whaling fleet with the capacity to take and process these targets. From the 2006/07 to 2008/09 whaling seasons, Japan’s fleet included five support boats in addition to the main factory ship; this was reduced to four support boats in 2009/10 and just three in the most recent season.³⁶⁸ Indeed, this reduction in the number of support boats followed Kyodo Senpaku’s announcement in January 2009 that, as part of its business improvement plan instituted in light of the “difficult conditions” faced by the company, it would review “the number of research vessels that [it] operate[s]”.³⁶⁹ In the 2010/11 season, moreover, the whaling fleet departed port some three weeks later than in previous years, significantly reducing the time available for hunting and leaving little realistic prospect of taking its entire stated annual catch targets under JARPA II.³⁷⁰

³⁶⁸ See *JARPA II Special Permits* [Annexes 82 to 87]; *JARPA II Cruise Reports* [Annexes 57 to 61]. “Support boats” refers to the smaller vessels used for chasing and harpooning whales and conducting sighting surveys.

³⁶⁹ “IWC: Last Chance for Normalisation. Three Whaling Organisation Chiefs”, *Seafood Sector Journal* 1490 (March 2009) 26, 27 [Annex 142].

³⁷⁰ Government of Japan, Japan Fisheries Agency, “Results of the 24th Antarctic Ocean Cetacean Capture Survey (JARPA II) in FY2010” (Press Release, 21 March 2011) at Ministry of Agriculture, Forestry and Fisheries website, <<http://www.jfa.maff.go.jp/j/press/enyou/110321.html>> on 18 April 2011 [Annex 110]. For the 2010/11 season, the fleet departed on 2 December 2010; in previous years, the fleet typically departed in mid-November.

The business considerations which characterise Japan’s “scientific” whaling are well explained by Komatsu:

Presumably, they believed that by restricting supply, reducing operating costs and keeping the products at a high price they would meet the costs of maintaining the fleet.³⁷¹

3.107 This evidence demonstrates that Japan has reduced its target catches under JARPA II in response to low demand for whale meat. These changes in target catches are commercially driven – they have no scientific basis. Japan has also sought to reduce costs, including by shortening its 2010/11 whaling season and, in the 2009/10 and 2010/11 seasons, reducing the size of its whaling fleet.

D. MAINTAINING THE INDUSTRY’S PELAGIC WHALING CAPACITY AND WHALE MEAT SUPPLY

3.108 “Scientific” whaling supports Japan’s whaling industry and has ensured the maintenance of its pelagic whaling fleet as well as whaling skills and technologies. This was a key concern of Japanese policy makers and the whaling industry at the time Japan commenced so-called “scientific” whaling. As Dr Toshio Kasuya noted, the Government and the whaling industry restructured the industry “with the view that, if they used research whaling to maintain the whaling organisations and techniques, they would be able to resume [authorised] commercial whaling after about ten years”.³⁷² This was highlighted in the *Yomiuri* newspaper on 24 February 1987, which noted that:

Given that the commercial whaling industry is standing at the edge of the precipice, if scientific whaling can be continued there will be no interruption to whaling, and to the dissection and processing techniques the industry has developed over the past half-century. It means too that the whaling vessels and factory ships will not be rendered obsolete.

³⁷¹ M Komatsu, *International Whale Wars* (PHP Institute Co. Ltd., 2010), 216 [Annex 80].

³⁷² T Kasuya, “Considering the Whaling Problem”, (2005) 16 *Ecosophia*, 56, 61 [Annex 76].

This is precisely why the Nippon Kyodo Hoge Company had repeatedly petitioned the Japan Fisheries Agency to implement scientific whaling. Fleet Chief, Captain Yasushi Iso, 55, was also passionate in his entreaty that “by using scientific whaling we want to somehow manage to stay alive until the day that [authorised] commercial whaling is resumed”.³⁷³

3.109 Japan’s special permit whaling remains vital in sustaining whaling technology, skills and assets. Hiroshi Hatanaka, the Director-General of the Institute of Cetacean Research, noted in 2004 that:

Although, unfortunately, [authorised] commercial whaling has been completely suspended, almost all skills involved has been handed down and is carried on [sic] in the scientific whaling projects conducted by the Institute of Cetacean Research.³⁷⁴

3.110 Kyodo Senpaku has also described its role in a similar manner. The President of the company stated in 2003, for example, that “[o]ur greatest mission is the passing on of the whaling technologies and techniques to the future”.³⁷⁵

3.111 In 2008, Seiji Ohsumi, a former Director-General of the Institute of Cetacean Research and at the time of writing an adviser to the Institute, provided a detailed explanation of the “vital significance” of “scientific” whaling while the commercial whaling moratorium remains in force:

First, is the obvious reason of developing the scientific basis for the resumption of whaling. Scientific whaling also contributes to the development of whaling management technologies and methods.

Second, is the handing on and development of whaling technologies. Factory ship whaling in particular requires the use of large-scale equipment and sophisticated techniques that require long periods of training by whaling crews. This is why, should whaling ever be stopped (even were resumption to be granted shortly afterward), restarting the whaling vessels, whaling machinery and the whaling crews would be extremely difficult. Scientific whaling is enabling whaling facilities and

³⁷³ T Ito, “Imminent Lock-out from the Sea: Report on Location from the Antarctic Ocean Whaling Grounds (Part 10)—Scientific Whaling Budget Reinstated (serial article)”, *Yomiuri Shimbun*, 24 February 1987 (evening edition), 14 [Annex 126].

³⁷⁴ H Hatanaka, Foreword to Institute of Cetacean Research (ed), *The 3rd Summit of Japanese Traditional Whaling Communities: Muroto, Kochi: Report and Proceedings* (Institute of Cetacean Research, 2004), 7 [Annex 113].

³⁷⁵ “A Message to the World: Sustainable Whaling. Three Whaling Groups’ New Year’s Press Conference”, *The Fishing & Food Industry Weekly*, 1559 (25 February 2003), 19 [Annex 128].

technical crews to be retained, making it possible to respond quickly to any decision to resume [authorised commercial] whaling.³⁷⁶

3.112 The Japan Fisheries Agency has also recently highlighted the importance of maintaining the capacity of the pelagic whaling industry. As a representative of the Far Seas Fisheries Division of the Agency stated on 15 June 2008, “[o]ur focus is on the continuation of whaling technology, and we believe that the [whaling] business would be profitable”.³⁷⁷

3.113 Continued whaling also maintains a supply of whale meat to the market. Ohsumi highlighted the importance of “scientific” whaling in “the handing on and development of a culture of whale cuisine... Scientific whaling supports and advances a culture of whale cuisine through the supply of by-products from its research”.³⁷⁸ The Ministry of Agriculture, Forestry and Fisheries similarly noted in reported comments on 27 June 2010:

You cannot say that it’s not our dietary culture just because the amounts [of whale meat eaten] are limited. As long as there are people who say they want to eat it and want to do whaling, MAFF will endeavour to put in place the right environment.³⁷⁹

E. POSITIONS FOR FORMER OFFICIALS IN THE WHALING INDUSTRY

3.114 A practice of securing prestigious and leading positions in private industry for retired senior public officials is known in Japan as *amakudari* (literally meaning “descent from heaven”, also translated as “golden parachuting”). This practice has been criticised as giving rise to conflicts of interest which breach

³⁷⁶ S Ohsumi, *Half a Century in Pursuit of the Whale – Proposals for a New Era in Whaling* (Seizando-Shoten Publishing Co. Ltd, 2008), 157-158 [Annex 78].

³⁷⁷ K Oyamada, “Commentary: Difficult Situation Reflected in Whale Meat Consumption”, *Nishi Nippon Shimbun*, 15 June 2008, 12 [Annex 139].

³⁷⁸ S Ohsumi, *Half a Century in Pursuit of the Whale – Proposals for a New Era in Whaling* (2008, Seizando-Shoten Publishing Co. Ltd), 158 [Annex 78].

³⁷⁹ “Whale Meat Consumption – One Third of Horse Meat”, *Sankei Shimbun*, 27 June 2010, 25 [Annex 147].

probity and compromise good public policy. The Democratic Party of Japan made a campaign promise before being elected to Government in 2008 to “[e]ngage in reform, including abolition of public service corporations that are hotbeds for *amakudari* (golden parachuting)”.³⁸⁰

3.115 *Amakudari* is a prevalent and long-standing feature of the whaling industry. Senior Japan Fisheries Agency officials have received executive positions in the Institute of Cetacean Research.³⁸¹ For example, Japan’s former Commissioner to the IWC and Deputy Director-General of the Japan Fisheries Agency became Director-General of the Institute of Cetacean Research following his retirement.³⁸² Senior Japan Fisheries Agency officials have also received executive positions in Kyodo Senpaku and the Japan Whaling Association. This includes two officials who made statements to the Japanese Diet, referred to above, concerning whaling policy at the time the Government decided to continue whaling under the guise of “scientific research”.³⁸³ The availability of *amakudari* opportunities in the whaling industry has provided an important incentive for those working for the Government to continue whaling operations in the form of “research”.

³⁸⁰ Democratic Party of Japan, “Restoring Vitality to Japan: The Democratic Party of Japan’s Policy Platform for Government”, (Political Party Manifesto, 17 June 2010), at <<http://www.dpj.or.jp/english/manifesto/manifesto.html>> on 9 March 2011, 8.

³⁸¹ K Oyamada, “(Observer: Taxes – Lifestyles – Money) The Real Reasons for Continued Whaling”, *Asahi Shimbun*, 18 January 2008 (morning edition), 8 [Annex 135].

³⁸² Institute of Cetacean Research, *Board Members* (16 September 2009), at Institute of Cetacean Research website, <<http://www.icrwhale.org/YakuinList.pdf>> (in Japanese) on 14 January 2011 [Annex 121].

³⁸³ See footnotes 190 and 216 in this Chapter above.

F. CONCLUSION: THE FINANCIAL VIABILITY OF “SCIENTIFIC” WHALING IS UNDER THREAT

3.116 Clearly, the financial viability of the “scientific” whaling business model, and of key participants within the industry, is under threat. This was stated unequivocally by the recently appointed Director-General of the Institute of Cetacean Research who publicly commented in December 2010 that the current “scientific” whaling business model was unviable due to the poor sales of whale meat as well as obstructive activities of the Sea Shepherd Conservation Society:

When whale meat was very popular, as in the old days, it was possible to raise plenty of funds for the research in the following year. But, at present, due to the domestic economic conditions and the obstructionist activities against scientific whaling we aren’t able to conduct scientific whaling as planned, and it would be impossible to say that things are going smoothly. Fundamental issues of how unfeasible it is will emerge if we try to continue with the current process whereby the income from the by-products is used to meet the survey costs.³⁸⁴

3.117 The real financial problems of the “scientific” whaling business model point to the fundamental conflict of interest presented in a “scientific” program which has no choice but to use lethal methods to fund continued operations and financially support key players. This compromises the authenticity of the program from any scientific perspective, forcing it to select objectives which require a pre-determined method of research – that is, lethal “research” – rather than selecting proper scientific objectives and then adopting methods best suited to addressing those objectives. It reinforces, as will be demonstrated in Chapter 5, that the real purpose of Japan’s “scientific” whaling is not science at all. It also highlights the economic interests which underpin Japan’s continuation of whaling under the guise of “research”; as will be demonstrated in Chapter 6, Japan’s “scientific” whaling is in reality commercial whaling undertaken contrary to the ICRW.

³⁸⁴ “New Developments Under Severe Conditions. Interview with Mr Fujise, Director-General, Institute of Cetacean Research”, *Nikkan Suisan Keizai Shimbun*, 27 December 2010, 2 [Annex 151].

SECTION IV. CONCLUSIONS

3.118 In summary:

- Japan was always determined to continue whaling “in some form or another”, despite the commercial whaling moratorium.
- The Japanese Government commenced “scientific” whaling as a way around the moratorium; in other words, science is not Japan’s real purpose in undertaking “scientific” whaling.
- Japan’s “scientific” whaling business model is designed to enable continued lethal hunts for an indefinite period, funded by the sales of whale meat produced by previous years’ whaling.
- These economic interests drive the conduct of Japan’s “research”, dictating the use of lethal methods and driving key participants to maximise revenue.
- “Scientific” whaling benefits insiders, financially sustaining Japan’s pelagic whaling industry and providing attractive retirement opportunities for Japanese officials.
- “Scientific” whaling provides a continued supply of whale meat to the market.

3.119 Plainly, Japan’s fundamental purpose in conducting JARPA II is not scientific research at all. As demonstrated in Chapters 5 and 6, Japan’s whaling is not within the scientific research exception contained in Article VIII of the ICRW and is contrary to the commercial whaling moratorium, the Southern Ocean Sanctuary and other obligations in the ICRW.

CHAPTER 4 - THE ARTICLE VIII EXCEPTION

4.1 Japan purports to rely on Article VIII of the ICRW in the conduct of its special permit whaling operations in the Southern Ocean (JARPA II). Article VIII of the ICRW provides as follows:

1. Notwithstanding anything contained in this Convention any Contracting Government may grant to any of its nationals a special permit authorizing that national to kill, take, and treat whales for purposes of scientific research subject to such restrictions as to number and subject to such other conditions as the Contracting Government thinks fit, and the killing, taking, and treating of whales in accordance with the provisions of this Article shall be exempt from the operation of this Convention. Each Contracting Government shall report at once to the Commission all such authorizations which it has granted. Each Contracting Government may at any time revoke any such special permit which it has granted.
2. Any whales taken under these special permits shall so far as practicable be processed and the proceeds shall be dealt with in accordance with directions issued by the Government by which the permit was granted.
3. Each Contracting Government shall transmit to such body as may be designated by the Commission, in so far as practicable, and at intervals of not more than one year, scientific information available to that Government with respect to whales and whaling, including the results of research conducted pursuant to paragraph 1 of this Article and to Article IV.
4. Recognizing that continuous collection and analysis of biological data in connection with the operations of factory ships and land stations are indispensable to sound and constructive management of the whale fisheries, the Contracting Governments will take all practicable measures to obtain such data.

4.2 This Chapter traces the origins and development of Article VIII and sets out the proper interpretation to be accorded to this exception consistent with established principles of treaty interpretation as reflected in Articles 31 and 32 of the *Vienna Convention*. It addresses also the requirement to perform obligations under the ICRW in good faith. That obligation is reflected in Article 26 of the *Vienna Convention*.

4.3 In light of these principles, Article VIII is confined to allowing Japan, acting in good faith, only to grant any permits that are, on the basis of objective

criteria, permits that authorise the killing, taking and treating of whales “for purposes of scientific research”, and for no other purpose.

4.4 In addition, any purported reliance on Article VIII by Japan is subject to review and oversight by the IWC, as the institution properly established under the ICRW.

4.5 Specifically, a proper interpretation of Article VIII in accordance with principles set out in the *Vienna Convention* leads to the following conclusions:

- (1) Article VIII special permits are to be treated as exceptional.
- (2) The application of Article VIII is to be determined on an objective basis – it is not self-judging. That is, a Contracting Government is not entitled to determine unilaterally that it is free to issue special permits according to its own asserted view that the killing, taking or treating of whales under those permits is “for purposes of scientific research”.
- (3) A program of whaling “for purposes of scientific research” under Article VIII must possess certain essential characteristics drawn from generally accepted scientific practice and the criteria adopted by the IWC for the review of special permits. An assessment of whether a program possesses those essential characteristics must be carried out on an objective basis.
- (4) Activities carried out for “purposes” of scientific research must be carried out for those purposes and not for any other purpose.
- (5) Article VIII must be implemented in good faith.

4.6 As will be shown in Chapter 5, Japan has acted – and continues to act – outside the scope of the proper interpretation of Article VIII in issuing permits under JARPA II.

SECTION I. THE ORIGINS AND DEVELOPMENT OF ARTICLE VIII

4.7 The concept of an exception for special permit whaling was not new to the ICRW. Although the arrangements established by Article VIII differed from earlier arrangements set forth in the *1931 Convention* and the *1937 Agreement*, Article 10 of the *1937 Agreement* formed the basis for Article VIII(1) of the ICRW. These earlier agreements provide the background against which Article VIII is to be interpreted and applied, and they support the conclusion that special permits may only be issued under the ICRW in limited and exceptional circumstances. Moreover, since its adoption in 1946, the Article VIII exception has been further developed by the practice of Contracting Governments, and the IWC itself, under the ICRW.

A. CONVENTION FOR THE REGULATION OF WHALING, 1931

4.8 The 1931 Convention contained no exemption for whaling conducted for purposes of scientific research. However, the *travaux préparatoires* to the Convention indicate that some consideration was given to this issue in its drafting.

4.9 The text of the 1931 Convention evolved from a draft Convention prepared by a Committee of Experts appointed by the Economic Committee of the League of Nations in July 1929. The draft Convention text recommended by the Committee of Experts to the Economic Committee in April 1930 did not provide for an express exemption for whaling conducted for scientific purposes. However, the Experts' Report which accompanied the draft Convention

stated: “[i]t is understood that provision would have to be made to give the necessary exemptions for scientific investigations.”³⁸⁵

4.10 In its Report to the Council of the League, the Economic Committee annexed the draft Convention prepared by the Committee of Experts with certain minor modifications, and repeated the Experts’ observation concerning the necessity of including exemptions for scientific investigations.³⁸⁶ However, the final text of the Convention adopted in Geneva on 24 September 1931 did not incorporate any exception for whaling conducted for purposes of scientific research. Notwithstanding this omission, domestic legislation subsequently enacted in a number of jurisdictions, including the United Kingdom, the United States and Australia, provided for such an exception.³⁸⁷

B. ARTICLE 10, INTERNATIONAL AGREEMENT FOR THE REGULATION OF WHALING, 1937

4.11 The notion of whaling under special permit for purposes of scientific research was first recognised expressly in an international instrument in Article 10 of the *1937 Agreement*, the text of which provided as follows:

Notwithstanding anything contained in this Agreement, any contracting Government may grant to any of its nationals a special permit authorizing that national to kill, take and treat whales for purposes of scientific research subject to such restrictions as to number and subject to such other conditions as the contracting Government

³⁸⁵ “Report to the Economic Committee on the Question of Whaling presented by Sir Sydney Chapman (President) and M. Jahn (Rapporteur)”, *League of Nations Doc. No. 6079/27*, Geneva, 28 April 1930, Remark IX, 2.

³⁸⁶ “Report to the Council of the League of Nations on the Work of the Thirty-Second Session of the Economic Committee”, *Series of League of Nations Publications, Volume II: Economic and Financial*, Doc. No. C.353.M.146.1930.II, Geneva, 14 June 1930, Observation VI, 11.

³⁸⁷ See, for example, *Whaling Industry (Regulation) Act 1934*, (United Kingdom), section 7; *Whaling Act 1935* (Australia), section 12; *Joint Regulations of the Secretary of the Treasury and the Secretary of Commerce Concerning Whaling*, made under the authority of the *Whaling Treaty Act*, 1 May 1936 (United States), Article 5(a).

thinks fit, and the killing, taking and treating of whales in accordance with the terms in force under this Article shall be exempt from the operation of this Agreement.

Any contracting Government may at any time revoke a permit granted by it under this Article.

4.12 According to the *travaux préparatoires* of the 1937 International Conference on Whaling,³⁸⁸ the final text of Article 10 is a near-verbatim adoption of an Additional Article proposal, put forward by the United Kingdom delegation at a relatively late stage in the Conference.³⁸⁹ Following minimal plenary discussion of this text, Article 10 was adopted with only one minor amendment from the original proposal: the final phrase of the first paragraph of Article 10 was reworded from its original formulation – “this article shall be exempt from the operation of *the foregoing articles*” – to its ultimate form – “this article shall be exempt from the operation of *this Agreement*” [emphases added].³⁹⁰

4.13 It will be noted that Article 10 of the *1937 Agreement* did not require any contracting Government to report on the issue of any special permits, nor did it make explicit provision for any oversight of the issue of such permits. During the short period in which the *1937 Agreement* remained in force, it appears that no criteria were adopted or applied to govern the circumstances in which a special permit might be issued under Article 10.

³⁸⁸ Held in London between 24 May and 8 June 1937.

³⁸⁹ “Agreement for the Regulation of Whaling: Additional Article”, ICW/1937/31; Agreement for the Regulation of Whaling (subject to formal amendments of drafting by the Foreign Office Draughtsmen), ICW/1937/32, 2.

³⁹⁰ International Conference on Whaling, Eighth Plenary Session, 4 June 1937, ICW/1937/34, 10. See also International Conference on Whaling, Seventh Plenary Session, 3 June 1937, ICW/1937/33, 8.

C. ARTICLE VIII, INTERNATIONAL CONVENTION FOR THE REGULATION OF WHALING, 1946

4.14 Article 10 of the *1937 Agreement* provided the basis for what became Article VIII of the ICRW. Article VIII was included in a proposal submitted to the 1946 International Whaling Conference by the United States delegation on 29 October 1946.³⁹¹ This proposal formed the basis for substantive discussions of Article VIII in subsequent Plenary and Drafting Committee sessions at the 1946 Conference.

4.15 Paragraph (1) of Article VIII replicates almost verbatim the whole of Article 10 of the *1937 Agreement*.³⁹² As noted in an internal US Government memorandum concerning the United States Proposals for the 1946 Conference, the effect of this paragraph “exempts certain scientific investigations from the conservation regulations applicable to *ordinary commercial operations*” [emphasis added].³⁹³

4.16 Article VIII(1) does, however, impose an important additional requirement on Contracting Governments that was not found in Article 10 of the *1937 Agreement*, namely that “[e]ach Contracting Government shall report to the Commission all such authorisations which it has granted.” This obligation was intended to ensure that the Commission had a basis on which to exercise oversight of special permits issued by Contracting Governments. Such oversight had been absent under the *1937 Agreement*. The additional requirement, and the oversight for which it provides, indicates that the Article VIII exception was not intended to be self-judging.

³⁹¹ “United States Proposals for a Whaling Convention”, International Whaling Conference, 29 October 1946, 1946/IWC/3, 11.

³⁹² Minutes of the Seventh Session, International Whaling Conference, 25 November 1946, 1946/IWC/32, para. 322.

³⁹³ Memorandum from the Informal Inter-agency Committee on the Regulation of Whaling to the Commodity Problems Committee, “Draft of American Proposal for the International Whaling Conference, Washington, November 20, 1946”, 15 October 1946, 9 [Annex 69].

4.17 Paragraph (2) of Article VIII imposes a further requirement, namely the full utilisation of all whales killed. This notion of full utilisation had previously been recognised in Article 11 of the *1937 Agreement* and Article 6 of the *1931 Convention* in relation to general whaling operations covered by those Conventions. The addition of this paragraph in Article VIII represented the first time the utilisation requirement was imposed in relation to whales taken pursuant to special permits for purposes of scientific research.³⁹⁴

4.18 Similarly, paragraphs (3) and (4) of Article VIII derive from provisions contained in the *1937 Agreement*. Paragraph (3) is sourced in the obligation contained in Article 17 of the *1937 Agreement* relating to the communication of statistical information.³⁹⁵ Paragraph (4), relating to the collection of data through the operation of factory ships and land stations, is sourced in the obligation contained in Article 16 of the *1937 Agreement*.³⁹⁶

4.19 Taken together, these additions indicate that the requirements of the ICRW were more restrictive than the previous instruments as to the ability of any Contracting Government to issue a special permit: what began in 1931 as a system that appeared to place no limits on the ability of a Contracting Government to engage in “scientific whaling” had evolved, in little more than a decade and a half, to a system involving an institution (the IWC) having oversight of special permits issued by Contracting Governments, with the authority to determine the proper scope and application of the special permit whaling exception under Article VIII.

³⁹⁴ The *travaux préparatoires* provide no support for the proposition that the sale of the products of scientific research on a commercial scale is authorised by Article VIII.

³⁹⁵ The precursor obligation in the *1931 Convention* is Article 12.

³⁹⁶ The precursor obligation in the *1931 Convention* is Article 10.

D. DEVELOPMENT OF THE IWC PROCEDURE FOR PRIOR REVIEW OF SPECIAL PERMITS: PARAGRAPH 30 OF THE SCHEDULE (1979)

4.20 Within a decade of the ICRW coming into force, Contracting Governments acted on their concern that all whaling that purported to be conducted under Article VIII had to be done in good faith and genuinely for purposes of scientific research.³⁹⁷ From 1963 onwards, the IWC moved to develop a procedure for prior review of proposed special permits by the Scientific Committee. This move was prompted by concerns as to the circumstances in which special permits were being issued, and in particular “instances of permits being given for the taking of much larger numbers of whales under [Article VIII] than in the past.”³⁹⁸ The objective of this prior review procedure was, *inter alia*, “to recognise and assure validity and utility of the proposed research, and to assure that proposed permits will not adversely affect the conservation of whale stocks”.³⁹⁹

4.21 At its meeting in April 1963, the Sub-Committee of the Scientific Committee emphasised that the current practice, under which the results of scientific investigations were merely provided to the Commission *following* the conduct of research, was “inadequate on the grounds of both scientific research and conservation.”⁴⁰⁰ The Sub-Committee observed that there should be some form of approval from the Commission, both of the number of whales to be taken as well as the proposed aims of the scientific investigation, and that this should occur *prior* to the issue of a special permit. This would permit the Commission to

³⁹⁷ See below, Section II.B(1)(i) of this Chapter.

³⁹⁸ Report of the Scientific Committee, Appendix IV, *Fourteenth Report of the Commission*, 1964, 25-26, para. 15. See also Chairman’s Report, Appendix III, *Sixteenth Report of the Commission*, 1966, 20, para. 18.

³⁹⁹ Report of the Scientific Committee, *Rep. int. Whal. Commn* 28, 1978, 41, para. 9.3.2.

⁴⁰⁰ Meeting of Sub-Committee of Scientific Committee, Appendix VI, *Fourteenth Report of the Commission*, 1964, 110, para. 23.

consult the Scientific Committee on the value of the proposed research program.⁴⁰¹ This new approach also reflected a concern to ensure that special permits were issued in a manner compatible with the object and purpose of the ICRW, including the commitment of Contracting Governments to the proper and effective conservation of whales.

4.22 Accordingly, a procedure was developed by the Scientific Committee and the Commission that provided for the expansion of the functions of the Scientific Committee to include *prior* review of special permits issued by Contracting Governments.⁴⁰² The development of this procedure culminated in the adoption of paragraph 30 of the Schedule to the ICRW at the Thirty-First Meeting of the IWC in 1979, a landmark moment in the development of the evolving system for the issuing of special permits under Article VIII. That this should have occurred following the 1972 Stockholm Conference and in the run up to the adoption of the moratorium on commercial whaling, three years later in 1982, was not a coincidence: it signalled the desire of the Contracting Governments to avoid the conduct of special permit whaling to circumvent the increasingly stringent limitations on commercial whaling.

4.23 Paragraph 30, adopted in 1979, provides:

A Contracting Government shall provide the Secretary to the International Whaling Commission with proposed scientific permits *before they are issued and in sufficient time to allow the Scientific Committee to review and comment on them*. The proposed permits should specify:

- a. objectives of the research;
- b. number, sex, size and stock of the animals to be taken;
- c. opportunities for participation in the research by scientists of other nations; and

⁴⁰¹ Ibid., 110, paras. 22-23.

⁴⁰² See, in particular, Report of the Scientific Committee, Appendix IV, *Fourteenth Report of the Commission*, 1964, 25-26, para. 15; Chairman's Report of the Fifteenth Meeting, *Fifteenth Report of the Commission*, 1965, 20; Report of the Scientific Committee, *Rep. int. Whal. Commn 28*, 1978, 41, para. 9.3.2; Chairman's Report of the Twenty-Ninth Meeting, *Rep. int. Whal. Commn 28*, 1978, 23, para. 14(ii).

d. possible effect on conservation of stock.

Proposed permits shall be reviewed and commented on by the Scientific Committee at Annual Meetings when possible. When permits would be granted prior to the next Annual Meeting, the Secretary shall send the proposed permits to members of the Scientific Committee by mail for their comment and review. Preliminary results of any research resulting from the permits should be made available at the next Annual Meeting of the Scientific Committee.⁴⁰³
[emphasis added]

4.24 The provision provides for the review of proposed special permits before they are issued by Contracting Governments. It confirms that the granting of special permits is not something that may be done by a Contracting Government on the basis of its own criteria and decision-making process, but rather that it must address criteria established by the Commission under conditions that allow the Commission to determine whether such criteria have been met. Compliance with the procedure of paragraph 30 (or lack thereof) has been a point of continued attention for the Commission.⁴⁰⁴

E. DEVELOPMENT OF THE IWC GUIDELINES FOR THE REVIEW OF SPECIAL PERMITS

4.25 The adoption of the moratorium on commercial whaling in 1982 and its entry into effect in 1985/86 was followed by a significant expansion in efforts by certain Contracting Governments to issue special permits under Article VIII in order to avoid the effects of the moratorium.⁴⁰⁵ As a result, there was a significant increase in the number of special permits that Contracting Governments, including Japan, sought to issue under Article VIII. The conditions for the issue of such permits came under increased scrutiny in the Commission and Scientific

⁴⁰³ Amendments to the Schedule Adopted at the 31st Annual Meeting of the Commission, Appendix 10, Chairman's Report of the Thirty-First Annual Meeting, *Rep. int. Whal. Commn* 30, 1980, 39.

⁴⁰⁴ See, for example, Resolution on Special Permits for Scientific Research, Appendix 2, Chairman's Report of the Thirty-Eighth Annual Meeting, *Rep. int. Whal. Commn* 37, 1987, 25 ("1986 Resolution") [Annex 43].

⁴⁰⁵ See Chapter 2, Section II.D(2).

Committee. In particular, the last annual meeting of the Commission prior to the entry into effect of the moratorium on commercial whaling in 1985 marked the beginning of growing concerns in the IWC as to the scope of special permit operations being proposed and conducted by certain Contracting Governments, particularly Japan.

4.26 To address this concern, in 1985, the IWC adopted “Annex L: Proposed Guidelines for Review of Special Permits” (“*Annex L*”).⁴⁰⁶ *Annex L* was the first in a series of evolving guidelines adopted by the IWC which lay down the detailed criteria against which special permit proposals should be assessed by the proponent Contracting Government prior to issuing the relevant permit, and by the Scientific Committee when providing advice to the Commission (the “*Guidelines*”). Over the next quarter of a century these detailed criteria were the subject of further refinement and elaboration. The most recent criteria were adopted by the Commission in 2008, in the “Process for the Review of Scientific Permits and Research Results from Existing Permits” (“*Annex P*”).⁴⁰⁷

4.27 Between the adoption of *Annex L* in 1985 and *Annex P* in 2008, the IWC adopted four important Resolutions that contributed to the evolution of the *Guidelines*:

- (1) the 1986 Resolution on Special Permits for Scientific Research (“*1986 Resolution*”);⁴⁰⁸
- (2) the 1987 Resolution on Scientific Permit Programmes (“*1987 Resolution*”),⁴⁰⁹ which supplemented the 1986 Resolution;

⁴⁰⁶ Report of the Scientific Committee, *Rep. int. Whal. Commn* 36, 1986, 38-39; Proposed Guidelines for Review of Scientific Permits, Annex L, Report of the Scientific Committee, *Rep. int. Whal. Commn* 36, 1986, 133 (“*Annex L*”) [Annex 42].

⁴⁰⁷ Process for the Review of Scientific Permits and Research Results from Existing Permits, Report of the Scientific Committee, Annex P, *J. Cetacean Res. Manage. 11 (Suppl.)*, 2009, 398-401 (“*Annex P*”) [Annex 49].

⁴⁰⁸ *1986 Resolution* [Annex 43].

- (3) the 1995 Resolution on Whaling under Special Permit (“*Resolution 1995-9*”) which replaced both the 1986 and 1987 Resolutions;⁴¹⁰ and
- (4) the 1999 Resolution on Special Permits for Scientific Research which supplemented Resolution 1995-9 (“*Resolution 1999-2*”).⁴¹¹

4.28 The language of the Guidelines setting out detailed criteria gradually evolved in specificity and emphasis in the period between 1985 and 1999. However, the criteria laid down in these successive Resolutions follow the same themes and are substantively consistent. On two separate occasions during this period – in 1988⁴¹² and in 2001⁴¹³ – the Scientific Committee undertook a process of consolidating the numerous *Guidelines* with which it had been presented by the Commission. The Committee grouped the *Guidelines* under five general headings to simplify its review process: (1) the proposal; (2) objectives; (3) methodology; (4) effect of catches; and (5) research cooperation.

4.29 As discussed further at Section II.C of this Chapter, these *Guidelines* set out the views of the IWC as to the criteria that must be satisfied for the requirements of the Article VIII exception to be met. The *Guidelines* reflect the fundamental concerns of the IWC surrounding the escalating conduct of lethal

⁴⁰⁹ Resolution on Scientific Research Programmes, Appendix 1, Chairman’s Report of the Thirty-Ninth Annual Meeting, *Rep. Int. Whal. Commn* 38, 1988, 27-28 (“*1987 Resolution*”) [Annex 44].

⁴¹⁰ Resolution on Whaling under Special Permit, Resolution 1995-9, Appendix 10, Chairman’s Report of the Forty-Seventh Annual Meeting, *Annual Report of the International Whaling Commission 1995*, 46-47 (“*Resolution 1995-9*”) [Annex 46].

⁴¹¹ Resolution on Special Permits for Scientific Research, Resolution 1999-2, Appendix 3, Chairman’s Report of the Fifty-First Annual Meeting, *Annual Report of the International Whaling Commission 1999*, 52 (“*Resolution 1999-2*”) [Annex 47].

⁴¹² Review of Scientific Permits, Annex O, Report of the Scientific Committee, *Rep. int. Whal. Commn* 39, 1989, 154 [Annex 45].

⁴¹³ Guidelines for the Review of Scientific Permit Proposals, Annex Y, Report of the Scientific Committee, *J. Cetacean Res. Manage.* 3 (Suppl.), 2001, 371-372 [Annex 48].

special permit operations. They focus on the need for relevant objectives, and stress the availability of non-lethal methods to achieve those objectives.

F. CONCLUSIONS

4.30 The conditions for the issue of special permits have evolved since they were first introduced in 1931. In particular, the ICRW introduced the basis for oversight by the Commission. The amendment of the Schedule by the introduction of a new paragraph 30 set out for the first time detailed criteria that had to be addressed before a Contracting Government could issue a permit under Article VIII. Since then, these criteria and the system of oversight by IWC institutions, have been refined, beginning with the *Guidelines* introduced in 1985 and culminating with the adoption of *Annex P* in 2008.

4.31 It follows that Article VIII, in its application to JARPA II, is characterised by the following essential features:

- (1) Article VIII is a limited exception to the ICRW regime regulating the conservation and management of whales;
- (2) Article VIII, and in particular the meaning of its central phrase “for purposes of scientific research”, is not self-judging and falls to be determined objectively; and
- (3) Special permit whaling conducted under Article VIII must meet the essential characteristics of a program for purposes of “scientific research”, those characteristics being reflected in the views of the IWC in its *Guidelines*.⁴¹⁴

⁴¹⁴ These characteristics are consistent with the essential characteristics of a program for purposes of scientific research as identified by Professor Mangel. See Section II.C of this Chapter.

4.32 These features also follow from the interpretation of Article VIII in accordance with the ordinary principles of treaty interpretation. In addition, in the light of these principles, the proper interpretation and application of Article VIII is characterised by two further essential features:

- (1) Special permit whaling carried out for “purposes” of scientific research means whaling conducted for such purposes and not for any other purpose; and
- (2) Article VIII is subject to the requirement under general international law, as reflected in Article 26 of the *Vienna Convention*, that ICRW obligations must be performed in good faith.

This will be established by Section II, which examines the application of the relevant principles of treaty interpretation to Article VIII in detail.

SECTION II. RELEVANT PRINCIPLES OF TREATY INTERPRETATION AND ARTICLE VIII OF THE ICRW

4.33 The interpretation of Article VIII of the ICRW is governed by the principles set out in Articles 31 and 32 of the *Vienna Convention*. The application of these principles makes clear that Japan’s ability to issue special permits under Article VIII must be exercised on the basis of objective criteria that determine whether an activity is, in good faith, “for purposes of scientific research”.

4.34 Moreover, the words of Article VIII have essential characteristics that are limitative in nature: activities for “purposes” of scientific research must be carried out for such purposes and not for any other purpose, and permits cannot be issued as a means of circumventing obligations arising under the Schedule of the ICRW. These characteristics flow from the application of Article 31 of the *Vienna Convention*, in particular the ordinary meaning to be given to Article VIII (Section II.A(1) below), the object and purpose of the ICRW (Section II.A(2) below), and the context of Article VIII (Section II.A(3) below), as well as the obligation to perform Article VIII in good faith (Section II.A(4) below).

A. APPLICATION OF ARTICLE 31(1) OF THE VIENNA CONVENTION

(1) The language of Article VIII and its ordinary meaning

4.35 Article VIII(1) of the ICRW provides for the issue of permits by a Contracting Government to its nationals that authorise the killing, taking and treating of whales “for purposes of scientific research subject to such restrictions as to number and subject to such other conditions as the Contracting Government thinks fit”. Article VIII applies “[n]otwithstanding anything contained in this Convention”, and is expressly framed as an exception to the operation of the ICRW. It is only where the conditions for the operation of this exception are met,

and in particular that the whaling activity is “for purposes of scientific research”, that whaling in purported reliance on Article VIII will be lawful within the meaning of the Convention. In this regard, the phrase “as the Contracting Government thinks fit” attaches only to the limitations “as to the number and...such other conditions”. It does not attach to the description of a permit as one “authorizing [a] national to kill, take and treat whales for purposes of scientific research”.

4.36 Article VIII implies that permits may only lawfully be issued if two separate but related conditions are met: first, the activity that is subject to the permit must in fact be “scientific research”; and secondly, the activity must be “for purposes of” scientific research, and not for other purposes. In this way, Article VIII is concerned both with the *product* of the activity (and the use to which it is put), and with the *aim* (or reason) for which the activity is to be carried out.

4.37 The concept of whaling “for purposes of scientific research” is not defined by the ICRW. Its meaning and effect fall to be determined by reference to the established rules of treaty interpretation, as reflected in Article 31 of the *Vienna Convention*. In this regard, the permission accorded to any Contracting Government under Article VIII(1) to “grant to any of its nationals a special permit authorizing that national to kill, take and treat whales for purposes of scientific research” is not self-judging or subjective. Rather, the meaning of Article VIII is to be determined on an objective basis. In this case, it is for the Court to determine the scope of the exception provided by Article VIII of the ICRW in accordance with Article 31 of the *Vienna Convention*.

4.38 Article 31(1) requires that treaties should be interpreted “in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose.” In applying this rule to Article VIII, consideration will first be given to the ordinary meaning of the

phrase “for purposes of scientific research” – in particular, the meaning of two distinct elements of the phrase, namely the meaning of the words “for purposes” and of the words “scientific research.”

(i) *The ordinary meaning of “for purposes of”*

4.39 The ordinary meaning of “purpose” is “the reason for which something is done or for which something exists.”⁴¹⁵

4.40 In accordance with this ordinary meaning, a proper interpretation of the words “for purposes of” as used in the phrase “for purposes of scientific research” requires that the activity be assessed to be genuinely motivated by an intent to conduct scientific research, and not for any other purpose or purposes. Moreover, a proper interpretation indicates that activity that is unlikely to generate scientifically useful information cannot be considered to be carried out “for purposes of scientific research”. Furthermore, the words “for purposes of” require that it will not be sufficient if the conduct of scientific research is an incidental reason for the conduct of a particular whaling operation.

4.41 This conclusion is fully consistent with, and supported by, the approach recently adopted by the Court in *Costa Rica v. Nicaragua*, where it held that,

[E]xpressly stating the purpose for which a right may be exercised implies in principle the exclusion of all other purposes and, consequently, imposes the limitation thus defined on the field of application of the right in question...⁴¹⁶

4.42 Accordingly, even assuming it could be established that whaling pursuant to a particular permit issued under Article VIII is capable of being categorised as scientific research, if the genuine purpose of the conduct of that whaling is something different, that whaling would not fall within the permitted scope of the

⁴¹⁵ “purpose *n.*”, *The Concise Oxford English Dictionary* (twelfth edn), C Soanes and A Stevenson (Eds), (Oxford University Press, 2008, *Oxford Reference Online*) (“*The Concise Oxford English Dictionary* (twelfth edn)”).

⁴¹⁶ *Case Concerning the Dispute Regarding Navigational and Related Rights (Costa Rica v. Nicaragua)*, *Judgment*, 13 July 2009, 28, para. 61.

exception under Article VIII. In determining the “purpose” for which an activity is carried out it is also essential to have regard to the outcome or product of that activity, especially an activity carried out over a prolonged period of time. In the context of whaling purportedly conducted “for purposes of scientific research” under Article VIII, this means examining the result of the relevant whaling operations to determine whether those operations were conducted with the genuine motivation of carrying out scientific research.

(ii) *The ordinary meaning of “scientific research”*

4.43 The term “scientific research” is not defined by the ICRW. Indeed, of the 40 international environmental agreements which currently contemplate the conduct of “scientific research”, none expressly define the concept.⁴¹⁷

4.44 The natural and ordinary meanings of the essential components of this phrase (“scientific”, “science” and “research”) are as follows:

Scientific: 1. relating to or based on science. 2. systematic; methodical.⁴¹⁸

Science: 1. the intellectual and practical activity encompassing the systematic study of the structure and behaviour of the physical and natural world through observation and experiment. 2. a systematically organised body of knowledge on any subject.⁴¹⁹

Research: the systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions.⁴²⁰

4.45 The essential nature of “science” was also defined in the *Amicus Curiae* Brief submitted by, *inter alia*, 72 Nobel Laureates in the United States Supreme Court in *Edwards v. Aguillard* in the following terms:

Science is devoted to formulating and testing naturalistic explanations for natural phenomena. It is a process for systematically collecting and recording data about

⁴¹⁷ Database of Ronald B Mitchell, 2002-2010, *International Environmental Agreements Database Project (Version 2010.3)*, at <<http://iea.uoregon.edu/>> on 17 April 2011.

⁴¹⁸ “scientific *adj.*”, *The Concise Oxford English Dictionary (twelfth edn)*.

⁴¹⁹ “science *n.*”, *The Concise Oxford English Dictionary (twelfth edn)*.

⁴²⁰ “research *n.*”, *The Concise Oxford English Dictionary (twelfth edn)*.

the physical world, then categorizing and studying the collected data in an effort to infer the principles of nature that best explain the observed phenomena.⁴²¹

4.46 As noted by Professor Mangel in his Expert Opinion:

The goal of science is to understand the natural world by providing a framework to account for observations already taken and to make predictions of new observations. This goal is achieved by putting new knowledge in the context of existing knowledge...⁴²²

And further:

[S]cience does not consist of simply accumulating data...

Simply put, the essence of science is to extract knowledge from data...⁴²³

4.47 The notion and process of science is inherently evolutionary. What amounts to scientific research in one age may not amount to scientific research in another age. The scientific character of an activity can only be gauged in its contemporary setting.

4.48 Combined with the ordinary meaning of “for purposes of”, as set out above, these definitions of “science” and “research” inform the ordinary meaning of the composite phrase “for purposes of scientific research”. In order to determine the ordinary meaning of this phrase in Article VIII, Article 31(1) of the *Vienna Convention* also requires that regard be had to the object and purpose of the ICRW, as well as the context of the Article VIII exception within the framework of the ICRW.

(2) The object and purpose of the ICRW

4.49 The ICRW establishes a system comprising institutions and procedures that are marshalled to give effect to the desire of the Contracting Governments to

⁴²¹ *Amicus Curiae Brief of 72 Nobel Laureates, 17 State Academies of Science, and 7 Other Scientific Organizations in Support of Appellees*, 18 August 1986, in *Edwards v. Aguillard*, 482 U.S. 578 (1987).

⁴²² *Mangel, Expert Opinion*, para. 4.1 [Appendix 2].

⁴²³ *Ibid.*, paras. 4.6 and 4.7 [Appendix 2].

take steps to conserve the global population of whales. The preamble to the ICRW provides an important guide to the ICRW's object and purpose, in such a way that assists the interpretation of Article VIII. As noted by the Tribunal in the *Beagle Channel Arbitration*:

Although Preambles to treaties do not usually – nor are they intended to – contain provisions or dispositions of substance – (in short they are not operative clauses) – it is nevertheless generally accepted that they may be relevant and important as guides to the manner in which the Treaty should be interpreted, and in order, as it were, to “situate” it in respect of its object and purpose.⁴²⁴

4.50 As noted in Chapter 2 of this *Memorial*,⁴²⁵ the preamble to the ICRW evidences two fundamental objectives underpinning the system established by the ICRW – first, to provide for the proper and effective conservation and recovery of all whale stocks and, secondly (relying on and flowing from the first), to make possible the “orderly development” of the whaling industry. Thus, the scientific research that is the purpose of a special permit issued pursuant to the Article VIII exception must be consistent with the object and purpose of the Convention, and in particular the conservation and recovery of whale stocks.

4.51 The ICRW regime includes procedures under Article V for amending the Schedule so as to give effect to the will of the Contracting Governments as to the manner in which the object and purpose of the ICRW are to be given effect. In this way, while the object and purpose of the ICRW remains constant, the measures agreed upon to give effect to that object and purpose evolve over time. Article VIII of the ICRW must therefore be interpreted to give the fullest possible effect to the measures adopted by the Contracting Governments that are designed to achieve the ICRW's object and purpose.

⁴²⁴ *Case concerning a dispute between Argentina and Chile concerning the Beagle Channel, Award*, 18 February 1977, *Reports of International Arbitral Awards*, Vol. XXI, 53-264, 89, para. 19.

⁴²⁵ See Chapter 2, Section I.C.

(3) The context of Article VIII

4.52 Article VIII commences with the words “[n]otwithstanding anything contained in this Convention”. Article VIII is therefore expressly framed as an exception to the operation of the ICRW as a whole. As such, it is a limited permission granted to Contracting Governments, the exercise of which must not undermine the effectiveness of the regulatory regime as a whole. An interpretation of Article VIII which allowed a Contracting Government to issue permits “for purposes of scientific research” without limitation on the number of whales taken, no matter how endangered, would plainly undermine the operation of the comprehensive regulatory regime established under the ICRW; it would also be incompatible with the object and purpose of the Convention. These propositions are consistent with the principle of effectiveness under international law, as reflected in Articles 26 and 31 of the *Vienna Convention* and applied by the Court in the *Reparation for Injuries* Advisory Opinion.⁴²⁶

4.53 This comprehensive international regime has evolved since the adoption of the original text of the ICRW in 1946.⁴²⁷ It now incorporates a number of additional conservation measures, including the factory ship moratorium (adopted in 1979), the moratorium on commercial whaling (adopted in 1982), the Indian Ocean Sanctuary (adopted in 1979) and the Southern Ocean Sanctuary (adopted in 1994). All of these have been adopted by way of amendment to the Schedule which forms part of the ICRW. The Article VIII exception falls to be interpreted by reference to the ICRW regime as it has evolved, and in particular as a regime that has, since 1985, included a zero catch limit on commercial whaling.

⁴²⁶ *Reparation for Injuries Suffered in the Service of the United Nations, Advisory Opinion*, 11 April 1949, *I.C.J. Reports 1949*, 174, (“*Reparation for Injuries Advisory Opinion*”) 183-184. See also *Interpretation of the Peace Treaties with Bulgaria, Hungary, and Romania, Advisory Opinion (Second Phase)*, *I.C.J. Reports 1950*, 65, 229.

⁴²⁷ See Chapter 2, Section II of this *Memorial*.

4.54 Article VIII therefore falls to be interpreted in such a manner that does not undermine the effectiveness of this regime, or deprive any of the conservation measures adopted by Contracting Governments – in particular since 1979 – of their full and operative effect. An interpretation of Article VIII that permits whaling of a commercial scale or nature – whether by intent or indirectly – would undermine an internationally-agreed conservation measure, the moratorium on commercial whaling under paragraph 10(e) of the Schedule, and deprive it of its operative value.

4.55 Relatedly, with the adoption in 1982 of the moratorium on commercial whaling, the Contracting Governments determined that in the immediate future the ICRW’s object and purpose could only be achieved by a complete and total prohibition on commercial whaling. In this way, the granting of any special permit under Article VIII that undermines the moratorium on commercial whaling will also be inconsistent with the object and purpose of the ICRW.

4.56 This construction of the Article VIII exception informs the interpretation of its central phrase, “for purposes of scientific research”. In particular, it requires close adherence to the essential characteristics of a program that is genuinely intended to be “for purposes of scientific research”, as identified below.⁴²⁸

(4) Good faith in the interpretation and application of Article VIII

4.57 Finally, Article 31(1) of the *Vienna Convention* specifically requires interpretation in good faith. The interpretation of a treaty provision, and its application in the given circumstances, is integral to the performance of the treaty.

4.58 The good faith obligation in Article 26 of the *Vienna Convention* (closely related to Article 31(1)) is that: “[e]very treaty in force is binding upon the parties

⁴²⁸ See below, Section II.C of this Chapter.

to it and must be performed by them in good faith.” The obligation reflects the customary international law principle of *pacta sunt servanda* and is recognised in Article 2 of the *Charter of the United Nations*.⁴²⁹

4.59 The obligation of good faith applies to the performance of treaty obligations as well as the exercise of rights. At its heart, it requires “every right to be exercised honestly and loyally.”⁴³⁰ It requires parties to observe treaty stipulations “in their spirit as well as according to their letter.”⁴³¹ It extends to precluding use of the “form of the law” to cover the commission of what would otherwise be an unlawful act. This reflects the maxim *ex re sed non ex nomine* (“according to the form, not the name”).⁴³²

4.60 The *Dictionnaire de la terminologie du droit international* refers to the related concept of *abus de droit* in the following terms:

The exercise by a State of a right in such a manner or in such circumstances as indicated that it was for that State an indirect means of avoiding an international obligation imposed upon that State, or was carried out with a purpose not corresponding to the purpose for which that right was recognised in favour of that State.⁴³³

[translation]

⁴²⁹ *Charter of the United Nations*, New York, 26 June 1945, 892 UNTS 119 (entered into force 24 October 1945).

⁴³⁰ B Cheng, *General Principles of International Law as Applied by International Courts and Tribunals* (Grotius Publications Limited, 1987), (“Cheng, *General Principles of International Law*”) 123.

⁴³¹ M Villiger, *Commentary on the 1969 Vienna Convention on the Law of Treaties* (Martinus Nijhoff Publishers, 2009), (“Villiger, *Commentary on the 1969 Vienna Convention on the Law of Treaties*”) 367.

⁴³² Cheng, *General Principles of International Law*, 122.

⁴³³ “s.v. Abus de droit”, Union académique internationale, *Dictionnaire de la terminologie du droit international*, (Sirey, 1960), 4. The French text from the original source reads as follows: “Exercice par un Etat d’un droit d’une manière ou dans des circonstances qui font apparaître que cet exercice a été pour cet Etat un moyen indirect de manquer à une obligation internationale lui incombant ou a été effectué dans un but ne correspondant pas à celui en vue duquel ledit droit est reconnu à cet Etat.”

4.61 Good faith also invokes notions of reasonableness: “[a] reasonable and *bona fide* exercise of a right...is one which is appropriate and necessary for the purpose of the right (ie in furtherance of the interests which the right is intended to protect).”⁴³⁴ This recourse to reasonableness is also supported in international jurisprudence.⁴³⁵

4.62 The application of the obligation of good faith to the implementation of Article VIII requires that the grant of a special permit by a Contracting Government occurs only where that grant is in furtherance of the objects of the ICRW.

4.63 The manner in which the principle of good faith applies to Japan’s reliance on Article VIII in the present case is addressed in Chapter 5 of this *Memorial*.⁴³⁶

B. APPLICATION OF ARTICLE 31(3) OF THE VIENNA CONVENTION

4.64 In interpreting the Article VIII exception in good faith consistent with the *Vienna Convention*, it is also appropriate to have regard to the subsequent practice of the Contracting Governments to the ICRW⁴³⁷ and to relevant developments in international environmental law.⁴³⁸ Subsequent practice provides a clear indication of what the Contracting Governments consider to be a proper interpretation of the ICRW generally and Article VIII in particular. The norms of international environmental law binding on Australia and Japan also inform the

⁴³⁴ Cheng, *General Principles of International Law*, 125.

⁴³⁵ *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, Report of the Appellate Body (1999) 38 ILM 119, para. 158.

⁴³⁶ See Chapter 5, Section IV.

⁴³⁷ *Vienna Convention*, Article 31(3)(a).

⁴³⁸ *Vienna Convention*, Article 31(3)(c).

content of the obligation set out in Article VIII. These norms have developed significantly since 1946.

(1) Subsequent practice of the Contracting Governments to the ICRW

4.65 The Court has noted that, when called upon to interpret the provisions of a treaty, it has “frequently examined the subsequent practice of the parties in the application of that treaty.”⁴³⁹

4.66 The subsequent practice of the parties is particularly relevant in the context of a treaty, such as the ICRW, which establishes a decision-making organ such as the IWC.⁴⁴⁰ The IWC has been given the task of interpreting and applying the ICRW; it takes decisions concerning the policy of the Commission on the basis of a majority vote (with the exception of Schedule amendments, which require a three-quarters majority, and certain Resolutions for which consensus is required).⁴⁴¹ As noted by Professor Bowett in a legal opinion to the IWC in 1979:

Where, as in the 1946 Convention, a treaty establishes a continuing regime with international organs, such as the Commission, there is a marked tendency to regard such a treaty as a “dynamic” instrument, akin to a constitution in a State, capable of adaptation to changing circumstances by a process of interpretation rather than as a static statement of rights and duties the content of which is fixed and unchangeable. The reason for this is obvious.⁴⁴²

4.67 The practice of Contracting Governments subsequent to the adoption of the ICRW reveals the views of the IWC as to the proper application and scope of the Article VIII exception, and what is required – developed over time – to give

⁴³⁹ *Kasikili/Sedudu Island (Botswana/Namibia)*, Judgment, *I.C.J. Reports 1999 (II)*, 1076, para. 50.

⁴⁴⁰ See, for example, *Certain Expenses of the United Nations, Advisory Opinion*, 20 July 1962, *I.C.J. Reports 1962*, 151, 157, 160, 165.

⁴⁴¹ Article III(2), ICRW; *Rules of Procedure*, Rule J.3.

⁴⁴² D Bowett, “Legal Opinion on Schedule Provision for Prior Review of Scientific Permits and Prohibition of Whaling by Operations Failing to Supply all Data Stipulated”, 28 April 1979, IWC/31/9, 1.

effect to the object and purpose of the ICRW. In addition to the IWC *Guidelines* for review of special permit proposals and results,⁴⁴³ the IWC's interpretation of the proper scope of the Article VIII exception is also evident in relevant Resolutions passed by the Commission.

4.68 Since the commencement of the moratorium on commercial whaling in 1985/86, the Commission has adopted more than 30 Resolutions on special permit whaling operations conducted by Contracting Governments. A great number of these are critical of the relevant programs and urge their suspension or modification.⁴⁴⁴ Special permit whaling operations have also been the subject of consistent concern and criticism by members of the Scientific Committee and Contracting Governments in the IWC. Criticisms of special permit whaling primarily have focused in general terms on two issues: (1) concern that current and proposed special permit whaling operations undermine conservation measures adopted by the Commission, in particular the moratorium on commercial whaling and the Southern Ocean Sanctuary; and (2) the need to ensure that non-lethal methods of research are utilised where available.

4.69 The subsequent practice of the parties as reflected in Commission Resolutions, as well as the *Guidelines* identified above,⁴⁴⁵ also informs the essential characteristics of a genuine program "for purposes of scientific research" under Article VIII.⁴⁴⁶

⁴⁴³ See above, Section I.E of this Chapter.

⁴⁴⁴ The IWC Resolutions on special permit whaling may be found at Annexes 7 - 41 to this *Memorial*.

⁴⁴⁵ See above, Section I.E of this Chapter.

⁴⁴⁶ See below, Section II.C of this Chapter.

(i) Special permit whaling should not undermine IWC conservation measures

4.70 The IWC has consistently recorded its view that special permit whaling should not be conducted in such a way as to undermine conservation measures adopted by the Commission. As stated by the Commission in 2003:

Contracting Governments, in exercising their rights under Article VIII, should nevertheless respect fully the Commission's arrangements to conserve whales and ensure that the killing, taking and treating of whales for scientific research is only undertaken in a manner consistent with the provisions and principles of the Convention.⁴⁴⁷

4.71 Such concerns can be traced back to the earliest years of the Commission, when the practice of issuing special permits authorising the killing of whales outside the whaling season began to emerge.⁴⁴⁸ For example, at its Ninth Meeting in 1957, the Commission stated that:

Contracting Governments should not issue permits for the taking of whales for scientific purposes outside the whaling season unless the reasons for doing so were of the utmost cogency.⁴⁴⁹

This makes clear that there exists a presumption that the Article VIII exception is to be construed narrowly.

4.72 The concerns of the Contracting Governments increased following the introduction of the moratorium on commercial whaling and the contemporaneous escalation of special permit whaling. Beginning in 1985, the Contracting Governments have emphasised consistently that special permit whaling should be used "conservatively" and not as a continuation of commercial whaling under the

⁴⁴⁷ *Resolution 1995-9* [Annex 46].

⁴⁴⁸ See, for example, Report of the Scientific Sub-Committee, Appendix IV, *Eighth Report of the Commission*, 1957, 27.

⁴⁴⁹ Chairman's Report of the Ninth Meeting, Appendix III, *Ninth Report of the Commission*, 1958, 16.

guise of scientific study.⁴⁵⁰ In 1985, the Commission adopted by consensus a Resolution urging:

[A]ny Contracting Government proposing the issue of scientific permits in the intervening period to take account of the serious concerns expressed in the Commission at the possibility of whaling for scientific purposes in the period referred to in Schedule paragraph 10(e) assuming the characteristics of commercial whaling.⁴⁵¹

4.73 Since then, concerns have been expressed consistently by Contracting Governments that the special permit programs proposed and conducted under Article VIII by their scale and nature subvert the intent of the moratorium on commercial whaling.⁴⁵² In 2003, the Commission:

STATE[D] that the current and proposed Special Permit whaling operations represent an act contrary to the spirit of the moratorium on commercial whaling and to the will of the Commission;

STATE[D] that Article VIII of the Convention is not intended to be exploited to provide whale meat for commercial purposes and shall not be so used.⁴⁵³

4.74 The Commission has also recognised that special permits issued under Article VIII have been used to circumvent the commercial moratorium, and that this is not permitted. The Commission made clear its views in 2003:

Unfortunately, some members have interpreted [Article VIII] as a licence to bypass the IWC's conservation measures, and to issue scientific permits for catches of whales on a similar scale to ordinary commercial whaling. Although Article VIII does indeed exempt whales taken for scientific purposes from the specific regulations of the Convention, it does not authorise members to ignore the general obligation to conserve whales for the benefit of future generations.⁴⁵⁴

⁴⁵⁰ See, for example, Chairman's Report of the Thirty-Seventh Annual Meeting, *Rep. int. Whal. Commn* 36, 1986, 12.

⁴⁵¹ Resolution on Scientific Permits, Appendix 2, Chairman's Report of the Thirty-Seventh Annual Meeting, *Rep. int. Whal. Commn* 36, 1986, 26 [Annex 7].

⁴⁵² See, for example, comments of Australia and others, Chairman's Report of the Forty-Eighth Annual Meeting, *Rep. int. Whal. Commn* 47, 1997, 38.

⁴⁵³ Whaling under Special Permit, Resolution 2003-2, Annex F, Chair's Report of the Fifty-Fifth Meeting, *Annual Report of the International Whaling Commission 2003*, 102 ("Resolution 2003-2") [Annex 38].

⁴⁵⁴ *Berlin Initiative*, Annex II, IWC Conservation Work (An Annotated Compilation, 1976-2001), 28 [Annex 37].

4.75 These concerns have also been echoed in the Scientific Committee. In 2003 – when only Iceland and Japan were conducting so-called “scientific” whaling programs – 41 members of the Scientific Committee stated:

As members of the Scientific Committee, we are seriously concerned by what we see as the increasingly frequent abuse of Article VIII of the International Whaling Convention for the Regulation of Whaling by some member nations. This has important ramifications for the IWC and the work of the [Scientific Committee]...⁴⁵⁵

4.76 It is the clear view of the IWC that Contracting Governments cannot issue permits under Article VIII in a manner that purports to be “for purposes of scientific research” but in reality has another purpose, namely to circumvent an internationally agreed moratorium on commercial whaling: special permit whaling must not assume the characteristics of commercial whaling.

4.77 Nor can whaling that purports to be “for purposes of scientific research” under Article VIII be allowed to have the effect of undermining any other conservation measures adopted by the Commission. In this context, the Southern Ocean Sanctuary is of particular relevance.

4.78 Paragraph 7(b) of the Schedule expressly prohibits commercial whaling in the Southern Ocean Sanctuary. In 1995, at its first annual meeting following the entry into effect of the Sanctuary, the Commission expressed the strong view that Contracting Governments should “respect fully” the wish of the Commission to ensure the conservation of whales in designated sanctuaries. As such, the Commission concluded that:

Contracting Governments should undertake, and collaborate in, the conduct of a program of research in the Southern Ocean Sanctuary using non-lethal methods and, in the exercise of their sovereign rights, refrain from issuing Special Permits for research involving the killing of cetaceans in such sanctuaries.⁴⁵⁶

⁴⁵⁵ Concerns Regarding Scientific Permits, Appendix 2 to Annex O, Report of the Scientific Committee, *J. Cetacean Res. Manage.* 6 (Suppl.), 2004, 364 (“Concerns Regarding Scientific Permits, Appendix 2 to Annex O, Scientific Committee Report, 2004”) [Annex 62].

⁴⁵⁶ Resolution on Whaling under Special Permit in Sanctuaries, Resolution 1995-8, Chairman’s Report of the Forty-Seventh Annual Meeting, *Rep. int. Whal. Commn* 46, 1996, 46 (“Resolution 1995-8”) [Annex 27].

4.79 In 1996, the Commission adopted a further Resolution which requested that “the Government of Japan, in the exercise of its sovereign rights, refrain from issuing a special permit for the take of Southern Hemisphere minke whales, particularly in the Southern Ocean Sanctuary”.⁴⁵⁷ The Commission adopted further Resolutions in 1997,⁴⁵⁸ 1998⁴⁵⁹, 1999,⁴⁶⁰ 2000,⁴⁶¹ 2001,⁴⁶² 2003,⁴⁶³ and 2007⁴⁶⁴ which reaffirmed that Contracting Governments should refrain from issuing special permits for research involving the killing of cetaceans in sanctuaries, reiterated its concern over Japan’s continuing scientific program involving the killing of whales in the Southern Ocean Sanctuary and strongly urged Japan to suspend the lethal aspects of its special permit program occurring in the Southern Ocean Sanctuary.⁴⁶⁵ Many Contracting Governments have also

⁴⁵⁷ Resolution on Special Permit Catches by Japan, Resolution 1996-7, Appendix 7, Chairman’s Report of the Forty-Eighth Meeting, *Rep. int. Whal. Commn* 47, 1997, 51-52 (“*Resolution 1996-7*”) [Annex 28].

⁴⁵⁸ Resolution on Special Permit Catches in the Southern Ocean by Japan, Resolution 1997-5, Appendix 5, Chairman’s Report of the Forty-Ninth Meeting, *Rep. int. Whal. Commn* 48, 1998, 47 (“*Resolution 1997-5*”) [Annex 29].

⁴⁵⁹ Resolution on Whaling under Special Permit, Resolution 1998-4, Appendix 4, Chairman’s Report of the Fiftieth Annual Meeting, *Annual Report of the International Whaling Commission 1998*, 43 (“*Resolution 1998-4*”) [Annex 31].

⁴⁶⁰ Resolution on Whaling under Special Permit, Resolution 1999-3, Appendix 4, Chairman’s Report of the Fifty-First Annual Meeting, *Annual Report of the International Whaling Commission 1999*, 52-53 (“*Resolution 1999-3*”) [Annex 32].

⁴⁶¹ Resolution on Whaling under Special Permit in the Southern Ocean Sanctuary, Resolution 2000-4, Appendix 1, Chairman’s Report of the Fifty-Second Annual Meeting, *Annual Report of the International Whaling Commission 2000*, 56 (“*Resolution 2000-4*”) [Annex 33].

⁴⁶² Resolution on Southern Hemisphere Minke Whales and Special Permit Whaling, Resolution 2001-7, Annex C, Chair’s Report of the Fifty-Third Annual Meeting, *Annual Report of the International Whaling Commission 2001*, 57 (“*Resolution 2001-7*”) [Annex 35].

⁴⁶³ Resolution on Southern Hemisphere Minke Whales and Special Permit Whaling, Resolution 2003-3, Annex G, Chair’s Report of the Fifty-Fifth Annual Meeting, *Annual Report of the International Whaling Commission 2003*, 103 (“*Resolution 2003-3*”) [Annex 39].

⁴⁶⁴ Resolution on JARPA, Resolution 2007-1, Annex E, Chair’s Report of the Fifty-Fifth Annual Meeting, *Annual Report of the International Whaling Commission 2007*, 90 (“*Resolution 2007-1*”) [Annex 41].

⁴⁶⁵ In relation to similar discussions in 2004, see Chair’s Report of the Fifty-Sixth Annual Meeting, *Annual Report of the International Whaling Commission 2004*, 54-55.

made explicit statements in the Commission expressing their opposition to the conduct of any lethal research in the Southern Ocean Sanctuary.⁴⁶⁶

(ii) Research should be conducted using non-lethal techniques

4.80 It is the clear view of the IWC that scientific research should be conducted using non-lethal techniques where available.⁴⁶⁷ As noted by the Commission in Resolution 2003-2, “Article VIII of the ICRW was drafted and accepted by States Parties in 1946, at a time when few alternatives to lethal investigations existed, a situation drastically different from today”.⁴⁶⁸ In the same Resolution, the Commission reaffirmed its clear view that “non-lethal techniques available today will usually provide better data at less cost to both animals and budget”, and it urged “any country conducting or considering the conduct of Special Permit whaling to terminate or not commence such activities and to limit scientific research to non-lethal methods only.”⁴⁶⁹ Individual Contracting Governments have expressed consistently their strong opposition to the use of lethal methods during plenary discussion in the Commission.⁴⁷⁰

⁴⁶⁶ See, for example, Chairman’s Report of the Forty-Seventh Annual Meeting, *Rep. int. Whal. Commn* 46, 1996, 30-31; Chairman’s Report of the Forty-Eighth Annual Meeting, *Rep. int. Whal. Commn* 47, 1997, 38.

⁴⁶⁷ See, for example, Resolution on Redirecting Research Towards Non-Lethal Means, Appendix 5, Chairman’s Report of the Forty-Second Meeting, *Rep. int. Whal. Commn* 41, 1991, 49; *Concerns Regarding Scientific Permits, Appendix 2 to Annex O, Scientific Committee Report, 2004* [Annex 62]; *Resolution 2003-2* [Annex 38].

⁴⁶⁸ *Resolution 2003-2* [Annex 38].

⁴⁶⁹ *Ibid.*

⁴⁷⁰ For example, New Zealand: Chairman’s Report of the Forty-Seventh Annual Meeting, *Rep. int. Whal. Commn* 46, 1996, 30-31; Chair’s Report of the Fifty-Sixth Annual Meeting, *Report of the International Whaling Commission 2004*, 55; Australia: Chairman’s Report of the Forty-Eighth Annual Meeting, *Rep. int. Whal. Commn* 47, 1997, 38; India: Chair’s Report of the Fifty-Eighth Annual Meeting, *Annual Report of the International Whaling Commission 2006*, 44; France: Chair’s Report of the Fifty-Ninth Annual Meeting, *Annual Report of the International Whaling Commission 2007*, 40; Monaco and the United Kingdom: Chair’s Report of the Fifty-Fifth Meeting, *Annual Report of the International Whaling Commission 2003*, 30; USA, Argentina, Costa Rica, Chile, Portugal, Mexico, Luxembourg, Peru, Uruguay, France, Panama and

(2) Relevant rules of international environmental law

4.81 The *Vienna Convention* requires that “any relevant rules of international law applicable in the relations between the parties” must be taken into account in interpreting the ICRW.⁴⁷¹ As regards Australia and Japan, there are a number of relevant rules of international law in force as between them, the application of which commits both countries to promote the conservation of biodiversity and to apply specific principles, including the precautionary approach. That such norms and principles are relevant has been confirmed by the Court. For example, in its 1971 Advisory Opinion on *South West Africa*, the Court noted that “[a]n international instrument has to be interpreted and applied within the framework of the entire legal system prevailing at the time of its interpretation.”⁴⁷² More recently, the Court confirmed this proposition specifically in relation to environmental considerations in *Gabčíkovo-Nagymaros Project*, observing that the 1977 Treaty in force between Hungary and Slovakia that was the subject of the dispute “is not static, and is open to adapt to emerging norms of international law”.⁴⁷³

4.82 Applying this principle, the interpretation of the ICRW today is not to be carried out by reference to the conditions that pertained in 1946, when the ICRW was adopted, but rather by reference to the conditions and values that prevail today. Since the adoption of the ICRW in 1946, there have been significant developments in international environmental law, in particular concerning the

Spain: Chair’s Report of the Sixtieth Annual Meeting, *Annual Report of the International Whaling Commission 2008*, 27-29.

⁴⁷¹ *Vienna Convention*, Article 31(3)(c).

⁴⁷² *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)*, Advisory Opinion, *I.C.J. Reports 1971*, 31, para. 53.

⁴⁷³ *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, *I.C.J. Reports 1997*, 67-68, para. 112.

protection and conservation of marine mammals, and the protection of the marine environment, including its biodiversity.

4.83 Within these fields, two developments are particularly relevant to the interpretation of the ICRW: the development of a treaty-based regime for the conservation of marine mammals and the precautionary approach. These developments, which evidence the increasingly conservation-oriented approach adopted in the international regulation of marine mammals, lend strong support to an interpretation of the Article VIII exception that is restrictive and that contributes to – rather than undermines – the conservation of whales. This becomes all the more important in circumstances in which there exists considerable uncertainty as to the status of the relevant whale stocks.

(i) Development of a treaty-based regime for the conservation of marine mammals

4.84 Since the 1970s, the international community has adopted an increasingly conservation-oriented approach in the development of treaty regimes, including those covering marine mammals.

4.85 The Stockholm Principles, which emerged from the Stockholm Conference in 1972, created standards against which all States should measure their environmental policies, “having considered the need for a common outlook and for common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment.”⁴⁷⁴ Subsequent international instruments such as the 1973 *Convention on International Trade in Endangered Species of Wild Fauna and Flora*, the 1979 *Convention on Migratory Species of Wild Animals* (“CMS”)⁴⁷⁵ (including the regional agreements for the

⁴⁷⁴ Report of the United Nations Conference on the Human Environment, Stockholm, 1972, UN Doc. A/CONF/48/14/Rev.1, 5-16 June 1972.

⁴⁷⁵ *Convention on Migratory Species of Wild Animals*, Bonn, 23 June 1979, 1651 UNTS 356 (entered into force 1 November 1983) (“CMS”).

conservation of cetaceans concluded under the umbrella of the CMS),⁴⁷⁶ the 1992 *Convention on Biological Diversity* and relevant provisions in the *United Nations Convention on the Law of the Sea*⁴⁷⁷ and the *Convention on the Conservation of Antarctic Marine Living Resources*⁴⁷⁸ also evidence significant developments in the law relating to conservation.

4.86 These instruments recognise the intrinsic value of all living things, and the importance of conservation of migratory species and biological diversity as common concerns of mankind.⁴⁷⁹ They are directly relevant to the conservation and management of whales, and support an interpretation of Article VIII of the Convention that contributes to – rather than undermines – the conservation of whales. This too points to a restrictive interpretation of the Article VIII exception, and a stringent limitation on the use of lethal methods of scientific research if non-lethal means are available.

(ii) Precautionary Approach

4.87 The years since the adoption of the ICRW have seen also the development in international environmental law of the precautionary approach. This development, which has been recognised by the IWC, must be taken into account in interpreting the Article VIII exception. In practical terms, and in the face of uncertainty as to the status of whale stocks and the effect of any lethal take, precaution directs an interpretation of Article VIII that limits the killing of whales.

⁴⁷⁶ *Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas*, New York, 17 March 1992, UNTS Reg. No. 30865 (entered into force 29 March 1994) (“*ASCOBANS*”); *Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area*, Monaco, 24 November 1996 (entered into force 1 June 2001) (“*ACCOBAMS*”).

⁴⁷⁷ *United Nations Convention on the Law of the Sea*, Montego Bay, 10 December 1982, 1833 UNTS 397 (entered into force 16 November 1994), (“*UNCLOS*”) Articles 65 and 120.

⁴⁷⁸ *Conservation on the Conservation of Antarctic Marine Living Resources*, Canberra, 20 May 1980, 402 UNTS 71 (entered into force 7 April 1982).

⁴⁷⁹ See, for example, preambles to the *Convention on Biological Diversity* and CMS.

4.88 The precautionary approach specifically is intended to provide guidance in the development and application of international environmental law where there is scientific uncertainty. The core of this approach is reflected in Principle 15 of the Rio Declaration, which provides that “where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation”.⁴⁸⁰ Thus, a precautionary approach should be taken by States in decisions concerning actions which entail threats of serious damage to the environment where there is scientific uncertainty about the effect of such actions. The approach requires caution and vigilance in decision-making in the face of such uncertainty.

4.89 The precautionary approach has been recognised in a number of international policy documents⁴⁸¹ and international environmental agreements, concerning both broader environmental matters⁴⁸² and, more particularly, the conservation and protection of marine mammals. The International Tribunal for the Law of the Sea (“ITLOS”) alluded to the precautionary approach in the *Southern Bluefin Tuna Cases*, where the Tribunal expressed the view that the parties should act with “prudence and caution to ensure that effective conservation measures are taken to prevent serious harm to the stock of southern bluefin tuna.”⁴⁸³ In *Pulp Mills on the River Uruguay*, the Court also recognised that

⁴⁸⁰ *Rio Declaration on Environment and Development*, adopted at the United Nations Conference on Environment and Development, UN Doc. A/CONF.151/26 (Vol. 1), 12 August 1992, Principle 15.

⁴⁸¹ See, for example, *World Charter for Nature*, UN Doc. A/RES/37/7, 28 October 1982; *Agenda 21*, UN Doc. A/CONF.151/26/Rev.1 (Vol. II) (1992), Chapter 17, para. 17.1.

⁴⁸² See, for example, *Convention on Biological Diversity*; *United Nations Framework Convention on Climate Change*, New York, 9 May 1992, 1771 UNTS 107 (entered into force 21 March 1994); *Agreement on the Application of Sanitary and Phytosanitary Measures*, 15 April 1994, 1867 UNTS 493 (entered into force 1 January 1995); *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*, New York, 4 August 1995, 2167 UNTS 3 (entered into force 11 December 2001).

⁴⁸³ *Southern Bluefin Tuna Cases (New Zealand v. Japan; Australia v. Japan)*, Provisional Measures Order, 27 August 1999, (1999) 38 ILM 1624, para. 77.

“a precautionary approach may be relevant in the interpretation and application of the provisions of the Statute”.⁴⁸⁴ In its Advisory Opinion on the *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area*, the ITLOS Seabed Disputes Chamber observed that:

[T]he precautionary approach has been incorporated into a growing number of international treaties and other instruments, many of which reflect the formulation of Principle 15 of the Rio Declaration. In the view of the Chamber, this has initiated a trend towards making this approach part of customary international law.⁴⁸⁵

4.90 The Contracting Governments to the ICRW have agreed to the adoption of a precautionary approach in a wide range of matters.⁴⁸⁶ As applied to Article VIII, this means that the uncertainty regarding the status of whale stocks requires Contracting Governments to act with prudence and caution by strictly limiting the grant of special permits under Article VIII.

(3) Summary

4.91 The subsequent practice of the parties and relevant developments in international law confirm that Article VIII is to be interpreted as an exception that

⁴⁸⁴ *Case Concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment, 20 April 2010, 51, para. 164.

⁴⁸⁵ *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area* Advisory Opinion, 1 February 2011, para. 135.

⁴⁸⁶ See for example: Resolution on the Need for Research on the Environment and Whale Stocks in the Antarctic Region, Appendix 2, Chairman’s Report of the Forty-Fourth Annual Meeting, *Rep. int. Whal. Commn* 43, 1993, 39-40; Resolution on Research on the Environment and Whale Stocks, Appendix 12, Chairman’s Report of the Forty-Fifth Annual Meeting, *Rep. int. Whal. Commn* 44, 1994, 35; Resolution on Directed Takes of White Whales, Resolution 1998-9, Appendix 10, Chairman’s Report of the Fiftieth Annual Meeting, *Annual Report of the International Whaling Commission 1998*, 46; Resolution on Dall’s Porpoise, Resolution 1999-9, Appendix 10, Chairman’s Report of the Fifty-First Annual Meeting, *Annual Report of the International Whaling Commission 1999*, 55-56; Resolution on Whalewatching, Resolution 1996-2, Appendix 2, Chairman’s Report of the Forty-Eighth Annual Meeting, *Rep. int. Whal. Commn* 47, 1997, 48; Guidance to the Scientific Committee on the Sanctuary Review Process, Resolution 2002-1, Annex F, Chair’s Report of the Fifty-Fourth Annual Meeting, *Annual Report of the International Whaling Commission 2002*, 89.

is only available in limited circumstances. Moreover, Article VIII is not self-judging; its application is to be determined by reference to objective criteria, consistent with those adopted by the Commission established under the ICRW. Such an approach is consistent with the broader international legal framework in which the ICRW now rests, which promotes a conservation-oriented focus that is consistent with a precautionary approach.

C. THE ESSENTIAL CHARACTERISTICS OF A PROGRAM “FOR PURPOSES OF SCIENTIFIC RESEARCH” UNDER ARTICLE VIII

4.92 Consistent with generally accepted scientific practice, Professor Mangel has identified the essential characteristics of a program “for purposes of scientific research” in the context of the conservation and management of whales. Professor Mangel also has explained how these characteristics find expression in the IWC *Guidelines* and are therefore consistent with the practice of the Contracting Governments to the ICRW. The characteristics in this way give contemporary context to the words “for purposes of scientific research” in Article VIII.

4.93 Professor Mangel has reported that a program for purposes of scientific research in the context of the conservation and management of whales must possess four essential characteristics:⁴⁸⁷

- (1) Defined and achievable objectives that aim to contribute knowledge that is important to the conservation and management of whale stocks;
- (2) Appropriate methods that are likely to achieve the stated objectives, including:

⁴⁸⁷ *Mangel, Expert Opinion*, para. 4.39 [Appendix 2].

- (a) lethal methods only where the objectives of the research cannot be achieved by any other means (for example, by the analysis of existing data and/or the use of non-lethal research techniques);
 - (b) setting sample sizes using accepted statistical methodology; and
 - (c) linking mathematical and statistical models to data consistently;
- (3) Periodic review of research proposals and results and adjustment in response to such review; and
- (4) The research is designed to avoid adverse effects on the stocks being studied.

4.94 Relevant international law sources and other international standards regulating the conduct of such research also support these essential attributes which characterise a legitimate program for purposes of “scientific research”. These are drawn upon and referred to in more detail below. Their practical application to JARPA II is addressed in Chapter 5 of this *Memorial*.

(1) Defined and achievable objectives that aim to contribute knowledge that is important to the conservation and management of whale stocks

4.95 Legitimate scientific research requires a defined and achievable set of objectives. To be achievable, the objectives of the proposed research must be testable. This in turn requires the formulation of operationally defined questions and hypotheses, meaning that it must be possible to answer these questions or hypotheses using existing methods (or, alternatively, that there is excellent prospect that new methods can be developed).⁴⁸⁸

⁴⁸⁸ *Mangel, Expert Opinion*, paras. 4.10-12 [Appendix 2].

4.96 This requirement of contemporary scientific method is reflected in the IWC *Guidelines* as an essential characteristic of proposals for the conduct of scientific research under Article VIII.⁴⁸⁹ In addition, this requirement has been confirmed in research guidelines underlying international instruments which contemplate the conduct of scientific research.⁴⁹⁰ It is also commonly recognised in criteria governing funding applications for the conduct of scientific research at the national level.⁴⁹¹

4.97 A further essential component in framing objectives for the conduct of scientific research is that the objectives address gaps in the current knowledge of a particular area or field. This should be evident from the objectives of the research.⁴⁹²

⁴⁸⁹ See, for example, Schedule, para. 30; *Annex P* [Annex 49].

⁴⁹⁰ See, for example, *Resolution 4.18* “Guidelines on the granting of exceptions to Article II, paragraph 1, for the purpose of non-lethal in situ research in the Agreement area,” adopted by the Fourth Meeting of the Contracting Parties to ACCOBAMS, Monaco, 9-12 November 2010, ACCOBAMS-MOP4/2010/Res4.18, (“*ACCOBAMS Resolution 4.18*”) Annex, paras. 7.1 and 7.5. See also *UNCLOS*, Article 248.

⁴⁹¹ In domestic jurisdictions, see guidelines laid down by the following national institutions: United States National Science Foundation, *Grant Proposal Guide*, January 2010, Chapter II, Project Description, at <http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg> on 17 April 2011; UK National Environment Research Council, *NERC Research Grants Handbook 2010*, Section F – Application and Assessment Procedures, para. 224, at <<http://www.nerc.ac.uk/funding/application/researchgrants/>> on 17 April 2011; Canada Natural Sciences and Engineering Research Council of Canada, *Discovery Grants Program*, at <http://www.nserc-crnsng.gc.ca/Professors-Professeurs/Grants-Subs/index_eng.asp> on 17 April 2011; Australian Research Council, *Discovery Projects: Instructions to Applications for funding commencing in 2011*, Part C – Project Description, 16-18, at <<http://www.arc.gov.au/applicants/instructions.htm>> on 17 April 2011.

⁴⁹² *Assessment Framework for Scientific Research Involving Ocean Fertilisation*, adopted at the 32nd Consultative Meeting of Contracting Parties to the London Convention and 5th Meeting of Contracting Parties to the London Protocol under Resolution LC-LP.2(2010), 14 October 2010, (“*Assessment Framework for Scientific Research Involving Ocean Fertilisation*”) para. 2.2.1; *ACCOBAMS Resolution 4.18*, para. 6.1; *Scientific Assessments: Review of methods and modalities for assessments, and pilot assessments initiated by the Subsidiary Body on Scientific, Technical and Technological Advice, Convention on Biological Diversity*, 5 November 2004, UNEP/CBD/SBSTTA/10/7, esp. *Steps for the Conduct of Pilot Assessments Initiated by SBSTTA*, (“*Steps for the Conduct of Pilot Assessments under the Convention on Biological Diversity*”) Annex, 15.

4.98 As noted by Professor Mangel:

[A] program that is motivated by an applied problem such as the conservation and management of whales must contribute to knowledge that informs the motivating problem. It is the responsibility of the proposers to demonstrate the objectives are both achievable with the methods proposed and that the work will contribute to the motivating applied problem.⁴⁹³

4.99 In relation to the IWC, the successive Resolutions setting out the IWC *Guidelines* on special permit whaling under Article VIII stress the need for any special permit program to contribute knowledge important to the conservation and management of whales.⁴⁹⁴ This knowledge may include information required for the Comprehensive Assessment or the implementation of the RMP, or to address other critically important research needs identified by the IWC.⁴⁹⁵

(2) Appropriate methods that are likely to achieve the stated objectives

4.100 Once a set of achievable objectives has been defined, the methods selected for the conduct of the proposed scientific research must be appropriate.⁴⁹⁶ That is, the research proponents must select the best tools that will achieve the stated objectives as clearly and unambiguously as possible. These methods “should be selected following an evaluation of their effectiveness in achieving [these] objectives”.⁴⁹⁷

⁴⁹³ *Mangel, Expert Opinion*, para. 4.37 [Appendix 2].

⁴⁹⁴ *1986 Resolution* [Annex 43]; *1987 Resolution* [Annex 44]; *Resolution 1995-9* [Annex 46]; *Resolution 1999-2* [Annex 47]; *Annex P* [Annex 49].

⁴⁹⁵ *1986 Resolution* [Annex 43]; *1987 Resolution* [Annex 44]; *Resolution 1995-9* [Annex 46]; *Resolution 1999-2* [Annex 47].

⁴⁹⁶ See, for example, *UNCLOS*, Article 240; *ACCOBAMS Resolution 4.18*, para. 7.6.

⁴⁹⁷ *Mangel, Expert Opinion*, para. 4.14 [Appendix 2].

4.101 The IWC *Guidelines* expressly break down this requirement of selecting “appropriate methods” which are likely to achieve the stated objectives into two further fundamental characteristics:

- (a) lethal methods may be utilised only where the objectives of the research cannot be achieved by any other means;⁴⁹⁸ and
- (b) use must be made of appropriate sample sizes.⁴⁹⁹

4.102 It is an uncontroversial proposition that, in conducting scientific research on animals, lethal methods should only be used where no other method is available to achieve the objectives and should not be used beyond what is critical and unavoidable.⁵⁰⁰ In the words of Professor Mangel:

Lethal take destroys the object of study and thus eliminates the possibility of future information gained from the animal that is killed.... Consequently, before using lethal take, one must carefully weigh the balance between the immediate information produced by killing the individual animal and the loss of future information that could be obtained were a non-lethal method used. In my opinion, only when the balance is strongly in favour of the former should the lethal take be used.⁵⁰¹

⁴⁹⁸ 1986 Resolution [Annex 43]; 1987 Resolution [Annex 44]; Resolution 1995-9 [Annex 46]; Resolution 1999-2 [Annex 47]; Annex P [Annex 49].

⁴⁹⁹ 1986 Resolution [Annex 43]; Annex P [Annex 49].

⁵⁰⁰ Annex II to the Protocol on Environmental Protection to the Antarctic Treaty: Conservation of Antarctic Flora and Fauna, Madrid, 4 October 1991, 30 ILM 1476 (entered into force 14 January 1998), Article 3; Agreement on the Conservation of Seals in the Wadden Sea, 16 October 1990, UN Reg. No. 48123 (entered into force 1 October 1991), Article VI(2); Convention on the Conservation of European Wildlife & Natural Habitats, 19 September 1979, CETS No. 104 (entered into force 1 June 1982), Article 9; ACCOBAMS, Article 2(2); Resolution No. 8, “Further Implementation of ASCOBANS”, adopted at the Fourth Meeting of the Parties to ASCOBANS, Esbjerg, Denmark, 19 - 22 August 2003; Convention for the Conservation of Antarctic Seals, 1 June 1972, Cmnd. 7209 Treaty Series 45 (1978) (entered into force 11 March 1978), as clarified by the parties to the Convention in 1988, Report of the 1988 Meeting to Review the Operation of the Convention for the Conservation of Antarctic Seals, London, 12 - 16 September 1988, para. 17; Guidelines for the treatment of marine mammals in field research, Society for Marine Mammalogy, 25(3) Marine Mammal Science 725 (July 2009), (“Guidelines for the treatment of marine mammals”) 736.

⁵⁰¹ Mangel, Expert Opinion, para. 4.35 [Appendix 2].

4.103 The IWC *Guidelines* have repeatedly emphasised that special permit programs should not utilise lethal methods of research where non-lethal methods may be available.⁵⁰² In *Resolution 1995-9*, for example, the Commission noted that “with the development of modern scientific techniques it is not necessary to kill whales to obtain the information that is needed for initial implementation of the Revised Management Procedure for a particular whale stock.” It therefore stipulated that:

[S]cientific research intended to assist the comprehensive assessment of whale stocks and the implementation of the Revised Management Procedure shall be undertaken by non-lethal means [and] scientific research involving the killing of cetaceans should only be permitted in exceptional circumstances where the questions address critically important issues which cannot be answered by the analysis of existing data and/or use of non-lethal research techniques.⁵⁰³

4.104 The *Guidelines* also require that, where a proposal specifies lethal methods, it should identify alternate non-lethal methods and alternate sources of data which might be used in meeting the research objectives.⁵⁰⁴ This principle – that justification should be provided as to why the expected outcomes cannot reasonably be achieved by other means – also finds broad support beyond the IWC.⁵⁰⁵

4.105 In circumstances in which it has been established that lethal research is both necessary and appropriate, the number of specimens killed should be strictly limited to that necessary to conduct the scientific research.⁵⁰⁶ This principle of proportionality is consistent with the internationally accepted tenet governing the

⁵⁰² *1986 Resolution* [Annex 43]; *1987 Resolution* [Annex 44]; *Resolution 1995-9* [Annex 46].

⁵⁰³ *Resolution 1995-9* [Annex 46]. See also *Resolution 1999-2* [Annex 47]; *Annex P* [Annex 49].

⁵⁰⁴ *Resolution 1995-9* [Annex 46].

⁵⁰⁵ See, for example, *Assessment Framework for Scientific Research Involving Ocean Fertilisation*, para. 2.2.1; *ACCOBAMS Resolution 4.18*, para. 7.7.

⁵⁰⁶ See, for example, *1986 Resolution* [Annex 43].

conduct of research on animals, widely known in scientific circles as the “Three Rs” (replacement, reduction and refinement).⁵⁰⁷

4.106 This principle also is consistent with the requirement reflected in the IWC *Guidelines* and more broadly under other international instruments which contemplate the conduct of “scientific research”, that selection of “appropriate methods” requires use of appropriate sample sizes.⁵⁰⁸ This means, for example, that sample sizes must be set using accepted statistical methodology.⁵⁰⁹

4.107 Finally, use of “appropriate methods” also requires consistent and appropriate linkage of mathematical models to data from the research.⁵¹⁰

(3) Periodic review of research proposals and results and adjustment in response to such review

4.108 Periodic peer review of research proposals and results is critical to the conduct of legitimate scientific research.⁵¹¹ As expressed by the United States Supreme Court in *Daubert v. Merrell Dow Pharmaceuticals*, “submission to the scrutiny of the scientific community is a component of ‘good science’, in part because it increases the likelihood that substantive flaws in methodology will be

⁵⁰⁷ See W Russell and R Burch, *The Principles of Humane Experimental Technique* (Allen & Unwin, 1959); World Organisation for Animal Health (OIE), *Terrestrial Animal Health Code*, 19th edition, May 2010, Chapter 7.8, Use of Animals in Research and Education, esp. Article 7.8.3.

⁵⁰⁸ See, for example, *ACCOBAMS Resolution 4.18*, para. 7.6; *Guidelines for the treatment of marine mammals*, 729. In the IWC context, see *1986 Resolution* [Annex 43]; *Annex P* [Annex 49].

⁵⁰⁹ *Mangel, Expert Opinion*, para. 4.15 [Appendix 2]. See also *Guidelines for the treatment of marine mammals*, 729.

⁵¹⁰ *Mangel, Expert Opinion*, para. 4.16 [Appendix 2].

⁵¹¹ See, for example, *Assessment Framework for Scientific Research Involving Ocean Fertilisation*, paras. 2.2(3) and (4); *Steps for the Conduct of Pilot Assessments under the Convention on Biological Diversity*; *FAO Code of Conduct for Responsible Fisheries*, 31 October 1995, Article 12.3.

detected.”⁵¹² The necessity for impartial review of research proposals and results also follows from the notion that “an expert’s self-serving assertion that his conclusions were ‘derived by the scientific method’ [cannot] be deemed conclusive.”⁵¹³ Participation in this process of peer review also encompasses an expectation that the outcome of the peer review should be taken into consideration by the proponents of the relevant research.⁵¹⁴

4.109 As stated by Professor Mangel:

The community of scientists is responsible for the proper assessment and quality control of scientific ideas, in which discovery becomes credibility, through the process of peer review...

In summary, it is essential to a program for purposes of scientific research that there be peer review from the outset of the research program (since a program should not begin until it has been assessed as feasible through a matching of methods and objectives); that there be peer review throughout the operation of the program (since throughout its duration a program should respond to deviations from objectives by adjusting methods or even abandoning the program in the face of inadequate progress); and that the program end with publication of results in peer-reviewed literature (since it is through peer-reviewed publication that claims of discovery are given scientific credibility).⁵¹⁵

4.110 In the IWC context, the conduct of legitimate scientific research under Article VIII necessitates review of research proposals and the periodic review of results. This requirement has expressly been recognised by the IWC, through the adoption of paragraph 30 of the Schedule and the development of the *Guidelines*.

4.111 The necessity for an independent process of review has been recognised by the IWC through the development of *Annex P*. *Annex P* established an “independent” specialist workshop to conduct an initial review of new special permit proposals, periodic review of research, and final review of results, prior to

⁵¹² *Daubert v. Merrell Dow Pharmaceuticals, Inc.* 509 U.S. 579 (1992), 593.

⁵¹³ *Daubert v. Merrell Dow Pharmaceuticals Inc.* (United States Court of Appeals, Ninth Circuit) 43 F.3d 1311 (1995) 1313, 1315-1316.

⁵¹⁴ See, for example, *Assessment Framework for Scientific Research Involving Ocean Fertilisation*, para. 2.2(3).

⁵¹⁵ *Mangel, Expert Opinion*, paras. 4.20 and 4.26 [Appendix 2].

their consideration by the Scientific Committee. This was largely in response to a lack of independence characterising the review process of the Scientific Committee under previous *Guidelines*, under which proponents both defended their own special permit proposals and results and participated in their review and in the drafting of the resulting Scientific Committee reports. These concerns were expressed by a group of 41 members of the Scientific Committee in 2003 as follows:

Member governments that promote poorly conceived research whaling programmes place their scientists in the untenable position of having to defend these proposals in order to support the agenda of their governments. In turn, this causes unnecessary conflict between [Scientific Committee] members (as has occurred at the last several [Scientific Committee] meetings), damages the credibility of the [Scientific Committee] as a whole, and undermines the agreed basis by which the IWC manages stocks of whales.⁵¹⁶

4.112 Finally, the *Guidelines* also stress that Contracting Governments should take account of the comments of the Scientific Committee.⁵¹⁷ Indeed, from *Resolution 1995-9* onwards, the *Guidelines* recommend that Contracting Governments should refrain from issuing, or should revoke, permits that, taking into account the comments of the Scientific Committee, the Commission considers do not meet the essential characteristics of legitimate scientific research as laid down in the *Guidelines*.⁵¹⁸

(4) The research is designed to avoid adverse effects on the stocks being studied

4.113 The notion that legitimate scientific research should be designed to avoid adverse effects on the status of the relevant population or species finds broad support in international agreements concerning the conservation of wildlife which

⁵¹⁶ *Concerns Regarding Scientific Permits, Appendix 2 to Annex O, Scientific Committee Report, 2004* [Annex 62].

⁵¹⁷ See, for example, *1986 Resolution* [Annex 43].

⁵¹⁸ See, for example, *Resolution 1995-9* [Annex 46].

contemplate the conduct of such research.⁵¹⁹ This essential characteristic of legitimate scientific research reflects the precautionary approach, and is also confirmed as a principle of established scientific practice by Professor Mangel.⁵²⁰ The onus is on the proponents of the research to demonstrate, not merely to assert, that the proposed research will not put the population or stock being studied at risk.

4.114 In the context of the IWC, the *Guidelines* have repeatedly emphasised that whaling operations under Article VIII should be conducted in a manner consistent with the Commission's conservation policy.⁵²¹ In particular, the Commission has recognised as one of the essential criteria for the legitimate conduct of scientific research under Article VIII that:

The research can be conducted without adversely affecting the overall status and trends of the stock in question or the success of the comprehensive assessment of such stock.⁵²²

4.115 This issue also has been raised repeatedly as an issue of concern within the Scientific Committee in its review of various special permit programs, including those of Japan, purportedly conducted under Article VIII.⁵²³

⁵¹⁹ See, for example, *Resolution 4.6* "Guidelines for the Issue of Permits for the Capture and Study of Captured Wild Bats", Report of the Fourth Session of the Meeting of the Parties to the *Agreement on the Conservation of Bats in Europe*, Sofia, Bulgaria, 22 – 24 September 2003, Annex 9, 44; *Agreement on the Conservation of Albatross and Petrels*, Canberra, 19 June 2002, 2258 UNTS 257 (entered into force 1 February 2004); Article 3.4; CMS, Article III(5). See also other international standards, for example, the *Guidelines for the treatment of marine mammals*, 728, 736.

⁵²⁰ Mangel, *Expert Opinion*, para. 4.29 [Appendix 2].

⁵²¹ See, for example, *1987 Resolution* [Annex 44]; *Resolution 1995-9* [Annex 46].

⁵²² *1987 Resolution* [Annex 44]. See also Schedule, para. 30; *Annex L* [Annex 42]; *Annex P* [Annex 49] for development of this criterion.

⁵²³ In relation to Japan's programs, see Childerhouse *et. al.*, Comments on the Government of Japan's Proposal for a Second Phase of Special Permit Whaling in Antarctic (JARPA II), Appendix 2 to Annex O1, Report of the Scientific Committee, *J. Cetacean Res. Manage. 8 (Suppl.)*, 2006, 260; Report of the Scientific Committee, Annex O1, Report of the Standing Working Group on Scientific Permits, *J. Cetacean Res. Manage. 8 (Suppl.)*, 2006, 261 [Annex 52]; Report of the Scientific Committee, *Rep. int. Whal. Commn* 38, 1988, 57; Report of the Special Meeting to Consider Japanese Research Permits, *Rep. int. Whal. Commn* 39, 1989,

SECTION III. CONCLUSION: THE MEANING AND EFFECT OF ARTICLE VIII

4.116 The permission granted to Contracting Governments to issue special permits authorising whaling operations “for purposes of scientific research” under Article VIII of the ICRW is not self-judging, but falls to be assessed by reference to objective criteria. That is, the determination of whether a whaling operation is “for purposes of scientific research” is not a question that is left to the discretion of each Contracting Government to the ICRW. To the contrary, the proper scope of this permission, and in particular the phrase “for purposes of scientific research”, falls to be determined by the Court in accordance with the established principles of treaty interpretation as reflected in Articles 31 and 32 of the *Vienna Convention*.

4.117 In the light of these interpretative principles, the Article VIII exception is to be interpreted in its context as a very limited exception to the ICRW regime regulating the conservation and management of whales. Any special permit whaling legitimately conducted under this exception must not undermine the effectiveness of the ICRW regime, including in particular the moratorium on commercial whaling, and must not deprive any specific conservation measure which forms an integral part of this regime of its operative value. In addition, in order to give effect to the text of Article VIII, a special permit whaling program must be conducted for “purposes” of scientific research and for no other purpose. These principles are also consistent with the obligation to perform the requirements of the ICRW in good faith.

163-164. In relation to Iceland’s program, see Report of the Scientific Committee, *Rep. int. Whal. Commn* 37, 1987, 29, para. 4.4.1; *Resolution 2003-2* [Annex 38]. In relation to the USSR, see Chairman’s Report of the Forty-Second Meeting, *Rep. int. Whal. Commn* 41, 1991, 13. In relation to the Republic of Korea, see Report of the Scientific Committee, *Rep. int. Whal. Commn* 37, 1987, 29, para. 4.4.2.

4.118 This interpretation of Article VIII flows from its ordinary meaning, having regard to the object and purpose of the ICRW and to the context of the Convention as a whole. The interpretation is supported by, and consistent with, the subsequent practice of the Contracting Governments to the ICRW, that has committed the IWC to the conservation of whale species as an end in itself. This subsequent practice, incorporating a precautionary approach to questions of conservation and management, also finds support in relevant developments in international environmental law that have occurred since the adoption of the ICRW in 1946. These developments inform the proper scope of the Article VIII exception and are consistent with a strictly limited application of the exception, in particular where there is uncertainty regarding the status of the relevant whale stocks.

4.119 These legal considerations, taken together with the IWC *Guidelines* and generally accepted principles of scientific practice, indicate that in order to qualify as a legitimate program for purposes of “scientific research” under Article VIII, that program must possess four essential characteristics:⁵²⁴

- (1) Defined and achievable objectives that aim to contribute knowledge that is important to the conservation and management of whale stocks;
- (2) Appropriate methods that are likely to achieve the stated objectives, including:
 - (a) lethal methods only where the objectives of the research cannot be achieved by any other means (for example, by the analysis of existing data and/or the use of non-lethal research techniques);
 - (b) setting sample sizes using accepted statistical methodology; and
 - (c) linking mathematical and statistical models to data consistently;

⁵²⁴ *Mangel, Expert Opinion*, para. 4.39 [Appendix 2].

- (3) Periodic review of research proposals and results and adjustment in response to such review; and
- (4) The research is designed to avoid adverse effects on the stocks being studied.

4.120 Each of these criteria must be satisfied in order for the strict and exceptional requirements of Article VIII to be met. Any other approach would undermine the effective operation of the comprehensive regime established by the ICRW.

4.121 Furthermore, a Contracting Party is constrained by Article 26 of the *Vienna Convention* to exercise the permission granted by Article VIII of the ICRW only in good faith.

4.122 To summarise, for the purposes of the present case, the permission granted to Japan by Article VIII is confined to allowing Japan, acting in good faith, only to grant a permit that is, on the basis of objective criteria, a permit that authorises the killing, taking or treating of whales “for purposes of scientific research”, and for no other purpose. That is:

- (1) Article VIII special permits are to be treated as exceptional. Any legitimate reliance on Article VIII by Japan must recognise this essential character of Article VIII.
- (2) Article VIII is not self-judging. It is not for Japan to unilaterally determine whether the activity that it authorises is for purposes of “scientific research”. Rather, determination of whether Japan’s special permit whaling is, in fact, for purposes of “scientific research” is to be determined by reference to objective criteria.

- (3) Any special permit whaling conducted by Japan must possess the four essential characteristics of a program for purposes of “scientific research” identified by Professor Mangel consistently with the IWC *Guidelines*.
- (4) Any special permit whaling conducted by Japan must be for “purposes” of scientific research and not for any other purpose.
- (5) Japan is obliged to act in good faith in relying on Article VIII.

CHAPTER 5 - JARPA II IS NOT WITHIN THE ARTICLE VIII EXCEPTION

5.1 The preceding Chapter discussed the interpretation of Article VIII of the ICRW, and in particular set out five fundamental principles that govern its use by Contracting Governments. In this Chapter, Australia establishes that JARPA II does not fall within the exception contained in Article VIII. Not only does JARPA II fail to meet the description of a program “for purposes of scientific research”, but Japan’s real purpose in issuing special permits under JARPA II is manifestly not scientific research.

5.2 Section I describes the failure of JARPA after nearly two decades of so-called “scientific” whaling by Japan. Notwithstanding this failure, Japan continued whaling by commencing JARPA II in 2005. Section I also explains how in JARPA II Japan continues to employ the same flawed method – the collection of data through whaling – that failed to generate useful or reliable results in JARPA. Japan has simply structured JARPA II around new objectives that purport to be scientific but have no greater prospects of scientific advancement or success.

5.3 Section II assesses JARPA II against the four essential characteristics of a program “for purposes of scientific research” set out in Chapter 4 of this *Memorial*. The evidence shows that JARPA II does not possess any of these characteristics.

5.4 Section III establishes that JARPA II is carried out for purposes other than scientific research. The manifest purpose of JARPA II – which may be traced to the inception of JARPA in 1987 as a means to subvert the moratorium on commercial whaling – is the continuation of whaling on a permanent basis.

SECTION I. THE ALLEGED SCIENTIFIC PURPOSES OF JAPAN’S “SCIENTIFIC” WHALING

5.5 This Section describes the failure of JARPA, in which Japan pursued objectives that were irrelevant to the management procedure agreed by the IWC – the RMP – and that were predicted, and ultimately proved, to be practically unachievable. It then details Japan’s alleged reasons for commencing JARPA II. In this respect, the shift from JARPA to JARPA II is critical since Japan continues to collect the same data using the same methods that failed to produce useful or reliable scientific results in JARPA. Japan has simply framed a new purported scientific purpose for JARPA II in an attempt to justify its continued whaling.

A. THE FAILURE OF JARPA

5.6 Japan conducted JARPA from 1988 to 2005, killing a total of 6,777 minke whales.⁵²⁵ The main objective of JARPA was to collect data on the biological parameters of Antarctic minke whales that were central to the NMP, the management approach that was conclusively discarded by the IWC in 1994.⁵²⁶

5.7 In particular, the stated “primary purpose” of JARPA was to estimate the natural mortality rate of Antarctic minke whales.⁵²⁷ The natural mortality rate determines the chance that a whale will die from natural causes (such as disease, old age or predation) in any particular year. Japan first attempted to calculate the rate at which whales die from natural causes depending on their age (the

⁵²⁵ See Chapter 3, Section II.B.

⁵²⁶ See Chapter 2, Sections II.C and II.E. Japan claimed that the estimation of biological parameters was “essential” for the management of the Antarctic minke whale population: *JARPA proposal, 1987*, 2 [Annex 156].

⁵²⁷ The JARPA proposal uses the terminology “age-specific natural mortality coefficient”: *Ibid.*, 3.

“age-specific natural mortality rate”), but abandoned this after five years to focus on the average rate of natural mortality for all whales, regardless of age.⁵²⁸ Japan also aimed to estimate a range of biological parameters relating to reproduction, including the rate of pregnancy among Antarctic minke whales and the age at which whales reach sexual maturity.⁵²⁹ Japan thus focussed JARPA on the collection of data that was relevant to the NMP.

5.8 When Japan submitted its proposal for JARPA in 1987, two scientists (Cooke and de la Mare) submitted papers to the Scientific Committee, predicting that Japan’s method for estimating the natural mortality rate of minke whales would fail.⁵³⁰ Moreover, by this time the Scientific Committee and the Commission had already reached considered decisions that the NMP was not capable of being implemented.⁵³¹ The Commission accordingly informed Japan in 1987, in the first of many Resolutions on JARPA, that the program was not structured to contribute data that were required for the management of Antarctic whale stocks.⁵³² Japan nonetheless commenced JARPA.

⁵²⁸ Government of Japan, “The 1992/93 Research Plan of Whale Resources in the Antarctic”, June 1992, SC/44/SHB14, 3.

⁵²⁹ *JARPA proposal, 1987*, 6-7 [Annex 156].

⁵³⁰ W de la Mare, “Comments on the program for research of the Southern Hemisphere minke whale and for preliminary research on the marine ecosystem in the Antarctic”, SC/39/O 24, June 1987; J Cooke, “Comments on a proposed take of minke whales (*Balaenoptera acutorostrata*) in Antarctic Areas IV and V pursuant to the Feasibility Study on ‘The Programme for Research on the Southern Hemisphere Minke Whale and for Preliminary Research on the Marine Ecosystem in the Antarctic’”, SC/D87/37, December 1987.

⁵³¹ See Chapter 2, Section II.C.

⁵³² Resolution on Japanese Proposal for Special Permits, Appendix 4, Chairman’s Report of the Thirty-Ninth Annual Meeting, *Rep. int. Whal. Commn* 38, 1988, 29 (“*Resolution 1987-4*”) [Annex 10].

5.9 In 1989, de la Mare provided a mathematical proof that the methods proposed by Japan were flawed.⁵³³ He further showed that, even if Japan corrected its flawed methods, the objective of estimating natural mortality was practically unachievable, and that Japan's results would be so imprecise as to be useless.⁵³⁴

5.10 The scientific irrelevance of JARPA was further confirmed in 1994 when the IWC agreed upon a new management procedure, the RMP. As outlined in Chapter 2 of this *Memorial*, the RMP is a sophisticated management procedure that was deliberately designed to eliminate the need for data on biological parameters obtained through whaling.⁵³⁵

5.11 Despite the adoption of the RMP, and in the face of proof that the primary objective of JARPA would fail, Japan continued whaling under JARPA until 2005. In its final review of JARPA, conducted from 4 to 8 December 2006 in Tokyo, the Scientific Committee was unable to conclude that any of the objectives of JARPA had been met.⁵³⁶

5.12 In particular, the initial predictions of Cooke and de la Mare that Japan could not succeed in its "primary purpose" of estimating natural mortality rate proved accurate; the precision of Japan's estimates was so poor that they did not

⁵³³ W de la Mare, "On the Simultaneous Estimation of Natural Mortality Rate and Population Trend from Catch-at-Age Data", *Rep. int. Whal. Commn* 39, 1989, 355-362.

⁵³⁴ W de la Mare, "A Further Note on the Simultaneous Estimation of Natural Mortality Rate and Population Trend from Catch-at-Age Data", *Rep. int. Whal. Commn* 40, 1990, 489-492.

⁵³⁵ See Chapter 2, Section II.E. See also *Mangel, Expert Opinion*, paras. 3.26, 3.30 [Appendix 2]. Professor Mangel (at para. 6.6) describes the RMP as "a practical and well-tested approach for the management of...whaling".

⁵³⁶ "Report of the Intersessional Workshop to Review Data and Results from Special Permit Research on Minke Whales in the Antarctic", Tokyo, 4-8 December 2006, *J. Cetacean Res. Manage* 10 (Suppl.), 2008, 411 ("IWC Final Review of JARPA") 433-434.

even exclude a natural mortality rate of zero.⁵³⁷ That is, the “results” of JARPA included the possibility that whales never die. This led the Scientific Committee to conclude that, after 18 years of Japan’s “research” and 6,777 whales killed, the natural mortality rate of minke whales remained “effectively unknown”.⁵³⁸

5.13 Japan similarly made little progress on other aspects of JARPA. Japan purported (pursuant to the second objective of JARPA) to investigate the feeding ecology of minke whales through examining their stomach contents.⁵³⁹ In sum, Japan found that 99% of the minke whale’s diet is krill and estimated that the daily krill consumption of minke whales, as a percentage of their body weight, ranges from 2.7 to 5%. This is well-established and uncontroversial information, which did not represent any advance in existing scientific knowledge and did not require that Japan kill one whale, let alone 6,777. For example, a scientific paper presented to the IWC in 1986 (prior to the commencement of JARPA) concluded that minke whales feed almost exclusively on Antarctic krill and that their daily food consumption ranges from 3 to 4% of their body weight (an estimate with a narrower margin than that produced after 18 years of JARPA).⁵⁴⁰ Scientists in the Committee noted their “disappointment and concern” with Japan’s analyses,⁵⁴¹ describing them as “simplistic” and “not particularly informative”.⁵⁴² Yet, as discussed below, Japan relies on these “results” in support of JARPA II.⁵⁴³

⁵³⁷ *Ibid.*, 18.

⁵³⁸ *Ibid.*, 32.

⁵³⁹ *JARPA proposal, 1987*, 3-4 [Annex 156].

⁵⁴⁰ S G Bushuev, “Feeding of minke whales, *Baleanoptera acutorostrata*, in the Antarctic”, *Rep. int. Whal. Commn* 36, 1986, 241-245.

⁵⁴¹ *IWC Final Review of JARPA*, 428.

⁵⁴² *IWC Final Review of JARPA*, 430.

⁵⁴³ See Section I.B of this Chapter.

5.14 In its final review of JARPA, the Scientific Committee also rejected Japan's estimates of the abundance of whale species in the Southern Ocean,⁵⁴⁴ which were central to the stated objectives of JARPA.⁵⁴⁵ Japan produced these estimates through conducting sighting surveys in JARPA and continues these efforts in JARPA II.⁵⁴⁶ As Professor Mangel explains, Japan's sighting activities are biased by being conducted in association with whaling activities.⁵⁴⁷ For example, whaling activities are likely to change the behaviour of whales in the vicinity, which will affect the number of whales sighted. The abundance estimates produced by Japan under JARPA were either unreliable – for example, the estimates suggested that humpback whales were increasing at biologically implausible rates – or were so imprecise as to be useless.⁵⁴⁸ For example, Japan's estimates of trends in abundance for minke whales, after nearly two decades of research, were utterly inconclusive. The estimates were consistent with:

[A] substantial decline, a substantial increase, or approximate stability in minke whale abundance in these geographic areas over the period of JARPA.⁵⁴⁹

5.15 The most positive conclusion the Scientific Committee was able to reach on JARPA was that it had “the potential” to improve management, if Japan were

⁵⁴⁴ The *IWC Final Review of JARPA* concluded that “agreed estimates of abundance and trends [in abundance] for Antarctic minke whales in the JARPA research area [had not been developed] at the present time”: 434.

⁵⁴⁵ *IWC Final Review of JARPA*, 433. See also S Tanaka, “Estimation of Natural Mortality Coefficient of Whales from the Estimates of Abundance and Age Composition Data Obtained from Research Catches”, *Rep. int. Whal. Commn* 40, 1990, 531-536.

⁵⁴⁶ *JARPA II proposal*, 14 [Annex 105].

⁵⁴⁷ Mangel, *Expert Opinion*, para. 5.26 [Appendix 2]; de la Mare et al., *Antarctic Baleen Whale Populations*, 10-12, [Appendix 1].

⁵⁴⁸ *IWC Final Review of JARPA*, 11-12; Report of the Scientific Committee, *J. Cetacean Res. Manage.* 7 (Suppl.), 2005, 45, 344; Report of the Scientific Committee, Annex H, “Report of the Sub-Committee on other Southern Hemisphere whale stocks”, *J. Cetacean Res. Manage.* 9 (Suppl.), 2007, 190-191.

⁵⁴⁹ *IWC Final Review of JARPA*, 418.

able to correct the methodological flaws in its “research” to provide useful and reliable results. This statement was first made in 1997 in the interim review of JARPA, after that program had been in place for ten years.⁵⁵⁰ It represents a telling lack of progress towards achieving any useful or reliable scientific results. The absence of any progress in the remaining decade of JARPA was illustrated when the Scientific Committee simply repeated the same statement in its final review.⁵⁵¹ For a long-term, large-scale “research” program, the Scientific Committee’s statement was tantamount to a finding of abject failure. In short, JARPA had only managed to accumulate masses of data. As Professor Mangel observes, “science does not consist of simply accumulating data”.⁵⁵²

5.16 Over the course of JARPA, in 14 Resolutions, the Commission formally urged Japan to withdraw JARPA or revise it to use non-lethal means.⁵⁵³ In these

⁵⁵⁰ “Report of the Intersessional Working Group to Review Data and Results from Special Permit Research on Minke Whales in the Antarctic, Tokyo, 12-16 May 1997”, *Rep. int. Whal. Commn* 48, 1998, 377 (“*IWC Interim Review of JARPA*”), 389 (IWC, Scientific Permit Whaling, Information on scientific permits, review procedure guidelines and current permits in effect, at <<http://www.iwcoffice.org/conservation/permits.htm#jarpa>> on 18 April 2011).

⁵⁵¹ *IWC Final Review of JARPA*, 433.

⁵⁵² Mangel, *Expert Opinion*, para. 4.6 [Appendix 2].

⁵⁵³ *Resolution 1987-Appendix 4* [Annex 10]; Resolution on the Proposed Take by Japan of Whales in the Southern Hemisphere under Special Permit, Appendix 3, Chairman’s Report of the Forty-First Annual Meeting, *Rep. int. Whal. Commn* 40, 1990, 36 (“*Resolution 1989-Appendix 3*”) [Annex 16]; Resolution on Special Permit Catches by Japan in the Southern Hemisphere, Appendix 2, Chairman’s Report of the Forty-Second Meeting, *Rep. int. Whal. Commn* 41, 1991, 47-48 (“*Resolution 1990-Appendix 2*”) [Annex 18]; Resolution on Special Permit Catches by Japan in the Southern Hemisphere, Appendix 2, Chairman’s Report of the Forty-Third Meeting, *Rep. int. Whal. Commn* 42, 1992, 46 (“*Resolution 1991-Appendix 2*”) [Annex 19]; Resolution on Special Permit Catches by Japan in the Southern Hemisphere, Appendix 7, Chairman’s Report of the Forty-Fifth Annual Meeting, *Rep. int. Whal. Commn* 44, 1994, 33 (“*Resolution 1993-Appendix 7*”) [Annex 21]; Resolution on Special Permit Catches by Japan in the Southern Hemisphere, Resolution 1994-10, Appendix 15, Chairman’s Report of the Forty-Sixth Annual Meeting, *Rep. Int. Whal. Commn* 45, 1995, 47 (“*Resolution 1994-10*”) [Annex 25]; *Resolution 1996-7* [Annex 28]; *Resolution 1997-5* [Annex 29]; *Resolution 1998-4* [Annex 31]; *Resolution 1999-3* [Annex 32]; *Resolution 2000-4* [Annex 33]; *Resolution 2001-7* [Annex 35]; *Resolution 2003-3* [Annex 39]; Resolution on JARPA II, Resolution 2005-1, Annex C, Chair’s Report of the

Resolutions, the Commission repeatedly highlighted a range of serious deficiencies in JARPA, in addition to its fundamental concern that the data collected in the program were not required for management.⁵⁵⁴ These included that JARPA did not address other critical research needs,⁵⁵⁵ that it involved lethal research in a whale sanctuary;⁵⁵⁶ and that it killed large numbers of Antarctic minke whales⁵⁵⁷ in circumstances where there were no agreed estimates of the abundance of the stocks and some evidence that they may be declining.⁵⁵⁸ Japan did not withdraw the program or revise it to use non-lethal means.

5.17 The Commission's fifteenth and final Resolution relating to JARPA, *Resolution 2007-1*, was adopted in 2007 after the conclusion of the program. In the Resolution, the Commission noted that not one of the objectives of JARPA had been met and that the program was not required for management under the RMP,⁵⁵⁹ which had been accepted 13 years previously. The Commission again repeated its request that Japan halt its whaling activities in the Southern Ocean; yet by this time, Japan had already commenced JARPA II.

Fifty-Seventh Annual Meeting, *Annual Report of the International Whaling Commission 2005*, 1 (“*Resolution 2005-1*”) [Annex 40].

⁵⁵⁴ *Resolution 1987-Appendix 4* [Annex 10]; *Resolution 1989-Appendix 3* [Annex 16]; *Resolution 1990-Appendix 2* [Annex 18]; *Resolution 1991-Appendix 2* [Annex 19]; *Resolution 1993-Appendix 7* [Annex 21]; *Resolution 1994-10* [Annex 25]; *Resolution 1997-5* [Annex 29]; *Resolution 1998-4* [Annex 31].

⁵⁵⁵ *Resolution 1989-Appendix 3* [Annex 16]; *Resolution 1996-7* [Annex 28]; *Resolution 1998-4* [Annex 31].

⁵⁵⁶ *Resolution 1996-7* [Annex 28]; *Resolution 1997-5* [Annex 29]; *Resolution 1999-3* [Annex 32].

⁵⁵⁷ *Resolution 1996-7* [Annex 28]; *Resolution 1997-5* [Annex 29]; *Resolution 1998-4* [Annex 31]; *Resolution 2005-1* [Annex 40].

⁵⁵⁸ *Resolution 2000-4* [Annex 33]; *Resolution 2001-7* [Annex 35]; *Resolution 2003-3* [Annex 39]; *Resolution 2005-1* [Annex 40].

⁵⁵⁹ *Resolution 2007-1* [Annex 41].

B. THE CONTINUATION OF WHALING UNDER JARPA II

5.18 Having failed to produce useful or reliable scientific information based on data from whaling in JARPA, Japan has devised a new overarching goal to support its continued whaling in JARPA II. In essence, Japan claims that JARPA II will inform the development of “a new and improved management system for whales”.⁵⁶⁰ This proposed new management system will purportedly take into account interactions between baleen whale species in the Antarctic, and in particular possible competition between them for their single food source, krill.⁵⁶¹

5.19 Japan claims that it will monitor competition between baleen whale species, and changes in the Antarctic ecosystem more generally, by collecting data through whaling.⁵⁶² Japan proposes to use this data to construct an “ecosystem model” that will reflect the competitive interactions between whale species.⁵⁶³ This proposed model is the centrepiece of JARPA II. It revolves around a series of assertions, including the hypothesis that competition between whale species for krill means that harvesting one species of whale will increase the availability of krill to other whale species. This is built on the so-called “krill surplus hypothesis”, which posits that the massive over-exploitation of great whales in the 20th century created an overabundance (or surplus) of krill for other predators (such as smaller whales, penguins and seabirds), which in turn led to an increase in their abundance.⁵⁶⁴ As discussed below, Professor Mangel describes this as the only identifiable hypothesis in JARPA II.⁵⁶⁵

⁵⁶⁰ *JARPA II proposal*, 5 [Annex 105].

⁵⁶¹ *JARPA II proposal*, 1 [Annex 105].

⁵⁶² See, for example, *JARPA II proposal*, 5, 10, 14 [Annex 105].

⁵⁶³ *JARPA II proposal*, 5, 11-12 [Annex 105].

⁵⁶⁴ *Mangel, Expert Opinion*, para. 5.12 [Appendix 2]; *JARPA II proposal*, 16 [Annex 105].

⁵⁶⁵ *JARPA II proposal*, 16 [Annex 105]; *Mangel, Expert Opinion*, para. 5.12 [Appendix 2].

5.20 Japan asserts that its proposed model of competition between whale species will permit the IWC to take an “ecosystem approach” to management and pursue new management objectives.⁵⁶⁶ In particular, Japan suggests that the IWC could in future attempt to accelerate the recovery of larger (“higher economic value”) whale species, by culling other smaller species, such as minke whales.⁵⁶⁷ This proposed approach to management, which Japan describes as “multi-species management”,⁵⁶⁸ has been roundly criticised within the Commission and the Scientific Committee as “an oversimplified and distorted approach to ecosystems,”⁵⁶⁹ and one that is based on “unsubstantiated or incorrect assumptions”.⁵⁷⁰

5.21 Despite framing new objectives for JARPA II, in practice Japan collects the same data through whaling that it collected under JARPA: data on the biological parameters; levels of pollutants; krill consumption; habitat; stock structure and abundance of whales.⁵⁷¹ That is, Japan is collecting data that in large part already exist, from JARPA and previous commercial whaling.⁵⁷² After this data proved so useless and unreliable under JARPA, it was incumbent upon

⁵⁶⁶ *JARPA II proposal*, 5, 11-12 [Annex 105].

⁵⁶⁷ *JARPA II proposal*, 10-11 [Annex 105].

⁵⁶⁸ *JARPA II proposal*, 5, 11-12 [Annex 105].

⁵⁶⁹ Intervention by Germany, Chair’s Report of the Fifty-Seventh Annual Meeting, *Annual Report of the International Whaling Commission 2005*, 49.

⁵⁷⁰ Report of the Scientific Committee, Report of the Standing Working Group on Scientific Permits, Appendix 2, “Comments on the Government of Japan’s Proposals for a Second Phase of Special Permit Whaling in Antarctica (JARPA II)”, *J. Cetacean Res. Manage.* 8 (Suppl.), 2006, 261. See also *IWC Final Review of JARPA*, 430.

⁵⁷¹ *JARPA II proposal*, 14 [Annex 105], at which Japan refers to a purported need “to secure continuity with the data collected in JARPA”. Professor Mangel notes that “the collection of [biological] parameters of whales by lethal take remains central in JARPA II”: *Mangel, Expert Opinion*, para. 5.18 [Appendix 2].

⁵⁷² *Mangel, Expert Opinion*, para. 5.48 [Appendix 2].

Japan to demonstrate a clear scientific need that justified its continued collection in JARPA II, a program of unprecedented scale with no end date.

5.22 However, Japan seeks to rely on JARPA, a flawed program with uninformative and unreliable results. Japan claims that the “results” of JARPA are consistent with its central proposition in JARPA II that baleen whale populations are competing for krill.⁵⁷³ The “results” on which Japan relies include the estimates of biological parameters, the abundance estimates and the feeding ecology data that were dismissed by the Scientific Committee in the final review of JARPA.⁵⁷⁴

5.23 It is revealing that Japan’s interpretation of the “results” of JARPA derives from its own “review” of that program. Japan conducted this “review” in January 2005, before JARPA had even concluded.⁵⁷⁵ It lacked the independence that is integral to peer review forming part of a proper scientific process.⁵⁷⁶ Of the 39 participants in the “review”, 31 were from Japan and most were directly engaged in JARPA. These participants included 18 members of the Institute of Cetacean Research and seven Government officials from the Japan Fisheries Agency; they were, in effect, reviewing their own work.⁵⁷⁷ The remaining

⁵⁷³ *JARPA II proposal*, 1 [Annex 105].

⁵⁷⁴ See Section I.A of this Chapter.

⁵⁷⁵ “Report of the Review Meeting of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) called by the Government of Japan, Tokyo, 18-20 January 2005”, Institute of Cetacean Research, at <http://www.icrwhale.org/eng/JARPA_Report.pdf> on 25 April 2011 (“*Government of Japan Review of JARPA*”). The final season of JARPA concluded on 8 March 2005: S Nishiwaki *et al.*, “Cruise Report of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) Area V and Western Part of Area VI in 2004/05”, SC/57/O5, 1.

⁵⁷⁶ See Chapter 4, Section II.C(3).

⁵⁷⁷ Annex A, “List of Participants”, *Government of Japan Review of JARPA*, 19. Twenty-two of the participants were authors of papers submitted to the IWC by the Institute of Cetacean Research.

reviewers included representatives of pro-whaling countries.⁵⁷⁸ It is not surprising, given its composition, that the group found that the “results” of JARPA, “viewed broadly”, indicated a need for further “research”.⁵⁷⁹

5.24 When Japan submitted its proposal for JARPA II in 2005, the Commission adopted *Resolution 2005-1* in which it formally called on Japan to withdraw JARPA II or revise it to use non-lethal means, repeating a call it made so often in relation to JARPA.⁵⁸⁰ In the preamble to that Resolution, the Commission set out its serious concerns in relation to JARPA II, and in particular Japan’s proposal to substantially increase its lethal take in the face of significant uncertainty on the status of the targeted whale populations:

RESOLUTION ON JARPA II

AWARE that Article VIII of the International Convention for the Regulation of Whaling allows Contracting Governments to grant Special Permits for the purpose of scientific research on whales;

RECALLING that since the moratorium on commercial whaling came into force in 1985/86, the IWC has adopted over 30 resolutions on Special Permit whaling in which it has generally expressed its opinion that Special Permit whaling should: be terminated and scientific research limited to non-lethal methods only (2003-2); refrain from involving the killing of cetaceans in sanctuaries (1998-4); ensure that the recovery of populations is not impeded (1987); and take account of the comments of the Scientific Committee (1987);

ALSO RECALLING Resolution 2003-3 that no additional Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) programs be

⁵⁷⁸ Annex A, “List of Participants”, *Government of Japan Review of JARPA*, 19. These participants were from Gabon, Grenada, Iceland, Korea, Norway and Saint Lucia. They were joined by Douglas Butterworth, a longstanding member of the Scientific Committee and, as noted in Chapter 3, a defender of Japan’s whaling on the basis that it permits cost recovery: “Potentially the strongest defence for ‘scientific whaling’ is that because [non-lethal sighting] surveys are enormously expensive, it is not unreasonable to recover the costs through harvests that are sufficiently low to pose no risk to the stock”: D Butterworth, “Science and sentimentality”, *Nature* 357 (18 June 1992) 532, 532. See also Chapter 3, Section III.A.

⁵⁷⁹ *Government of Japan Review of JARPA*, 15.

⁵⁸⁰ *Resolution 2005-1* [Annex 40]; see Section I.A of this Chapter for the Commission’s Resolutions on JARPA.

considered until the Scientific Committee has completed an in-depth review of the results of JARPA;

FURTHER RECALLING that earlier this year the Government of Japan concluded JARPA - an 18-year program of whaling under Special Permit in Antarctic waters;

NOTING that the results of the JARPA program have not been reviewed by the Scientific Committee this year;

CONCERNED that more than 6,800 Antarctic minke whales (*Balaenoptera bonaerensis*) have been killed in Antarctic waters under the 18 year [sic] of JARPA, compared with a total of 840 whales killed globally by Japan for scientific research in the 31 year period prior to the moratorium;

NOTING that it is the Government of Japan's stated intention to more than double the annual catch of Antarctic minke whales and also take 50 fin whales (*B. physalus*) and 50 humpback whales (*Megaptera novaeangliae*) under the proposed JARPA II program;

NOTING that the Third Circumpolar Survey indicates that the abundance of Antarctic minke whales is substantially lower than the earlier estimate of 760 000, and that the Scientific Committee is working to identify factors contributing to the differences between the two surveys;

CONCERNED that there are no agreed data to indicate that endangered fin whale populations have increased since the cessation of whaling;

ALSO NOTING that some humpback whales which will be targeted by JARPA II belong to small, vulnerable breeding populations around small island States in the South Pacific and that even small takes could have a detrimental effect on the recovery and survival of such populations;

ALSO CONCERNED that JARPA II may have an adverse impact on established long-term whale research projects involving humpback whales;

NOW THEREFORE THE COMMISSION:

REQUESTS the Scientific Committee to review the outcomes of JARPA as soon as possible; and

STRONGLY URGES the Government of Japan to withdraw its JARPA II proposal or to revise it so that any information needed to meet the stated objectives of the proposal is obtained using non-lethal means.

5.25 Japan nonetheless commenced JARPA II. In 2007, after the Scientific Committee completed its final review of JARPA, the Commission adopted

Resolution 2007-1.⁵⁸¹ In this Resolution, the Commission called again upon Japan to “suspend indefinitely” the lethal aspects of JARPA II. The preamble to the Resolution notes that JARPA did not achieve any of its objectives; that the aims of JARPA II do not address critically important research needs; and that JARPA II may adversely affect the targeted fin and humpback whale stocks:

RESOLUTION ON JARPA

WHEREAS paragraph 7(b) of the Schedule establishes a sanctuary in the Southern Ocean;

RECALLING that the Commission has repeatedly requested Contracting Parties to refrain from issuing special permits for research involving the killing of whales within the Southern Ocean Sanctuary, has expressed deep concern at continuing lethal research within the Southern Ocean Sanctuary, and has also recommended that scientific research involving the killing of cetaceans should only be permitted where critically important research needs are addressed;

CONSCIOUS that the Scientific Committee last year convened a workshop to analyse the results of JARPA I, which is reported in SC/59/REP 1;

NOTING that the Workshop agreed that none of the goals of JARPA I had been reached, and that the results of the JARPA I programme are not required for management under the RMP;

FURTHER NOTING that the Government of Japan has authorised a new special permit programme in the Antarctic, JARPA II, in which the take of minke whales has been more than doubled, and fin whales and humpback whales have been added to the list of targeted species;

CONCERNED that fin whales in the Southern Hemisphere are currently classified as endangered, and that humpback whales in the JARPA II research area may include individuals from depleted breeding populations overwintering in the waters of certain Pacific Islands;

CONVINCED that the aims of JARPA II do not address critically important research needs;

NOW THEREFORE THE COMMISSION

CALLS UPON the Government of Japan to address the 31 recommendations listed in Appendix 4 of Annex O of the Scientific Committee report relating to the December 2006 review of the JARPA I programme to the satisfaction of the Scientific Committee;

⁵⁸¹ *Resolution 2007-1* [Annex 41].

FURTHER CALLS UPON the Government of Japan to suspend indefinitely the lethal aspects of JARPA II conducted within the Southern Ocean Whale Sanctuary.

5.26 In addition to these views repeatedly expressed by the Commission, a large number of Contracting Governments to the ICRW have consistently expressed their opposition to JARPA II. The Governments of Argentina, Australia, Austria, Belgium, Brazil, Chile, Costa Rica, Croatia, the Czech Republic, Ecuador, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Luxembourg, Mexico, Monaco, the Netherlands, New Zealand, Peru, Portugal, San Marino, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, the United Kingdom, the United States of America and Uruguay, joined by the European Commission, have participated in joint démarches strongly urging the Government of Japan to cease JARPA II.⁵⁸²

5.27 These démarches express the serious concerns of the participating Governments and the European Commission that JARPA II has no scientific value; that lethal research is unnecessary under the program given available non-lethal techniques; that lethal research should not be conducted in the Southern Ocean Sanctuary; that the scale of lethal take under the program is without

⁵⁸² Aide Mémoire, Joint Démarche by Argentina, Australia, Austria, Belgium, Brazil, Finland, France, Germany, Ireland, Italy, Mexico, Monaco, New Zealand, Peru, Portugal, Spain, Sweden, the Netherlands, the United Kingdom, June 2005 [Annex 64]; Aide Mémoire, Joint Démarche by Australia, Brazil, France, Mexico, Portugal, Spain, the United Kingdom *et al.*, January 2006 [Annex 65]; Aide Mémoire, Joint Démarche by Argentina, Australia, Austria, Belgium, Brazil, Chile, the Czech Republic, Finland, France, Germany, Hungary, Ireland, Italy, Luxembourg, Mexico, Monaco, the Netherlands, New Zealand, Peru, Portugal, San Marino, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and the United States, 15 December 2006 [Annex 66]; Aide Mémoire, Joint Démarche by Australia, Argentina, Austria, Belgium, Brazil, Chile, Costa Rica, Croatia, Czech Republic, Ecuador, the European Commission, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, Mexico, Monaco, the Netherlands, New Zealand, Portugal, San Marino, Slovak Republic, Slovenia, Spain, Sweden, the United Kingdom and Uruguay, “Objection to Japan’s Scientific Whaling”, 21 December 2007 [Annex 67]. This most recent démarche forms Annex 1 to the Application of Australia instituting the current proceedings, filed on 31 May 2010.

precedent; and that JARPA II may undermine the long-term viability of vulnerable humpback and endangered fin whale species.⁵⁸³

5.28 Thus even as Japan has sought to build a new framework for JARPA II, the essential point is that it rests on the same data that failed to produce results in JARPA. It is against this background that it falls to the Court to determine whether JARPA II is a program for purposes of scientific research under Article VIII of the ICRW. Section II establishes that JARPA II is not such a program.

⁵⁸³ Ibid.

SECTION II. JARPA II IS NOT SCIENTIFIC RESEARCH

5.29 As set out in Chapter 4 of this *Memorial*, it is not for Japan subjectively to characterise its activity as being scientific research: the test of scientific research in accordance with Article VIII is an objective one. Consistent with the conclusion of Professor Mangel and the IWC *Guidelines* for the review of special permits, the four essential characteristics of a program that may properly be characterised as being for purposes of scientific research under Article VIII are:

- (1) Defined and achievable objectives that aim to contribute knowledge that is important to the conservation and management of whale stocks;
- (2) Appropriate methods that are likely to achieve the stated objectives, including:
 - (a) lethal methods only where the objectives of the research cannot be achieved by any other means (for example, by the analysis of existing data and/or the use of non-lethal research techniques);
 - (b) setting sample sizes using accepted statistical methodology; and
 - (c) linking mathematical and statistical models to data consistently;
- (3) Periodic review of research proposals and results and adjustment in response to such review; and
- (4) The research is designed to avoid adverse effects on the stocks being studied.⁵⁸⁴

5.30 These characteristics should be treated in a hierarchical manner, in the sense that they should be followed sequentially in both the design and the conduct of a program for purposes of scientific research. The necessary starting point is the selection of the objectives – the scientific questions to be investigated. The

⁵⁸⁴ *Mangel, Expert Opinion*, para. 4.39 [Appendix 2].

next step is to determine the methods or tools that are appropriate and necessary to achieve the identified objectives. The third step is the periodic review of the research proposal and its results, including the adjustment of the research as it proceeds, in order to ensure that the program remains capable of achieving its objectives. Finally, there is an overarching requirement that the scientific research must be designed to avoid adverse effects on the whale stocks being studied.

5.31 The four essential characteristics of scientific research under Article VIII are cumulative and interrelated; in order to be characterised as scientific research, a program must reflect each of them, both in its design and in its implementation. If JARPA II fails to meet any one of them, it follows that the program as a whole does not fall within the meaning of, and is not justified by reference to, Article VIII.

5.32 This case is therefore about the processes by which scientific research is carried out. As Professor Mangel notes, “the conclusions [of science] are transient (that is, subject to ongoing testing and revision) but the methods are not”.⁵⁸⁵ JARPA II does not stand or fall under Article VIII by reference to whether the results claimed by Japan constitute good science or mediocre science or poor science. Rather, Article VIII requires the Court to determine whether Japan has designed a program that meets the four characteristics identified above, making it a scientific program at all.

5.33 That is not to say that the outcome or product of a purported scientific research program is irrelevant to an objective assessment of the motivation for which the activity is conducted. The essence of the process of science is to extract knowledge from data.⁵⁸⁶ Where a program consistently fails to produce knowledge through sound results – as JARPA did from 1988 to 2005 and as

⁵⁸⁵ *Mangel, Expert Opinion*, para. 4.1 [Appendix 2].

⁵⁸⁶ *Mangel, Expert Opinion*, para. 4.7 [Appendix 2].

JARPA II continues to do today – this will confirm that it has not been designed and conducted in accordance with the basic requirements of established scientific process.

5.34 JARPA II fails to satisfy any of the four essential characteristics of a program for purposes of scientific research. In fact, Japan has “retro-fitted” a purported “scientific” research program to justify its true purpose of continuing whaling on a permanent basis.⁵⁸⁷ Japan has commenced with a pre-determined method (killing) without taking the necessary steps of defining an achievable scientific objective or identifying the most appropriate methods to achieve that objective. Instead, Japan has devised vague purported “scientific” objectives to match its pre-determined purpose of continuing whaling. There is no identifiable endpoint at which these objectives may be achieved; instead JARPA II provides for the collection of data through whaling on a permanent basis. The goal of continuing whaling on a permanent basis also explains why Japan fails to adjust its program in response to periodic review, and why it persists with its “research” despite the manifest paucity of useful and reliable results, and sustained critique from independent members of the scientific community. Finally, JARPA II is not designed to avoid adverse effects on the minke, fin and humpback whale stocks targeted.

A. JARPA II DOES NOT HAVE SCIENTIFIC OBJECTIVES

5.35 The formulation of objectives in a scientific research program requires the selection of particular hypotheses or questions that will be answered through the proposed research. As set out in Chapter 4, in order for scientific objectives to be

⁵⁸⁷ The evidence in relation to Japan’s true purpose of continued whaling is set out in Section III of this Chapter and Chapter 3.

achievable, these questions or hypotheses must be capable of being tested.⁵⁸⁸ As a corollary, the particular question or hypothesis must be sufficiently defined such that progress towards its answer may be assessed on verifiable grounds. Without such a defined question or hypothesis to test, a research program has no achievable goals.

5.36 Moreover, when scientific research is “motivated by an important applied problem such as the conservation and management of whales”, it is critical that the knowledge extracted from the data can be used to provide relevant answers to this problem.⁵⁸⁹ This means that the questions or hypotheses to be tested must be framed to address important gaps in the current state of knowledge in the relevant area or field. The IWC has recognised this in respect of Article VIII, by stipulating that the objectives of a program for purposes of scientific research must aim to contribute knowledge that is important to the conservation and management of whale stocks.⁵⁹⁰

5.37 The Commission and the Scientific Committee agree on areas for research relating to the conservation and management of whale stocks (sometimes referred to as “critically important research needs”) from time to time in their Annual Reports and, in the case of the Commission, in its Resolutions. These include issues relating to the management of whale stocks under the RMP, such as abundance estimates and stock structure,⁵⁹¹ and conservation issues such as the

⁵⁸⁸ Chapter 4, Section II.C(1). Professor Mangel describes this as selecting questions that are “operationally defined”: *Mangel, Expert Opinion*, para. 4.11 [Appendix 2].

⁵⁸⁹ *Mangel, Expert Opinion*, para. 4.37 [Appendix 2].

⁵⁹⁰ Chapter 4, Section II.C(1).

⁵⁹¹ See, for example, Resolution on Surveys Intended to Provide Abundance Estimates for the Implementation of the Revised Management Scheme, Resolution 1995-7, Appendix 8, Chairman’s Report of the Forty-Seventh Annual Meeting, *Rep. int. Whal. Commn* 46, 1996, 45. In respect of the most recent priorities agreed by the Scientific Committee, see Report of the Scientific Committee, *J. Cetacean Res. Manage. 11 (Suppl.)*, 2009, 65-66; Report of the Scientific Committee, *J. Cetacean Res. Manage. 10 (Suppl.)*, 2008, 64-65; Report of the Scientific

effects of environmental change on cetaceans.⁵⁹² The onus is on the proposers of research to demonstrate that their work will contribute important information to these areas.⁵⁹³

5.38 Following the manifest failure of JARPA, Japan devised four new objectives for JARPA II, as follows:

1) Monitoring of the Antarctic ecosystem, 2) Modelling competition among whale species and developing future management objectives, 3) Elucidation of temporal and spatial changes in stock structure and 4) Improving the management procedure for the Antarctic minke whale stocks.⁵⁹⁴

5.39 These objectives do not contain defined, testable scientific questions that can be falsified or validated through Japan's whaling. Instead, Japan has merely identified broad fields of potential scientific interest to the IWC, such as "the Antarctic ecosystem" and the stock structure of whale species. Similarly, Japan describes its objectives as if their contribution to the conservation and management of whale stocks were self-evident (such as "improving the management procedure for Antarctic minke whale stocks"). However, Japan has not identified any important gap in knowledge on the conservation and management of whale species that will be addressed by JARPA II.

Committee, IWC/62/Rep 1, 18 June 2010, 80-81 (collectively, "*Scientific Committee Research Priorities*").

⁵⁹² See, for example, Consensus Resolution on Climate and Other Environmental Changes and Cetaceans, Resolution 2009-1, Annex F, Chair's Report of the Sixty-First Annual Meeting, *Annual Report of the International Whaling Commission 2009*, 1; Resolution on Environmental Change and Cetaceans, Resolution 2000-7, Appendix 1, Chairman's Report of the Fifty-Second Annual Meeting, *Annual Report of the International Whaling Commission 2000*, 56-57; Resolution on Research on the Environment and Whale Stocks, Resolution 1994-13, Appendix 14, Chairman's Report of the Forty-Sixth Annual Meeting, *Rep. int. Whal. Commn* 45, 1995, 49. See also *Scientific Committee Research Priorities*.

⁵⁹³ *Mangel, Expert Opinion*, para. 5.52 [Appendix 2].

⁵⁹⁴ *JARPA II proposal*, 1 [Annex 105].

5.40 Beyond the broad claims in Japan's stated objectives, it is "difficult to impossible to clearly identify the hypotheses" of JARPA II.⁵⁹⁵ Without identifying new facts or conclusions that are to be investigated and the period of time over which this is to occur, Japan has designed objectives that require nothing more than the continuous collection of data. As Professor Mangel observes, "science does not consist of simply accumulating data".⁵⁹⁶

5.41 The first objective of "monitoring the Antarctic ecosystem", which is the primary justification for lethal fieldwork in JARPA II,⁵⁹⁷ amply illustrates the open-ended nature of the program. Japan does not define what it proposes to achieve pursuant to this objective. Any data obtained from the Southern Ocean could arguably be said to comprise monitoring the Antarctic ecosystem. Japan does not define the Antarctic ecosystem, nor explain how the area in which it conducts JARPA II is representative of this ecosystem. In fact, the Antarctic ecosystem in its ordinary meaning covers a much larger area than the narrow region in which Japan conducts its whaling.⁵⁹⁸

5.42 Japan does not demonstrate how the data collected will be useful in understanding changes in the Antarctic ecosystem. For example, Japan does not explain how the data collected from whales killed will contribute to understanding global warming (one of the changes in the Antarctic that Japan purports to be

⁵⁹⁵ Mangel, *Expert Opinion*, para. 5.22 [Appendix 2].

⁵⁹⁶ Mangel, *Expert Opinion*, para. 4.6 [Appendix 2].

⁵⁹⁷ *JARPA II proposal*, 14-15 [Annex 105]; Report of the Scientific Committee, *J. Cetacean Res. Manage.* 8 (Suppl.), 2006, 50-51.

⁵⁹⁸ For example, Article I of CCAMLR defines the Antarctic marine ecosystem to mean "the complex of relationships of Antarctic marine living resources with each other and with their physical environment" in the area south of 60° South, as well as in the area between that latitude and the Antarctic Convergence (a line defined in that Article). This is significantly larger than the area in which Japan conducts JARPA II: see Figure 5 – Japan's Areas of Whaling Operations under JARPA II, at Chapter 3, Section II.B.

monitoring).⁵⁹⁹ Nor does Japan include any criteria for determining when sufficient data will have been collected such that its “monitoring” will be completed. In fact, JARPA II has no defined endpoint. Members of the Scientific Committee identified the open-ended nature of JARPA II as a serious concern when considering the JARPA II proposal, noting that the program “has no time limit by which [progress towards its objectives] can be assessed”.⁶⁰⁰

5.43 The objectives of JARPA II are so vague that they “could be used to justify almost any activity that Japan wished to pursue”.⁶⁰¹ The only identifiable hypothesis in JARPA II is the “krill surplus hypothesis”, which posits that the massive over-exploitation of great whales has created a surplus of krill for other predators (such as smaller whales, penguins and seabirds), which has in turn led to an increase in the abundance of those predators.⁶⁰² This hypothesis underpins Japan’s objective of constructing a model of competition between whale species for krill, which will purportedly lead to an improved management procedure for Antarctic minke whale stocks.⁶⁰³ As discussed below, however, the investigation of this hypothesis is simply not achievable through Japan’s whaling, since even to attempt to test the “krill surplus hypothesis”, Japan would need to undertake a much broader ecological study on the Antarctic ecosystem and other krill predators.⁶⁰⁴ Therefore, there is no nexus between the data Japan collects and its only defined hypothesis in JARPA II.

⁵⁹⁹ *JARPA II proposal*, 8 [Annex 105].

⁶⁰⁰ S Childerhouse *et al.*, Appendix 2, “Comments on the Government of Japan’s Proposals for a Second Phase of Special Permit Whaling in Antarctica (JARPA II)”, Annex O1, Report of the Standing Working Group on Scientific Permits, Report of the Scientific Committee, *J. Cetacean Res. Manage.* 8 (Suppl.), 2006, 260-261 [Annex 52].

⁶⁰¹ *Mangel, Expert Opinion*, para. 5.22 [Appendix 2].

⁶⁰² *Mangel, Expert Opinion*, para. 5.12 [Appendix 2]; *JARPA II proposal*, 16 [Annex 105].

⁶⁰³ *JARPA II proposal*, 10-11 [Annex 105].

⁶⁰⁴ See Section II.B(1) of this Chapter.

5.44 In addition to the lack of defined questions that can be tested through Japan's whaling, the objectives of JARPA II are framed without reference to any demonstrated need for the data collected. For example, Japan makes a number of far-reaching assertions – pursuant to its second, third and fourth objectives – that JARPA II will contribute to the management of whale stocks.⁶⁰⁵ The RMP is the accepted management procedure within the IWC relating to the conservation and management of whale stocks. It is unclear whether Japan proposes to improve the RMP or replace it entirely with its new “ecosystem approach” management model. Regardless, the central problem is that Japan has not demonstrated that there are any circumstances in which the RMP would fail to work. That is, Japan has not demonstrated a gap in knowledge that JARPA II will address.

5.45 The Scientific Committee has emphasised that in light of “the thorough and extensive testing process” that accompanied the development of the RMP, the question of revising it “should not be approached in a casual manner”.⁶⁰⁶ In the course of the considered process of rigorous testing through which the RMP was developed (in which Japanese scientists were active participants),⁶⁰⁷ the Scientific Committee examined and satisfactorily resolved the very issues that Japan now proposes to address. For example, the Scientific Committee ensured that variables were built into the RMP that adequately reflect uncertainty in the Maximum Sustainable Yield Rate,⁶⁰⁸ the possible effects of competition between

⁶⁰⁵ *JARPA II proposal*, 11-12 [Annex 105].

⁶⁰⁶ Report of the Scientific Committee, *Rep. int. Whal. Commn* 44, 1994, 47.

⁶⁰⁷ G Kirkwood, “Background to the Development of Revised Management Procedures”, Annex I, Report of the Scientific Committee, *Rep. int. Whal. Commn* 42, 1992, 236, discussing the proposal from Sakuramoto and Tanaka (Japanese members of the Scientific Committee) at 239.

⁶⁰⁸ Maximum Sustainable Yield Rate (MSYR) refers to the proportion of a population that theoretically may be harvested sustainably: see *Mangel, Expert Opinion*, para. 3.12 [Appendix 2]. Japan claims that it will refine the range of estimates of MSYR utilised in the RMP: *JARPA II proposal*, 12 [Annex 105]. As discussed in Section II.C(2) of this Chapter, this claim is unachievable through Japan's whaling.

whale species and the various stock structure hypotheses which Japan proposes to investigate in JARPA II.⁶⁰⁹ Japan has not demonstrated that these (or any other) aspects of the RMP are in any way deficient or inadequate. Furthermore, Japan has not shown how (if this were the case) data obtained from lethal whaling – which are not used in the RMP – would correct such deficiencies.

5.46 The IWC has an agreed Protocol for proposed revisions to the RMP, which has been invoked in only one instance.⁶¹⁰ It requires that Contracting Governments provide adequate notice of such proposals, supported by sufficient evidence to demonstrate the proposals' importance.⁶¹¹ After six years of whaling under JARPA II, Japan has given no indication that it intends to make a proposal for revising the RMP.

5.47 The IWC itself has recognised that “the aims of JARPA II do not address critically important research needs”.⁶¹² In fact, the Commission has never identified a need for data obtained from the lethal research in JARPA II in respect of any of its research priorities. To the contrary, the Commission has regularly

⁶⁰⁹ For a specification of the various models used in the RMP, which take into account a wide range of uncertainties including possible effects of competition between species, see: “Single Stock Trials for Finalised Procedures”, Report of the Fourteenth Workshop on Management Procedures, Annex D, *Rep. int. Whal. Commn* 42, 1992, 317-318; “Robustness trials”, Report of the Scientific Committee, Annex D, *Rep. int. Whal. Commn* 42, 1992, 110. For consideration of the stock structure hypotheses posited by Japan during the RMP development process, see: F Kasamatsu, and S Nishiwaki, “Breeding grounds and southbound migration of southern minke whales with special reference to stock boundaries”, SC/42/SHMi20, 1990; “Report of the Working Group to Examine Choices For Medium Area Boundaries”, Report of the Scientific Committee, Annex E, *Rep. int. Whal. Commn* 43, 1993, 109-110.

⁶¹⁰ *Rep. int. Whal. Commn* 44, 1994, 47 (“*Protocol for Revising the RMP*”) [Annex 51]. This protocol has been invoked by Norway: Report of the Scientific Committee, Annex D, “Report of the Sub-Committee on the Revised Management Procedure”, *J. Cetacean Res. Manage.* 7 (Suppl.), 2005, 79-80.

⁶¹¹ *Protocol for Revising the RMP* [Annex 51].

⁶¹² *Resolution 2007-1* [Annex 41].

recommended non-lethal methods in its Resolutions concerning research on cetaceans.⁶¹³

5.48 It is essential to have defined and achievable scientific objectives, especially before commencing lethal fieldwork. As Professor Mangel states, “the essence of science is to extract knowledge from data and, if one does not know in advance how the data will be analyzed to extract such knowledge, one is not ready to collect the data”.⁶¹⁴ JARPA II is not structured to advance scientific knowledge; its objectives instead are an attempt to justify whaling on an ongoing basis. As such, JARPA II does not meet the first essential characteristic of a program for purposes of scientific research.

B. JARPA II DOES NOT HAVE APPROPRIATE SCIENTIFIC METHODS

5.49 Assuming the objectives of a scientific research program pass the first test of being defined, achievable and important, the proponents of the program must carefully evaluate the range of available methods in order to select those that are most likely to effectively achieve their stated objectives. Professor Mangel describes this as “the important step of identifying the best tools that will answer [the] questions as clearly and unambiguously as possible”.⁶¹⁵ If, as in JARPA II, the objectives of a research program are poorly defined, unachievable and do not

⁶¹³ Resolution on Promotion of Research Related to Conservation of Large Baleen Whales in the Southern Oceans, Resolution 1994-12, Appendix 13, Chairman’s Report of the Forty-Sixth Annual Meeting, *Rep. int. Whal. Commn* 45, 1995, 48; *Resolution 1995-8* [Annex 27]; Resolution on Environmental Change and Cetaceans, Resolution 1997-7, Appendix 7, Chairman’s Report of the Forty-Ninth Annual Meeting, *Rep. int. Whal. Commn* 48, 1998, 48; Resolution on the Southern Ocean Sanctuary, Resolution 1998-3, Appendix 4, Chairman’s Report of the Fiftieth Annual Meeting, *Annual Report of the International Whaling Commission 1998*, 42-43; Resolution on Environmental Changes and Cetaceans, Resolution 1998-5, Appendix 6, Chairman’s Report of the Fiftieth Annual Meeting, *Annual Report of the International Whaling Commission 1998*, 43-44.

⁶¹⁴ *Mangel, Expert Opinion*, para. 4.7 [Appendix 2].

⁶¹⁵ *Mangel, Expert Opinion*, para. 4.14 [Appendix 2].

aim to contribute important knowledge, then it follows that the question of selecting appropriate methods does not even arise as the program should not be commenced.

5.50 However, for the purposes of assessing JARPA II against the second essential characteristic of a scientific research program, this Section treats the broad fields of scientific interest identified in the JARPA II proposal – such as competition between whale species for krill, the stock structure of whale species and changes in the Antarctic ecosystem – as if they were framed as valid scientific objectives (which they are not). The fundamental question is whether the methods chosen by Japan are appropriate to address these. In this respect, Japan must demonstrate that it is appropriate to continue using the same lethal methods to collect the same data that failed to produce reliable or useful results in JARPA.

5.51 Chapter 4 described the overarching test that must be met, namely that the methods selected must be likely to achieve the stated objectives.⁶¹⁶ This includes three further requirements. First, models must be linked to the data that are collected. Secondly, lethal methods must only be selected for use in a research program under Article VIII where no other means are available. The third requirement becomes relevant only where it has been established that it is essential to use lethal methods to achieve the stated objectives of the program. In that event, the sample size (in this case, the number of whales killed) and the timeframe for the conduct of lethal research must be strictly limited to those necessary to achieve the program’s stated objectives.

5.52 Japan has entirely disregarded the step of selecting appropriate methods in JARPA II. In substance, Japan only pursues methods associated with whaling, which is “a disproportionate focus” of Japan’s effort.⁶¹⁷ Japan has not provided

⁶¹⁶ See Chapter 4, Section II.C(2).

⁶¹⁷ *Mangel, Expert Opinion*, para. 5.27 [Appendix 2].

any proper analysis that demonstrates that its core method of whaling is appropriate, by comparing it with other methods and assessing which combination of tools would be the most effective to achieve its broadly-framed objectives.

(1) Japan does not use methods that are likely to achieve the stated objectives of JARPA II

5.53 Japan's narrow focus on whaling means that Japan is not using methods that are effective to address the broad fields of scientific inquiry vaguely identified in the JARPA II proposal. Dead whales provide little information of importance, compared to that which Japan could obtain by utilising a wide range of other methods more commonly used in large-scale scientific research on cetaceans.

5.54 This is demonstrated in the case of Japan's "research" on stock structure. Whales may be grouped into different stocks, depending on where they habitually breed and/or where they migrate.⁶¹⁸ Whales are highly migratory species, and significant uncertainty remains about which migratory routes are taken by different whale stocks (and the extent to which these migrations overlap) and where different whale stocks breed, as well as how these things may vary from year to year. This means that to answer important questions on stock structure, methods that permit the investigation of the annual movements of whales between their feeding grounds and their breeding grounds are required.⁶¹⁹

⁶¹⁸ The concept of stock structure broadly refers to the subdivision of whale populations into groups of animals that are either genetically distinct ("biological stocks") or occur in the same geographic area with only negligible mixing with adjacent geographic areas ("unit stocks"). The JARPA II proposal does not discuss this distinction.

⁶¹⁹ The important questions for the RMP relate to where different biological stocks of whales are present at any one time. This can best be determined by observing the movements of whales, which is not possible with lethal methods. The RMP sets catch limits by "Small Area", meaning that catch limits apply either to areas that contain whales from only one biological stock or, if

5.55 Professor Mangel describes the current technology of satellite tagging to track whales' movements as the "gold standard of methodology" to research stock structure.⁶²⁰ For example, it is possible to attach tags to whales (using non-lethal darts) that provide daily transmissions of their position to satellites orbiting the Earth, for up to six months.⁶²¹ This can, for example, track whales as they migrate across vast distances of the ocean from their feeding grounds to their breeding grounds.

5.56 In contrast, whaling only gives the location of the whale at a single instant. Moreover, it eliminates the whale from further study. Yet Japan purports to make progress on stock structure by analysing the tissues of dead whales collected in the same area year after year. This in part explains Japan's lack of progress on stock structure: after 18 years of JARPA and nearly 7,000 dead whales, Japan was only able to conclude that there are at least two stocks in the JARPA area which mix to some extent.⁶²²

5.57 Another example is Japan's purported investigation of the predator-prey interaction between whales and krill. In JARPA II, Japan claims to investigate this by developing an ecosystem model that would take into account the purported effects of competition between whale species (including the "krill surplus hypothesis").⁶²³ The Scientific Committee has a Working Group on Ecosystem Modelling, which meets annually to review progress in developing ecosystem

whales from different biological stocks are present, the catch limit is set according to the proportions in which the stocks are present: Report of the Scientific Committee, Annex H, "The revised management procedure (RMP) for baleen whales", *Rep. int. Whal. Commn* 44, 1994, 145-152.

⁶²⁰ *Mangel, Expert Opinion*, para. 5.35 [Appendix 2].

⁶²¹ B Mate, R Mesecar and B Lagerquist (2007) "The evolution of satellite-monitored radio tags for large whales: one laboratory's experience", *Deep Sea Research; Part II*, 54(3-4), 224-247.

⁶²² *IWC Final Review of JARPA*, 421-422, 433.

⁶²³ *JARPA II proposal*, 15-16 [Annex 105].

models relevant to the work of the IWC.⁶²⁴ After six years of “research” under JARPA II, Japan has presented no papers or models of competition using lethally obtained data to this Working Group.

5.58 This lack of progress reflects (at least in part) the poor methods chosen by Japan. Professor Mangel observes that:

[A] program intended to investigate [the “krill surplus hypothesis”] would need to begin with a broad focus on the interactions between different predators of krill and krill consumption by all such predators... JARPA and JARPA II do not do this since their narrow focus is purportedly on three (in practice, essentially just one) species of whale.⁶²⁵

5.59 When the JARPA II proposal was submitted in 2005, it was noted within the Scientific Committee that Japan’s failure to properly research krill seriously undermines JARPA II’s ability to achieve its stated objectives, to the extent that it appeared that the research proposal was not serious about achieving them.⁶²⁶ Despite the fact that the JARPA II proposal acknowledges the centrality of krill to its stated objectives, Japan has no specific research plans for properly studying krill or other krill predators. Japan merely states in the JARPA II proposal that it will monitor krill “if possible”⁶²⁷ and will record sightings of “seals and possibly other krill predators”.⁶²⁸ Japan has not yet reported any sightings of other krill predators like seals or squid, and only occasionally takes samples of krill.⁶²⁹ This falls far short of the systematic study of krill and krill predators that would be required to investigate the “krill surplus hypothesis”.

⁶²⁴ The Ecosystem Modelling Working Group was first convened in 2007. For its most recent report, see Report of the Scientific Committee, 18 June 2010, IWC/62/Rep 1, 53-55 and Annex KI, “Final Report of the Working Group on Ecosystem Modelling”.

⁶²⁵ Mangel, *Expert Opinion*, para. 5.37 [Appendix 2].

⁶²⁶ Report of the Scientific Committee, *J. Cetacean Res. Manage.* 8 (Suppl.), 2006, 51.

⁶²⁷ *JARPA II proposal*, 11 [Annex 105].

⁶²⁸ *JARPA II proposal*, 14 [Annex 105].

⁶²⁹ *JARPA II Cruise Report 2006/07*, 4 [Annex 58]; *JARPA II Cruise Report 2007/08*, 6 [Annex 59]; *JARPA II Cruise Report 2008/09*, 7 [Annex 60].

5.60 The study of predator-prey interactions involving krill is a common feature of scientific research programs in the Southern Ocean, given the essential function of krill as the primary prey for a wide range of animals including whales, seals, fish, penguins and seabirds.⁶³⁰ In contrast to JARPA II, these programs adopt a multi-disciplinary and collaborative approach, drawing on a range of diverse non-lethal methods, to properly examine the role of krill in the Antarctic ecosystem. For example, the recently established Southern Ocean Research Partnership (SORP), a consortium of Contracting Governments conducting research under the auspices of the IWC,⁶³¹ studies (amongst other things) whale foraging ecology and predator-prey interactions between minke and humpback whales and krill across different Antarctic regions.⁶³² SORP employs modern non-lethal methods, including tagging technologies that track the feeding behaviour of whales as they swim and dive at different depths and sophisticated computer programs that identify patterns in the movement of whales as they feed over long periods.⁶³³

5.61 Another example is the Ecosystem Monitoring Program of the Commission for the Conservation of Antarctic Marine Living Resources, known

⁶³⁰ Professor Mangel provides a simple diagram of the Antarctic ecosystem which illustrates some of the predators of krill: *Mangel, Expert Opinion*, para. 5.14 [Appendix 2].

⁶³¹ SORP was endorsed by the Scientific Committee at its annual meeting in 2009: Report of the Scientific Committee, 2009, IWC/61/Rep 1, 89.

⁶³² Government of Australia, Australian Antarctic Division, “SORP Projects”, at <<http://www.marinemammals.gov.au/sorp/sorp-projects>> on 15 April 2011. The members of the SORP Steering Group at the time of filing this *Memorial* include Argentina, Australia, Brazil, Chile, France, Germany, South Africa and the United States: S Childerhouse, “Annual Report of the Southern Ocean Research Partnership 2009/10”, at <http://www.marinemammals.gov.au/___data/assets/pdf_file/0007/26944/SC-62-O9.pdf> on 25 April 2011.

⁶³³ S Childerhouse, “Project Outlines for the Southern Ocean Research Partnership”, SC/62/10, 12-15 (Government of Australia, Australian Antarctic Division, *SORP Projects*, Southern Ocean Research Partnership at <http://www.marinemammals.gov.au/___data/assets/pdf_file/0003/26940/SC-62-O10-SORP-Project-Plans.pdf> on 15 April 2011).

as CEMP, which was established in 1985. CEMP studies krill and a range of krill-dependent species (four species of penguin, three species of bird and two species of seal) across three different study regions and a network of associated sites.⁶³⁴ Scientists in CEMP use over 20 different non-lethal standardised methods in order to detect significant changes in these critical components of the Antarctic ecosystem.⁶³⁵

5.62 Japan also conducts scientific research on the krill-based ecosystem in Antarctica through its National Institute for Polar Research (NIPR)⁶³⁶ and its National Research Institute of Far Seas Fisheries.⁶³⁷ In the 24 years since JARPA commenced, the National Research Institute of Far Seas Fisheries has collaborated in only one exercise undertaken in JARPA, namely a non-lethal survey on krill undertaken in the 2004/05 whaling season.⁶³⁸ NIPR similarly operates entirely separately to JARPA II. In 2009, NIPR hosted a symposium of the Scientific Committee on Antarctic Research (SCAR, established under the *Antarctic Treaty*)⁶³⁹ in Japan. Of the 235 oral and written presentations on Antarctic biology, none referred to “research” conducted under JARPA or JARPA II.

⁶³⁴ Commission for the Conservation of Antarctic Marine Living Resources, “CEMP”, at <<http://www.ccamlr.org/Pu/e/sc/cemp/intro.htm>> on 15 April 2011.

⁶³⁵ Commission for the Conservation of Antarctic Marine Living Resources, “CCAMLR Ecosystem Monitoring Program: Standard Methods”, January 2004 (revised), at <http://www.ccamlr.org/Pu/e/e_pubs/std-meth04.pdf> on 15 April 2011. This comprehensive document runs to 268 pages.

⁶³⁶ National Institute of Polar Research, “NiPR: National Institute of Polar Research”, at <<http://www.nipr.ac.jp/english/>> on 15 April 2011.

⁶³⁷ Japan Fisheries Agency, National Research Institute of Far Seas Fisheries, “The history and our rules”, at <<http://fsf.fra.affrc.go.jp/eng/history-e.htm>> on 15 April 2011.

⁶³⁸ *IWC Final Review of JARPA*, 427-428.

⁶³⁹ *The Antarctic Treaty*, Washington, 1 December 1959, 402 UNTS 71 (entered into force 23 June 1961).

5.63 If Japan were serious about producing scientific knowledge through JARPA II, it would use methods that are capable of addressing its stated objectives. Professor Mangel describes the proper process of scientific research as “[the] assembling [of] many different strands of evidence, which, if collected properly, can be woven into a strong and intellectually sound fabric of conclusions”.⁶⁴⁰ However, in JARPA II, Japan focusses on those strands that involve lethal take. Japan essentially limits its methods to collecting data through whaling, year after year, in the same area in which it commenced JARPA (and in which it harvested whales before that),⁶⁴¹ and in isolation from its own genuine scientific research programs. Professor Mangel therefore concludes that “[e]ven though JARPA II’s objectives have changed, its practice has not been altered so as to collect the type of data required for a far broader ecological study”.⁶⁴² Japan has invested little energy in adopting appropriate research techniques for JARPA II: the majority of its effort is directed to hunting and killing whales.⁶⁴³

(2) The proposed models in JARPA II are not linked to the data collected

5.64 Japan’s overarching goal in JARPA II is to construct a model of the Antarctic ecosystem, incorporating the effects of competition between whale species.⁶⁴⁴ Japan claims that the data it collects through whaling will be used for this model.⁶⁴⁵ However, the types of models proposed in association with

⁶⁴⁰ *Mangel, Expert Opinion*, para. 4.5 [Appendix 2].

⁶⁴¹ See Chapter 3, Section II.B.

⁶⁴² *Mangel, Expert Opinion*, para. 5.20 [Appendix 2].

⁶⁴³ *Mangel, Expert Opinion*, para. 5.51 [Appendix 2].

⁶⁴⁴ See Section I.B of this Chapter.

⁶⁴⁵ *JARPA II proposal*, 10 [Annex 105].

JARPA II do not require the information collected from Japan's lethal take.⁶⁴⁶ In the absence of any link between the purported models and the data collected, Japan has not demonstrated that it can achieve its objective of constructing an ecosystem model with the data it collects through whaling.⁶⁴⁷

(3) Japan uses lethal methods where non-lethal methods are available

5.65 Lethal methods should not be employed under Article VIII where a proposed research program could be conducted using other means, including existing data.⁶⁴⁸ Under JARPA II, Japan claims that lethal research is necessary to investigate the age and stomach contents of whales.⁶⁴⁹ Japan also takes whale tissue for genetic analyses (purportedly to investigate stock structure) and examines internal organs for traces of pollutants.⁶⁵⁰ Yet Japan provides no cogent scientific reasoning to demonstrate that lethal methods are in fact required. Japan simply asserts that lethal take is required, without providing justification.⁶⁵¹

5.66 Japan has not demonstrated that the data already collected under JARPA are insufficient to achieve its purported objectives in JARPA II, especially in light of the fact that JARPA II will simply repeat the collection of data amassed over 18 years of JARPA. Even assuming that new data are required, Japan has not demonstrated that lethal fieldwork is essential to obtain this. The reality is that it is no longer necessary to kill a whale in order to study it: all important research needs for the conservation and management of whales can be appropriately (and,

⁶⁴⁶ *Mangel, Expert Opinion*, paras. 5.49-5.50, 6.10 [Appendix 2].

⁶⁴⁷ *Mangel, Expert Opinion*, para. 5.51 [Appendix 2].

⁶⁴⁸ See Chapter 4, Section II.C(2).

⁶⁴⁹ *JARPA II proposal*, 20 [Annex 105].

⁶⁵⁰ *JARPA II proposal*, 15, 17 [Annex 105].

⁶⁵¹ *Mangel, Expert Opinion*, paras. 5.27, 6.9 [Appendix 2].

as discussed above, more effectively) addressed using modern non-lethal techniques. Work that does require lethal methods – such as obtaining data on the age of whales through examining their ear plugs – is either unreliable or unimportant. It therefore fails at the first essential characteristic of a program for purposes of scientific research under Article VIII, as it does not relate to the development of knowledge that is important to the conservation and management of whale stocks.

5.67 Instead of killing whales to ascertain their food consumption by examining their stomach contents, Japan could obtain such data by examining the faeces of whales or molecules in their blubber derived from biopsy samples, as scientists routinely do.⁶⁵² It is also possible to estimate the amount of prey consumed by a whale through simple, non-lethal allometric techniques (that is, using a whale's length to determine its food intake).⁶⁵³

5.68 Similarly, rather than killing whales to examine their livers, Japan could analyse the levels of many pollutants ingested by whales from skin samples obtained through non-lethal biopsies, since levels of pollution in different parts of an animal's body tend to correlate.⁶⁵⁴ The efficacy of such techniques is demonstrated by the major collaborative research initiative sponsored by the IWC,

⁶⁵² S N Jarman *et al.*, “DNA-based identification of prey species represented in whale faeces”, SC/55/E16, 2003; S J Iverson, “Tracing Aquatic Food Webs Using Fatty Acids: from Qualitative Indicators to Quantitative Determination”, in M T Arts *et al.* (eds), *Lipids in Aquatic Ecosystems* (Springer, 2009), 281-307.

⁶⁵³ R Leaper and D Lavigne, “How much do large whales eat?” *J. Cetacean Res. Manage.* 9 (2007), 179.

⁶⁵⁴ Mangel, *Expert Opinion*, para. 5.33 [Appendix 2]; P J H Reijnders *et al.*, “Report of the Workshop on Chemical Pollution and Cetaceans, March 1995, Bergen, Norway”, in “Chemical Pollutants and Cetaceans”, *J. Cetacean Res. Manage.*, (Special Issue 1), 17.

“POLLUTION 2000+”, which also seeks to investigate pollutant levels in cetaceans and involved only non-lethal methods.⁶⁵⁵

5.69 Rather than killing whales to study their stock structure, Japan could utilise non-lethal techniques such as biopsy sampling and tagging and tracking whales.⁶⁵⁶ These non-lethal methods are, in fact, more effective.⁶⁵⁷ Japan has failed to justify adequately their choice of lethal methods in this respect. Instead, in JARPA II Japan has made modest attempts to collect non-lethal biopsy samples,⁶⁵⁸ and made several failed attempts at tagging minke whales,⁶⁵⁹ but has otherwise focussed its efforts on whaling.

5.70 Japan also justifies its use of lethal methods on the basis that data on the age of whales (used to estimate biological parameters) cannot be obtained through non-lethal techniques.⁶⁶⁰ Japan attempts to obtain such data from the earplugs of whales killed. However, this method is fraught with difficulties, including that

⁶⁵⁵ Resolution for the Funding of High Priority Scientific Research, Resolution 1999-5, Appendix 6, Chairman’s Report of the Fifty-First Annual Meeting, *Annual Report of the International Whaling Commission 1999*, 53-54; Resolution on Environmental Change and Cetaceans, Resolution 2000-7, Appendix 1, Chairman’s Report of the Fifty-Second Annual Meeting, *Annual Report of the International Whaling Commission 2000*, 56-57.

⁶⁵⁶ *Mangel, Expert Opinion*, paras. 5.34-5.35 [Appendix 2]. See also S Childerhouse *et al.*, “Comments on the Government of Japan’s Proposals for a Second Phase of Special Permit Whaling in Antarctica (JARPA II)”, Appendix 2, Report of the Standing Working Group on Scientific Permits, Annex O1, Report of the Scientific Committee, *J. Cetacean Res. Manage. 8 (Suppl.)*, 2006, 260-261 [Annex 52]; *IWC Interim Review of JARPA 1997*, Annex H, “Summary Statements Supporting the Use of Lethal Removal and Refuting its Use, as it Pertains to the Collection of Information on Stock Structure”, 412, para. 1.

⁶⁵⁷ See Section II.B(1) of this Chapter.

⁶⁵⁸ *JARPA II Cruise Report 2005/06*, 4 [Annex 57]; *JARPA II Cruise Report 2006/07*, 4 [Annex 58]; *JARPA II Cruise Report 2007/08*, 4 [Annex 59]; *JARPA II Cruise Report 2008/09*, 5 [Annex 60]; *JARPA II Cruise Report 2009/10*, 3 [Annex 61].

⁶⁵⁹ *JARPA II Cruise Report 2005/06*, 7-8 [Annex 57]; *JARPA II Cruise Report 2006/07*, 4, 7 [Annex 58]; *JARPA II Cruise Report 2008/09*, 5, 7 [Annex 60].

⁶⁶⁰ *JARPA II proposal*, 20 [Annex 105].

large numbers of whales are killed without the earplugs being readable at all.⁶⁶¹ Japan has not established that this flawed age data will lead to reliable scientific results, and in fact the failure of JARPA demonstrates that the converse is true. A program for purposes of scientific research would not continue to collect such demonstrably flawed data. Moreover, while age data was central to the unachievable objectives of JARPA, Japan has not demonstrated that it is necessary or useful for the ecosystem modelling that is purportedly central to JARPA II.

5.71 The lack of any demonstrated need for lethal methods in JARPA II has been emphasised by the Commission in its Resolutions, which call on Japan to withdraw or suspend the lethal aspects of the program.⁶⁶² In summary, Japan's use of lethal methods is not appropriate. As Professor Mangel concludes, “[l]ethal take is not required to meet the objectives of JARPA II”.⁶⁶³

(4) The sample size and timeframes in JARPA II are not appropriate

5.72 Given that Japan has not demonstrated a need to conduct lethal research in order to achieve its objectives, the question of sample size does not arise. Since Japan continues to conduct lethal “research” nonetheless, Japan needs to demonstrate that its sample size is strictly limited to the minimum number of animals required for its results to be scientifically accurate and precise. Japan has never provided a coherent scientific rationale for its sample size in JARPA or JARPA II. Japan has moved between different numbers of whales that it purportedly needs to kill to pursue its “research” and, most recently, has admitted

⁶⁶¹ *Mangel, Expert Opinion*, paras. 5.29-5.30 [Appendix 2].

⁶⁶² *Resolution 2005-1* [Annex 40]; *Resolution 2007-1* [Annex 41].

⁶⁶³ *Mangel, Expert Opinion*, para. 6.11 [Appendix 2].

that its actual target sample size is a confidential figure well below the official stated targets.

5.73 In its original proposal for JARPA in 1987, Japan claimed that a sample size of 825 minke whales per year was the “minimum number required” to achieve its objectives.⁶⁶⁴ Having decided for political reasons to significantly lower its sample size to 300 minke whales per year,⁶⁶⁵ Japan submitted a revised proposal for JARPA in which it claimed that 300 minke whales was sufficient to achieve its objectives.⁶⁶⁶ Japan also abandoned its proposed take of 50 sperm whales, with no explanation as to whether or how this may impact on its purported “scientific” objectives.⁶⁶⁷ Japan subsequently justified its decision to proceed with the lesser number of whales on account of logistical constraints related to the capacity of its whaling fleet.⁶⁶⁸

5.74 Despite having stated that an annual take of 300 whales was sufficient to achieve its objectives, in 1995, Japan increased its annual target take to 400 minke whales (plus or minus 10%).⁶⁶⁹ By 2003, Japan had killed over 5,000 whales. When a member of the Scientific Committee queried this number, Japan defended its sample size by referring to the JARPA proposal from 1987, which claimed that

⁶⁶⁴ *JARPA proposal, 1987*, 9 [Annex 156]. Japan also asserted, without explanation, that it would be necessary to take 50 sperm whales per year: *JARPA proposal, 1987*, 18 [Annex 156].

⁶⁶⁵ See Chapter 3, Section I.D.

⁶⁶⁶ *JARPA Feasibility Study Proposal, 1987*, 10. See also Chairman’s Report of the Forty-Third Meeting, *Rep. int. Whal. Commn* 42, 1992, 14.

⁶⁶⁷ *JARPA Feasibility Study Proposal, 1987*, 3.

⁶⁶⁸ Government of Japan, “The Research Plan in 1989/90 Season in conjunction with note for “The Program for the Research on the Southern Hemisphere Minke Whale and for the Preliminary Research on the Marine Ecosystem in the Antarctic (SC/39/O4)”, May 1989, SC/41/SHMi13, 5.

⁶⁶⁹ Government of Japan, “The 1995/96 Research Plan for the Japanese Whale Research Program under Special Permit in the Antarctic”, March 1995, SC/47/SH3, 3-4.

an annual take of 825 minke whales was necessary, notwithstanding that at that stage Japan was only taking up to 440 whales per year.⁶⁷⁰

5.75 As Professor Mangel observes, and as these various justifications by Japan for its sample size illustrate, “[i]t is very difficult to understand the scientific basis for setting the level of lethal take in either JARPA or JARPA II”.⁶⁷¹ Even Japan’s own data demonstrate that taking far fewer whales than its target in JARPA would not have affected its purported analyses.⁶⁷²

5.76 This “lack of statistical clarity”⁶⁷³ continues in JARPA II. Japan has settled on a new target, now claiming that an annual take of up to 935 minke whales (850 whales plus or minus 10%) is necessary to detect statistically significant changes in the same biological parameters that it unsuccessfully investigated under JARPA.⁶⁷⁴ JARPA II also provides for the taking of 50 humpback and 50 fin whales.⁶⁷⁵

5.77 The process for setting sample sizes in JARPA II “is not based on solid statistical reasoning or analyses of the accuracy required to meet objectives”.⁶⁷⁶ Indeed, Japan has claimed that “given that the stocks to be sampled are abundant and, for humpback and fin whales, increasing rapidly, it is quite logical that the sample size is correspondingly large”.⁶⁷⁷ As Professor Mangel states, “[t]his

⁶⁷⁰ Report of the Scientific Committee, *J. Cetacean Res. Manage.*, 6 (Suppl.), 2004, 352. See also Appendix 4, *JARPA proposal*, 1987, 55-57.

⁶⁷¹ Mangel, *Expert Opinion*, para. 5.38 [Appendix 2].

⁶⁷² Mangel, *Expert Opinion*, paras. 5.39-5.43 [Appendix 2].

⁶⁷³ Mangel, *Expert Opinion*, para. 5.44 [Appendix 2].

⁶⁷⁴ *JARPA II proposal*, 17-18 [Annex 105].

⁶⁷⁵ *JARPA II proposal*, 1 [Annex 105].

⁶⁷⁶ Mangel, *Expert Opinion*, para. 6.12 [Appendix 2].

⁶⁷⁷ H Hatanaka *et al.*, Appendix 3, “Response to Appendix 2”, Annex O1, Report of the Standing Working Group on Scientific Permits, Report of the Scientific Committee, *J. Cetacean Res. Manage.* 8 (Suppl.), 2006, 262 [Annex 52].

conclusion is not logical at all”.⁶⁷⁸ The increasing abundance of a particular whale stock is irrelevant to the determination of the sample size necessary to achieve scientific objectives, which must be grounded in statistical methods.⁶⁷⁹ Japan’s expressed rationale is consistent with a program of commercial whaling, but not consistent with a scientific program.

5.78 Moreover, as outlined in Chapter 3, Japan’s actual takes have in most years of JARPA II been significantly less than the stated targets.⁶⁸⁰ Japan has provided no explanation of how this lesser take will affect its ability to conduct its “research”. Indeed, Japan’s then Minister for Agriculture, Forestry and Fisheries, Minister Akamatsu, has recently stated that Japan does not “actually need 800 [whales]” to conduct its research: “I mean, its more than we need”.⁶⁸¹ Separately, Minister Akamatsu has admitted that Japan’s actual targets under JARPA II are significantly less than as stated in the “research” proposal.⁶⁸² This highlights the lack of any scientific basis applied by Japan in setting its sample sizes, and undermines Japan’s claim that the target takes under JARPA II are necessary.

(5) Conclusion: JARPA II does not use scientific methods

5.79 Lethal methods are inappropriate and ineffective to achieve scientific objectives on the conservation and management of whales. This was noted in

⁶⁷⁸ *Mangel, Expert Opinion*, para. 5.45 [Appendix 2].

⁶⁷⁹ *Mangel, Expert Opinion*, para. 4.15 [Appendix 2].

⁶⁸⁰ See Figure 11 – Japan’s Maximum Target and Actual Catches under JARPA II, 2005/06 to 2010/11, at Chapter 3, Section III.C(3).

⁶⁸¹ Government of Japan, Minister for Agriculture, Forestry and Fisheries (H Akamatsu), Transcript of Press Conference, 9 March 2010 [Annex 107]; see further, Chapter 3, Section III.B.

⁶⁸² Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 6, 7 April 2010, Speaker: 13/76 (Hiroataka Akamatsu, Minister for Agriculture, Forestry and Fisheries) [Annex 97]; see further, Chapter 3, Section III.C(3).

2010 in a joint statement on Japan's use of Article VIII by a group of scientists within the Scientific Committee, who observed that:

In 1946, the only way to study whales was to kill them. This is no longer the case, and as we have previously noted there is virtually nothing important to management that cannot be learned using non-lethal techniques. This is significant, because the IWC's guidelines for scientific whaling include the provision that lethal sampling should be conducted only if non-lethal alternatives are unavailable.⁶⁸³

5.80 Japan's persistence in collecting a narrow set of data through whaling, in circumstances where other methods are widely and successfully used in major scientific research programs, confirms that its methods have not been chosen to achieve the stated objectives of JARPA II. Rather, Japan has decided to use lethal methods and then sought to justify this by reference to objectives that (even if properly framed) would be better pursued through non-lethal methods. Similarly, the "vague, unclear or simply wrong"⁶⁸⁴ reasoning that underlies the sample sizes in JARPA II demonstrates that Japan sets its levels of lethal take according to non-scientific considerations.

5.81 JARPA II thus fails to meet the essential characteristic that a scientific research program must utilise appropriate methods, as it uses lethal methods that are unnecessary and ineffective to pursue its stated objectives, and its sample size is fixed at an unprecedented scale without scientific justification and with no end date. For these reasons, "the potential of JARPA II to bring new knowledge about the conservation and management of whales is very low, if indeed it exists at all".⁶⁸⁵

⁶⁸³ P Clapham *et al.*, "Comment on the Use of Article VIII by the Government of Japan", Annex U1, "Statements on the Agenda", Annex U, Report of the Scientific Committee, 18 June 2010, IWC/62/Rep 1. The six members represented Australia and the United States. The proponents of JARPA II made a separate statement responding to this comment: H Hatanaka *et al.*, "Response to Annex U1", Annex U2.

⁶⁸⁴ Mangel, *Expert Opinion*, para. 5.51 [Appendix 2].

⁶⁸⁵ Mangel, *Expert Opinion*, para. 5.22 [Appendix 2].

C. JAPAN FAILS TO ADJUST JARPA II IN RESPONSE TO PEER REVIEW

5.82 As established in Chapter 4, independent peer review by the scientific community is an essential characteristic of scientific research under Article VIII. This requirement includes review of research proposals, periodic review as research continues and review of the results of research once produced. As the purpose of peer review is to increase the likelihood of the research achieving robust scientific results, a necessary corollary of such review is that the proponents of research will take into account the recommendations arising from such review.⁶⁸⁶

5.83 As Professor Mangel puts it: “[o]f course, scientific opinion can be wrong, but reliable science responds to valid criticism, which is how science advances”.⁶⁸⁷ Peer review in scientific research thus leads to a continuous process of revision and amendment of the research as necessary. There is no indication of Japan adopting any such approach. Japan commenced JARPA II without proper peer review, and continues it without substantial adjustment, despite serious and sustained criticism from members of the scientific community that its objectives and methods are flawed and likely to fail. It is thus unsurprising that JARPA II has produced a paucity of peer reviewed results, as did its predecessor JARPA.

(1) JARPA II was not properly peer reviewed at the outset

5.84 A scientific research program must pass peer review before its commencement.⁶⁸⁸ The JARPA II proposal was not properly peer reviewed;

⁶⁸⁶ See Chapter 4, Section II.C(3).

⁶⁸⁷ *Mangel, Expert Opinion*, para. 4.21 [Appendix 2].

⁶⁸⁸ *Mangel, Expert Opinion*, para. 4.23 [Appendix 2].

Japan implemented the program precipitously and without the benefit of any proper independent assessment of the preceding JARPA.

5.85 Given that JARPA II is the second phase of JARPA, and is ostensibly supported by its “results”, a full and proper consideration of JARPA is essential to properly assessing JARPA II. When planning for the Scientific Committee’s final review of JARPA commenced in 2003, the Commission issued an express recommendation that “no additional JARPA programs be considered until the Scientific Committee has completed...an in-depth review of the results of...JARPA”.⁶⁸⁹ Accordingly, the Commission expected Japan to delay the submission of any proposal for a second phase of JARPA so that it could take into account the lessons learnt from the first phase.

5.86 Japan did not do so. Japan submitted the JARPA II proposal to the IWC in June 2005, shortly after concluding its final whaling season of JARPA and well before that program could be reviewed in its totality. The Scientific Committee did not reach a consensus as to any of the objectives or methods of JARPA II.⁶⁹⁰ In fact, 63 members (approximately one-third) of the Committee refused to participate in the discussions at all, formally objecting that it was “scientifically invalid” even to attempt to review the proposal as no meaningful assessment of it was possible.⁶⁹¹ Instead, these members made a joint statement highlighting the

⁶⁸⁹ *Resolution 2003-3* [Annex 39]. For the Scientific Committee’s decision to hold an intersessional review, see “Report of the Standing Working Group on Scientific Permit Proposals”, Annex O, Report of the Scientific Committee, *J. Cetacean Res. Manage.* 6 (Suppl.), 2004, 350.

⁶⁹⁰ “Report of the Standing Working Group on Scientific Permits”, Annex O1, Report of the Scientific Committee, *J. Cetacean Res. Manage.* 8 (Suppl.), 2006, 259 [Annex 52].

⁶⁹¹ Report of the Scientific Committee, *J. Cetacean Res. Manage.* 8 (Suppl.), 2006, 49 [Annex 52]. These members represented 16 national delegations and 16 Invited Participants.

fundamental problems with JARPA II.⁶⁹² Nonetheless, Japan refused to withdraw its proposal.

5.87 Japan did not revise the JARPA II proposal or re-submit it for review or discussion following the Scientific Committee's final review of JARPA in which the Committee was unable to conclude that JARPA had met any of its objectives.⁶⁹³ By that stage, Japan was conducting its second season of whaling under JARPA II.

5.88 Japan's unwillingness to contemplate any pause in its whaling program to permit proper peer review reflects a pattern of conduct across JARPA and JARPA II. Japan commenced JARPA in 1988 notwithstanding the Commission's recommendation that Japan not proceed "until such time as the Scientific Committee is able to resolve the serious uncertainties" in the objectives and methods of the proposed research.⁶⁹⁴ Japan also disregarded requests from numerous Contracting Governments during Commission meetings in 1995 and 1996 that it cease implementing JARPA until the Scientific Committee had completed its interim review of that program.⁶⁹⁵

⁶⁹² S Childerhouse *et al.*, "Comments on the Government of Japan's proposal for a second phase of Special Permit Whaling in Antarctica (JARPA II)", Appendix 2, Annex O, Report of the Scientific Committee, *J. Cetacean Res. Manage.* 8 (Suppl.), 2006, 260-261 [Annex 52].

⁶⁹³ See Section I.A of this Chapter.

⁶⁹⁴ *Resolution 1987-4* [Annex 10].

⁶⁹⁵ Chairman's Report of the Forty-Seventh Annual Meeting, *Rep. int. Whal. Commn* 46, 1996, 30; Chairman's Report of the Forty-Eighth Annual Meeting, *Rep. int. Whal. Commn* 47, 1997, 38. The requesting Governments were Australia, Austria, Brazil, Chile, France, Germany, India, Monaco, the Netherlands, New Zealand, Oman, Spain, South Africa, St Lucia, Sweden, Switzerland, the United States and the United Kingdom.

(2) Japan does not respond to peer review

5.89 The evidence above has established that the objectives and methods of JARPA II fail to meet the essential characteristics of a scientific research program. Notwithstanding the serious and valid criticisms expressed by members of the scientific community in relation to JARPA II, Japan has not made any meaningful or effective revisions to JARPA II since its inception.⁶⁹⁶ Professor Mangel concludes that those persons involved in JARPA II “have not demonstrated an ability to respond to criticism, or to admit being wrong”.⁶⁹⁷ As he observes, “[a]n individual who is not open to the possibility of being wrong cannot be a scientist”.⁶⁹⁸

5.90 JARPA II is replete with identified and uncorrected errors, many of which originated in JARPA. Indeed, Japan has not reported any substantive changes in JARPA II in response to the Scientific Committee’s final review of JARPA.⁶⁹⁹ For example, the Scientific Committee concluded that for Japan to make progress on the stock structure of Antarctic minke whales, it would be necessary to collect non-lethal biopsy samples from their breeding grounds in the temperate waters north of Antarctica.⁷⁰⁰ This is because the stocks of whales that congregate to breed may differ from the stocks of whales found in the Antarctic feeding grounds where Japan conducts its hunting. However, Japan has ignored this

⁶⁹⁶ Japan has not submitted any revised research plans for the lethal aspects of JARPA II since its inception in 2005.

⁶⁹⁷ Mangel, *Expert Opinion*, para. 5.62 [Appendix 2].

⁶⁹⁸ Mangel, *Expert Opinion*, para. 4.18 [Appendix 2].

⁶⁹⁹ Report of the Scientific Committee, Annex O, Report of the Standing Working Group on Scientific Permits, *J. Cetacean Res. Manage. 10 (Suppl.)*, 2008, 344. See also “Summary of Recommendations from the JARPA Review Workshop”, Appendix 3, Report of the Scientific Committee, Annex O, Report of the Standing Working Group on Scientific Permits, *J. Cetacean Res. Manage. 10 (Suppl.)*, 2008, 349-350.

⁷⁰⁰ *IWC Final Review of JARPA*, 422.

recommendation in JARPA II; year after year, Japan collects samples through whaling in the same region in which it commenced JARPA in 1988.⁷⁰¹ By merely amassing ever more of the same data, Japan cannot begin to achieve its objective of elucidating stock structure in JARPA II.

5.91 Similarly, Japan's claim that it will utilise data on biological parameters to estimate the Maximum Sustainable Yield Rate (MSYR)⁷⁰² of whale species in JARPA II ignores nearly a decade of work by the Scientific Committee on this issue. The Committee has a Working Group which has considered various methods of refining the range of estimates of MSYR for use in the RMP, including Japan's suggested approach of using data on biological parameters. As far back as 1993, it agreed that the estimation of MSYR from biological parameters was "subject to large error" which made its application "usually practically impossible".⁷⁰³ This conclusion was reaffirmed by the Working Group as recently as 2009, when it specifically considered – and then dismissed as being of low reliability – estimates of MSYR for minke whale populations derived from data on biological parameters collected under JARPA.⁷⁰⁴ Japan has made no revision to its JARPA II proposal, in light of this conclusive statement by the Scientific Committee that Japan's objective and method are flawed and cannot produce useful results.

5.92 Nor has Japan made any amendments to JARPA II to address new deficiencies that have arisen since JARPA. For example, Japan continues taking fin whales despite the repeated concerns expressed within the Scientific Committee that its targeting is biased towards juvenile whales – a fact

⁷⁰¹ See Chapter 3, Section II.B.

⁷⁰² *JARPA II proposal*, 12 [Annex 105].

⁷⁰³ Report of the Working Group on MSY Rates, *Rep. int. Whal. Commn* 44, 1994, 183.

⁷⁰⁴ "Report of the Intersessional Workshop on MSYR for Baleen Whales, 6-8 February 2009, Seattle", *J. Cetacean Res. Manage.* 11 (Suppl. 2), 493-508.

admitted by Japan. Japan conceded in 2008 that it cannot process large whales (above around 18 metres in length) on its vessels,⁷⁰⁵ despite the fact that fin whales have an average length of around 25 metres.⁷⁰⁶

5.93 Japan has thus failed to demonstrate an ability to make fundamental and necessary changes to its “research” in order to properly address concerns raised by members of the scientific community.

(3) Japan has produced a paucity of peer reviewed results

5.94 Japan has produced very few peer reviewed publications from JARPA and JARPA II. The majority of papers authored by those involved in JARPA and JARPA II are unpublished papers submitted to the IWC. Over the course of 24 years, only about 15% of the papers written in conjunction with JARPA and JARPA II have been peer reviewed and are potentially relevant to the broadly stated objectives of those programs.⁷⁰⁷ This is a remarkably small output from a large-scale program that claims to have been conducting scientific research for 24 years and has killed over 10,000 whales in the process. This record of publications reflects the conclusion of the IWC that JARPA did not meet its objectives and that neither JARPA nor JARPA II contributes to critically important research needs.⁷⁰⁸

⁷⁰⁵ Report of the Scientific Committee, *J. Cetacean Res. Manage.* 10 (Suppl.), 2008, 344. See also Chapter 3, Section II.B.

⁷⁰⁶ Female and male fin whales average 26 metres and 25 metres in length, respectively: *de la Mare et al.*, *Antarctic Baleen Whale Populations*, para. 4.1 [Appendix 1].

⁷⁰⁷ *Mangel, Expert Opinion*, para. 5.62 [Appendix 2].

⁷⁰⁸ See Resolutions of the Commission cited in Section I of this Chapter.

(4) Conclusion: Japan fails to adjust JARPA II in response to peer review

5.95 Throughout JARPA and JARPA II, Japan has demonstrated an unwillingness to submit its work for peer review and to respond to such review where it occurs. JARPA II was not properly peer reviewed at the outset. Moreover, where fundamental errors in its “research” have been identified, Japan has failed to make necessary adjustments to address these errors. Where it becomes apparent through peer review that a method is flawed or an objective cannot be achieved due to the absence of a reliable method, a scientist would consider revising the objectives and methods. Japan has commenced and continued JARPA II with objectives and methods that have been demonstrated to fail. Such intransigence can only be explained on account of Japan’s overriding determination to continue whaling.

D. JARPA II IS NOT DESIGNED TO AVOID ADVERSE EFFECTS ON THE TARGETED WHALE STOCKS

5.96 A Contracting Government conducting a scientific research program under Article VIII must demonstrate that the program is designed to avoid adverse effects on the whale stocks in question.⁷⁰⁹ Japan has failed to demonstrate this with respect to JARPA II.

5.97 This characteristic is particularly critical given the recent history of massive over-exploitation of whale stocks, which led in the case of some species (most notably blue whales) to near extinction.⁷¹⁰ Considerable uncertainty remains as to the current abundance of the whale stocks targeted by Japan in

⁷⁰⁹ See Chapter 4, Section II.C(4).

⁷¹⁰ See Chapter 2, Section IV.

JARPA II.⁷¹¹ In particular, fin and humpback whales are prescribed as a “Protection Stock” in the Schedule to the ICRW, are listed under Appendix I of CITES (species threatened with extinction) and have been classified by the IUCN as “endangered”.⁷¹²

5.98 While commercial whaling did not deplete Antarctic minke whale stocks to the same extent as fin and humpback whale stocks, estimates of their abundance fluctuate considerably.⁷¹³ Antarctic minke whale stocks are not prescribed any specific classification in the Schedule to the ICRW, as the Scientific Committee was unable to provide management advice in relation to them due to a lack of information available to implement the NMP.⁷¹⁴ The IUCN lists minke whales as “data deficient”,⁷¹⁵ they are also listed under Appendix I of CITES (species threatened with extinction). While estimates typically place the number of minke whales in the Southern Ocean at between 300,000 and 500,000 individuals, the Commission has repeatedly expressed concern that minke whales may be “appreciably lower” in abundance than estimated.⁷¹⁶ In particular, in 2003

⁷¹¹ For a detailed assessment of the current status of each stock targeted by Japan in JARPA II, see *de la Mare et al., Antarctic Baleen Whale Populations* [Appendix 1].

⁷¹² International Union for the Conservation of Nature (IUCN). “IUCN Red List of Threatened Species. Version 2010.4”, at <<http://www.iucnredlist.org/apps/redlist/details/2478/0>> (in respect of fin whales) and <<http://www.iucnredlist.org/apps/redlist/details/132832/0>> (in respect of Southern Hemisphere or “Oceania” humpback whales), on 31 March 2011.

⁷¹³ *Mangel, Expert Opinion*, para. 5.63 [Appendix 2].

⁷¹⁴ See, for example, Report of the Scientific Committee, *Rep. int. Whal. Commn* 28, 1978, 82-83; Report of the Scientific Committee, *Rep. int. Whal. Commn* 29, 1979, 44.

⁷¹⁵ International Union for the Conservation of Nature (IUCN) 2010, “IUCN Red List of Threatened Species. Version 2010.4”, at <<http://www.iucnredlist.org/apps/redlist/details/2480/0>> on 31 March 2011.

⁷¹⁶ *Resolution 2000-4* [Annex 33]; *Resolution 2001-7* [Annex 35]; *Resolution 2003-3* [Annex 39]; *Resolution 2005-1* [Annex 40].

the Commission noted that it could not be ruled out that the population “may have suffered a precipitous decline over the past decade”.⁷¹⁷

5.99 This uncertainty clearly warrants a precautionary approach.⁷¹⁸ However, Japan has not properly assessed the possible adverse effects of its “research” on the targeted stocks, and as a result JARPA II was not designed to avoid such adverse effects.

5.100 Japan claims that its calculations indicate that its “research” will have no negative effect on minke or fin whale stocks, and that the proposed take of 50 humpback whales “would probably not delay the recovery of stocks to pristine level”.⁷¹⁹ However, Japan’s calculations are flawed. First, in calculating the effect of JARPA II on stocks, Japan relies on its own abundance estimates from JARPA,⁷²⁰ which were roundly rejected by the Scientific Committee.⁷²¹ Secondly, Professor Mangel explains that the models Japan uses in its calculations are constructed to assume that the catch is but a small fraction of the overall size. As a result, the assumption that the lethal take will have no effect on the stocks is built into the models as a foregone conclusion.⁷²²

5.101 In contrast, the Scientific Committee was unable to conclude that JARPA II would not adversely affect the targeted whale stocks. A number of members stressed that it was “difficult or impossible” to properly assess the effects of Japan’s whaling, as no current agreed abundance estimates existed for

⁷¹⁷ *Resolution 2003-3* [Annex 39].

⁷¹⁸ See Chapter 4, Section II.B(2)(ii).

⁷¹⁹ Report of the Scientific Committee, *J. Cetacean Res. Manage.* 8 (Suppl.), 2006, 51 [Annex 52].

⁷²⁰ Japan has clarified in Commission meetings that it relied on its own abundance estimates from JARPA in calculating the effect of JARPA II on the targeted stocks: Chair’s Report of the Fifty-Eighth Annual Meeting, *Annual Report of the International Whaling Commission 2006*, 41.

⁷²¹ See Section I.A of this Chapter.

⁷²² *Mangel, Expert Opinion*, para. 5.64 [Appendix 2].

any of the relevant species in the area where JARPA II takes were to occur. Their “serious concerns” were as follows:

- (i) The determination of the extent and possible reasons for an apparent substantial decline in abundance of Antarctic minke whales.
- (ii) The targeting of species that were subject to massive over-exploitation during earlier whaling, whose populations were taken to dangerously low levels and which remain well below their pre-exploitation abundance.
- (iii) A lack of any agreed estimates of fin whale abundance, population trend or stock structure.
- (iv) The potential impact of take of humpback whales from small, poorly understood and highly threatened populations in the South Pacific (e.g. Fiji, Samoa, Cook Islands, etc.)
- (v) The potential impact of takes of humpback whales on existing, non-lethal research programmes in Australia, New Zealand and elsewhere in the South Pacific.⁷²³

5.102 The Commission has also expressed concern about the substantial lethal takes involved in JARPA II and their potential effects on Antarctic minke, fin and humpback whale stocks in both its Resolutions on the program.⁷²⁴

Resolution 2005-1 states in relevant part:

NOTING that the Third Circumpolar Survey indicates that the abundance of Antarctic minke whales is substantially lower than the earlier estimate of 760 000, and that the Scientific Committee is working to identify factors contributing to the differences between the two surveys;

CONCERNED that there are no agreed data to indicate that endangered fin whale populations have increased since the cessation of whaling;

ALSO NOTING that some humpback whales which will be targeted by JARPA II belong to small, vulnerable breeding populations around small island States in the South Pacific and that even small takes could have a detrimental effect on the recovery and survival of such populations;

ALSO CONCERNED that JARPA II may have an adverse impact on established long-term whale research projects involving humpback whales;[.]⁷²⁵

⁷²³ S Childerhouse *et al.*, “Comments on the Government of Japan’s Proposals for a Second Phase of Special Permit Whaling in Antarctica (JARPA II)”, Appendix 2, Report of the Standing Working Group on Scientific Permits, Annex O1, Report of the Scientific Committee, *J. Cetacean Res. Manage.* 8 (Suppl.), 2006, 260-261 [Annex 52].

⁷²⁴ *Resolution 2005-1* [Annex 40]; *Resolution 2007-1* [Annex 41].

⁷²⁵ *Resolution 2005-1* [Annex 40].

5.103 Professor Mangel raises particular concerns in relation to minke whales, the main species targeted under JARPA II. Professor Mangel observes that Japan has made no apparent attempt to understand the social structure of minke whale schools and how whaling might disrupt their population dynamics.⁷²⁶ In JARPA II, Japan samples “one or two” individuals from each school of minke whales.⁷²⁷ However, minke whale schools are extremely small and typically contain between one and four individuals.⁷²⁸ There is a well-known biological phenomenon, known as the Allee effect, in which once the size of a population becomes sufficiently small it continues to decline, even if the original cause of the decline (such as whaling) is removed.⁷²⁹ Depleting populations and disrupting their social structure are amongst the many known causes of the Allee effect. Japan fails to even mention the literature on the Allee effect in its JARPA II proposal, leading Professor Mangel to state that “[t]here is no record that JARPA II is designed with any attention directed to avoiding unintended consequences”.⁷³⁰

5.104 Japan’s failure to properly assess the possible ramifications of its “scientific” whaling, which occurs on an unprecedented scale and in a designated whale sanctuary, is a particularly cogent concern given that JARPA II has no end date. This makes it both more difficult to properly assess its effect on the targeted stocks and more likely that there may be significant adverse effects. Professor Mangel concludes that JARPA II does not meet the essential characteristic of scientific research that it will not adversely affect the targeted whale stocks.⁷³¹

⁷²⁶ *Mangel, Expert Opinion*, para. 5.66 [Appendix 2].

⁷²⁷ *JARPA II proposal*, 14 [Annex 105].

⁷²⁸ *Mangel, Expert Opinion*, para. 5.66 [Appendix 2].

⁷²⁹ *Ibid.*

⁷³⁰ *Mangel, Expert Opinion*, para. 6.17 [Appendix 2].

⁷³¹ *Mangel, Expert Opinion*, para. 6.18 [Appendix 2].

Instead, Japan simply proceeds on the assumption that the take will have no effect on the stock.⁷³²

E. CONCLUSIONS

5.105 This Section has established that JARPA II fails at each step of the scientific process; it reflects none of the four essential characteristics of a scientific research program. In summary:

- (i) JARPA II has far-reaching, unrealistic and poorly conceived objectives for which there is no demonstrated need;
- (ii) JARPA II uses inappropriate methods, essentially limited to collecting data through whaling, despite the fact that this is both unnecessary and unlikely to achieve JARPA II's stated objectives. Moreover, Japan's sample size in JARPA II has no demonstrated scientific basis and it is set without time limits;
- (iii) JARPA II was not properly peer reviewed at its inception and it has not been genuinely adjusted in response to valid criticisms raised since its inception, resulting in the continued pursuit of objectives and methods that do not lead to reliable and useful results; and
- (iv) the design of JARPA II reflects little or no attention to the serious question of potential adverse effects on the targeted whale stocks.

5.106 As Professor Mangel concludes in his expert opinion, "JARPA II is an activity that collects data in the Southern Ocean. However...it is not a program for purposes of scientific research in the context of the conservation and management

⁷³² Mangel, *Expert Opinion*, para. 5.67 [Appendix 2].

of whales”.⁷³³ JARPA did not increase the state of scientific knowledge in relation to whales, and nor will such knowledge increase as a result of Japan continuing its flawed “research” in JARPA II. As will be established in the next Section, this is because the actual purpose of JARPA II is not to conduct scientific research, but simply to continue whaling.

⁷³³ *Mangel, Expert Opinion*, para. 6.19 [Appendix 2].

SECTION III. JARPA II IS UNDERTAKEN FOR PURPOSES OTHER THAN SCIENTIFIC RESEARCH

5.107 Chapter 4 establishes that a fundamental limitation on the application of Article VIII is that activities authorised by special permit must be carried out for the purposes of scientific research and for no other purpose. This Section demonstrates that Japan does not undertake JARPA II for purposes of scientific research. Japan’s real purpose in undertaking “scientific” whaling is – and always has been – simply to continue commercial whaling prohibited by the moratorium.

5.108 The evidence in Chapter 3 confirmed that the continuation of whaling was Japan’s fundamental goal in commencing “scientific research” under JARPA in January 1988. Having initially objected to the moratorium on commercial whaling, Japan withdrew its objection in the face of significant international pressure and accordingly was bound to cease commercial whaling.⁷³⁴ Despite accepting the moratorium, Japanese Ministers and officials repeatedly stated the Government’s commitment to continue whaling “in some form or another”.⁷³⁵ Consistent with these public commitments, Japan decided to continue whaling in the Southern Ocean and support its pelagic whaling industry under the guise of “scientific research” However, Japan’s real purpose was not science: as a subsequent Director-General of the Japan Fisheries Agency recalled:

The implementation of scientific whaling was viewed as the only method available to carry on with the traditions of whaling.⁷³⁶

5.109 The continuation of whaling remains Japan’s fundamental goal in JARPA II. This Section sets out how Japan’s purpose of continuing whaling, rather than scientific aims, dictates the conduct of its “research” and has driven

⁷³⁴ See Chapter 3, Section I.B.

⁷³⁵ See Chapter 3, Section I.C.

⁷³⁶ G Satake, *Japanese Fisheries and Overseas Fisheries Cooperation in the Era of Globalisation* (Seizankdo-Shoten Publishing Company Limited, 1997), 113 [Annex 75].

the design and implementation of JARPA II. Under Japan’s business model of “scientific” whaling, continued operations are made financially possible by the sale of whale meat as the “by-product” of research. This dependence on revenue dictates the use of lethal methods and influences Japan’s catch targets. This Section also sets out how Japan’s true purpose of continuing whaling is evident in the range of benefits enjoyed by key stakeholders as a result of “scientific” whaling, providing compelling evidence to explain Japan’s continued pursuit of such flawed “research”.

A. JAPAN’S PURPOSE OF CONTINUING WHALING DICTATES THE CONDUCT OF ITS “RESEARCH”

5.110 Having decided to support its pelagic whaling industry and continue whaling indefinitely under the guise of “science”, Japan set about achieving this aim. First, Japan has designed a “research” program to enable large-scale takes of whales by positing this as the core “research” method. Secondly, Japan set up a business model for “scientific” whaling to enable whaling operations to continue on a largely self-sustainable financial basis. Thirdly, Japan has designed “research” that requires long-term whaling. As set out in Chapter 3, the Government explicitly stipulated these requirements to the select group charged with developing a Southern Ocean “scientific” whaling program in 1984.⁷³⁷ These basic requirements – whaling as the core “research” method, a largely self-sustainable business model, and open-ended objectives that justify continued whaling – remain the foundation of JARPA II.

⁷³⁷ See Chapter 3, Section I.D.

(1) Whaling as the core “research” method

5.111 To achieve its goal of continued whaling, Japan has “retro-fitted” a so-called “scientific research” program to attempt to justify large-scale whaling as a “research” method of JARPA and JARPA II. As outlined above, while Japan changed its “scientific” objectives from JARPA to JARPA II – after the objectives of JARPA proved practically impossible to achieve through lethal whaling – it has nonetheless retained the same “research” method of lethal whaling.⁷³⁸ Japan’s persistence with this flawed “research” method not only explains the failure of JARPA and JARPA II to achieve any real scientific progress over the past 24 years, it also reveals that Japan’s real purpose in persisting with this “scientific research” is to achieve its objective of continued whaling.

5.112 If Japan’s real purpose were science, then, as noted above, Japan would select the most appropriate methods likely to achieve its stated scientific objectives. In stark contrast, JARPA and JARPA II are premised from the outset on lethal whaling as the predetermined method of “research”. The *Cetacean Research Capture Program Implementation Guidelines*, issued by the Japanese Ministry of Agriculture, Forestry and Fisheries on 17 December 1987 at the commencement of JARPA, and which remain in effect, specifically provide that the Institute of Cetacean Research “shall conduct biological surveys, marine ecology surveys and other survey activities *through sampling capture in the Antarctic Ocean, etc*” [emphasis added].⁷³⁹ “Sampling capture” means whaling. In this way, the *Guidelines* in fact require the Institute of Cetacean Research to use whaling as the core method of “research”. The use of lethal methods is also

⁷³⁸ See Section I.B of this Chapter.

⁷³⁹ Government of Japan, *Cetacean Research Capture Project Implementation Guidelines*, Directive issued by order of the Administrative Vice-Minister for Agriculture, Forestry and Fisheries, 62 Sea Fisheries No. 3775, (17 December 1987), para. 3 [Annex 101].

reflected in the title used by Japan for its “scientific” whaling operations, the “Cetacean Research Capture Project”.⁷⁴⁰

(2) Continued whaling on a self-sustainable financial basis

5.113 Japan’s “scientific” whaling was and is intended to be maintained on a largely self-sustainable financial basis. This is achieved through the “scientific” whaling business model, by which revenue from the sale of whale meat funds continued whaling operations.⁷⁴¹ In particular, whale meat sales (from both Japan’s Southern Ocean and northern Pacific whaling) largely cover the costs of Japan’s continued whaling, with the remainder covered by government subsidies.⁷⁴² The key participants in the pelagic whaling industry – the Institute of Cetacean Research and Kyodo Senpaku – depend on continued whaling and the resulting revenue for their financial viability.⁷⁴³

5.114 These economic interests underpin the design and implementation of JARPA II. The interest of Japan’s pelagic whaling industry in maximising revenue from “scientific” whaling is reflected in Japan’s decision to increase catch targets progressively over the course of JARPA (from 300 minke whales to a maximum of 440 by the end of the program) and then to more than double the number of minke whales targeted under JARPA II (up to 935) and to target new

⁷⁴⁰ Ibid.

⁷⁴¹ See Chapter 3, Sections I.D and III.

⁷⁴² In 2009/10, the Institute of Cetacean Research generated revenue of around ¥5.5 billion from whale meat sales, as against costs for whaling operations of a little over ¥6 billion: Institute of Cetacean Research, *FY2009 Business Report* (30 September 2010) at Institute of Cetacean Research website, <<http://www.icrwhale.org/H21jigyo.pdf>> on 16 April 2011, Balance Sheet [Annex 123].

⁷⁴³ See Chapter 3, Section II.A.

species of whales (up to 50 fin and humpback whales respectively).⁷⁴⁴ This has provided Japan's pelagic whaling industry with the opportunity to increase its revenue from so-called "scientific" whaling. As outlined above, Japan has provided no cogent scientific rationale for how these "sample sizes" have been set.⁷⁴⁵

5.115 At present, the business model of "scientific" whaling and the financial viability of the Institute of Cetacean Research and Kyodo Senpaku are threatened by Japan's inability to sell much of the whale meat produced as so-called "by-products".⁷⁴⁶ The reality is that consumption of whale meat in Japan has declined significantly, and despite increased marketing and promotion the industry has been unable to revive demand. This has led to a significant oversupply of whale meat and large stockpiles of frozen meat being stored in large freezers at great cost across Japan.⁷⁴⁷ This has important financial consequences for participants in Japan's pelagic whaling industry. For example, in 2009/10 the Institute of Cetacean Research had total loans exceeding ¥4.5 billion (approximately US\$50 million). When compared to the Institute's total annual revenue in 2009/10 of under ¥7 billion (approximately US\$80 million),⁷⁴⁸ the financial imperative for the Institute to maximise revenue from "scientific" whaling is clear.⁷⁴⁹ Similarly, the profits generated by Kyodo Senpaku have to

⁷⁴⁴ See Chapter 3, Section III.B.

⁷⁴⁵ See above, Chapter 5, Section II.B(3).

⁷⁴⁶ See Chapter 3, Section III.C(2).

⁷⁴⁷ See Chapter 3, Section III.C(1).

⁷⁴⁸ Institute of Cetacean Research, *FY2009 Business Report* (30 September 2010) at Institute of Cetacean Research website, <<http://www.icrwhale.org/H21jigyo.pdf>> on 16 April 2011, Balance Sheet [Annex 123].

⁷⁴⁹ *Ibid.*

date been deemed insufficient to replace the ageing factory ship (the *Nisshin-Maru*) in Japan's pelagic whaling fleet.⁷⁵⁰

5.116 In response to these threats to the viability of its business model of “scientific” whaling, Japan has reduced its actual catches under JARPA II to well below its official catch targets.⁷⁵¹ It has caught an average of just under 550 minke whales each year of JARPA II compared with the target of 935 minke whales, and a total of just 19 fin whales compared to the cumulative official target for this period of 220 fin whales.⁷⁵² The evidence adduced in Chapter 3 shows how Japan has deliberately reduced its intended catches due to decreasing demand for the product, large inventories of unsold frozen meat and consequent budgetary constraints on the activity.⁷⁵³ Indeed, the fact that Japan has deliberately reduced its actual catch targets to a confidential number was publicly admitted by Japan's Minister for Agriculture, Forestry and Fisheries, Hirotaka Akamatsu, in the Japanese Diet on 7 April 2010, when he confirmed that:

[T]he research whaling catch we were able to obtain was pretty much as planned – please understand that it is our practice not to state the number of whales – but I can say it was approximately the number we had planned.⁷⁵⁴

5.117 The fact that Japan's implementation of JARPA II is driven by economic interests, rather than scientific considerations, reveals that Japan's purpose is not science at all, but continued whaling.

⁷⁵⁰ T Taniguchi, “Opinion. The Inside Story of Japan's Whaling – What the Media Doesn't Tell Us. Taxpayer's Money Spent, Friends Lost”, *Wedge* (20 January 2009), at <<http://wedge.ismedia.jp/articles/-/721>> on 15 April 2011 [Annex 79].

⁷⁵¹ See Figure 11 – Japan's Maximum Target and Actual Catches under JARPA II, 2005/06 to 2010/11, at Chapter 3, Section III.C(3).

⁷⁵² *Ibid.*

⁷⁵³ *Ibid.*

⁷⁵⁴ Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 6, 7 April 2010, Speaker: 13/76 (Hirotaka Akamatsu, Minister for Agriculture, Forestry and Fisheries) [Annex 97].

(3) JARPA II is structured to provide for indefinite whaling

5.118 In 1984, the Government of Japan also stipulated that the proposed “scientific” whaling program in the Southern Ocean should enable whaling on an indefinite basis.⁷⁵⁵ This requirement was reflected in the open-ended nature of JARPA, which enabled Japan to continue whaling for 18 seasons until 2004/05, and is reflected in the design of JARPA II. In particular, the stated objectives of JARPA II are framed so broadly that they could be used to justify “almost any activity that Japan wished to pursue”.⁷⁵⁶ The program is open-ended, providing no details about the period of research. It includes no end date or performance criteria by which achievement could be measured and the program adjusted or stopped as necessary. Instead, the JARPA II research proposal merely provides that after a six year initial “research phase”, which concludes in 2011, “a review will be held and revisions made to the program if required”.⁷⁵⁷ The only plausible explanation for the poorly conceived objectives and the absence of any specified end date is that Japan has designed JARPA II to achieve its purpose of continued whaling for an indefinite period.

B. THE BENEFITS TO KEY STAKEHOLDERS EXPLAIN JAPAN’S PURPOSE OF CONTINUING “SCIENTIFIC” WHALING

5.119 Japan’s “scientific” whaling provides a range of important benefits to the pelagic whaling industry and a close group of stakeholders. The benefits provided by JARPA II help explain why the Government of Japan has chosen to continue whaling under the guise of “science”. In summary, as set out in Chapter 3, “scientific” whaling provides five main benefits to key stakeholders:

⁷⁵⁵ See Chapter 3, Section I.D.

⁷⁵⁶ *Mangel, Expert Opinion*, para. 5.22 [Appendix 2]. See also Section II.A of this Chapter.

⁷⁵⁷ *JARPA II proposal*, 13 [Annex 105].

- (1) “Scientific” whaling sustains what remains of the pelagic whaling industry and provides the bulk of income for both the Institute of Cetacean Research and Kyodo Senpaku.⁷⁵⁸
- (2) “Scientific” whaling maintains the ongoing capacity of the pelagic whaling industry over the longer term. Continuing operations foster the retention and development of skills, technologies and assets, and keep in place the institutions and personnel necessary to maintain long-term pelagic whaling operations.⁷⁵⁹
- (3) “Scientific” whaling ensures a continued supply of whale meat to what remains of the market. This supports whale meat distributors, wholesalers and retailers through the supply chain and ensures a continued supply of whale meat to (the limited number of) interested consumers in Japan.⁷⁶⁰
- (4) “Scientific” whaling has provided a continued supply of meat directly to stakeholders and government institutions. These have included government officials and parliamentarians, Kyodo Senpaku crew members and Institute of Cetacean Research personnel, as well as schools and hospitals.⁷⁶¹
- (5) Finally, the “scientific” whaling business model has provided *amakudari* (“golden parachute”) opportunities for senior officials in Japan’s bureaucracy. As demonstrated in Chapter 3, former senior bureaucrats, particularly in the Japan Fisheries Agency, have received prestigious

⁷⁵⁸ See Chapter 3, Sections II.A and III.

⁷⁵⁹ See Chapter 3, Section III.D.

⁷⁶⁰ See Chapter 3, Sections II.C and III.D.

⁷⁶¹ See Chapter 3, Section II.C.

positions in the Institute of Cetacean Research, Kyodo Senpaku and the Japan Whaling Association.⁷⁶²

5.120 It is clear that without “scientific” whaling, Japan’s pelagic whaling industry could not operate and would lose its skills and capacity; the Institute of Cetacean Research and Kyodo Senpaku would lose the bulk of their revenue; Japan would produce significantly less whale meat, to the detriment of whale meat suppliers; and stakeholders would lose access to whale meat “gifts” and other benefits. The “scientific research” program also keeps the door open to continued whaling over the long term.

5.121 These benefits provided to stakeholders are compelling evidence to support the conclusion that JARPA II is undertaken for one purpose – the continuation of Japanese whaling. Indeed, the need to continue whaling is the only plausible explanation for why Japan, one of the world’s leading nations in scientific research, continues to pursue a “scientific” whaling program that over the past 24 years has produced a paucity of results.

⁷⁶² See Chapter 3, Section III.E.

SECTION IV. GOOD FAITH IN THE APPLICATION OF ARTICLE VIII

5.122 In Chapter 4, Australia establishes Japan's obligation under international law to interpret and perform the provisions of the ICRW in good faith and provides content to that obligation.⁷⁶³ Japan's conduct in issuing permits under JARPA II allegedly pursuant to Article VIII is in breach of that obligation. First, the purposes for which Japan is granting special permits – as reviewed above – are inconsistent with those for which the provision was intended, and Japan is using Article VIII to circumvent its obligations under the Schedule to the ICRW. Secondly, the behaviour of Japan with respect to the IWC (as the authoritative institution with respect to implementation of the ICRW) reveals that Japan lacks the requisite good faith in its implementation of Article VIII.

A. JAPAN IS NOT APPLYING ARTICLE VIII IN ACCORDANCE WITH ITS INTENDED PURPOSE

5.123 JARPA II does not possess the four essential characteristics of a program for purposes of scientific research under Article VIII. Japan's continued pursuit of flawed "science" reveals that Japan's real purpose is a continuation of whaling operations, rather than *bona fide* scientific investigation. This is confirmed by the fact that investigation into the issues identified by Japan as aims or purposes of its program does not require large-scale lethal sampling.⁷⁶⁴

5.124 The failure to possess these four essential characteristics, in addition to the evidence provided in Section III of this Chapter, shows that Japan is utilising

⁷⁶³ See Chapter 4, Section II.A(4).

⁷⁶⁴ Mangel, *Expert Opinion*, paras. 5.27ff, Chapter 5, Section II.B.

Article VIII for purposes other than those for which it was intended.⁷⁶⁵ By continuing whaling “in one form or another”,⁷⁶⁶ Japan has sought to create a legal fiction to render legitimate that which would otherwise be unlawful. The principle *ex re sed non ex nomine* requires the Court to look to the real state of affairs, without attaching decisive importance to the legal denominations upon which Japan relies.⁷⁶⁷ In this case, the genuine state of affairs is a commercial whaling program, sustaining Japan’s pelagic whaling industry, and providing a continuing supply of whale meat to the market.⁷⁶⁸

5.125 Japan’s purported reliance on Article VIII for the purpose of continuing commercial whaling operations is an attempt to avoid or circumvent the obligations under the Schedule to the ICRW prohibiting commercial whaling operations. If a Contracting Government does not wish to be bound by an amendment to the Schedule agreed under Article V of the ICRW, it must object in the manner prescribed in that Article. The lodging of such an objection is the sole legal means of avoiding being bound by an amendment. Rather than exercising this legitimate right of objection, Japan instead seeks to rely on Article VIII as a means of circumventing its obligations under the Schedule, in particular the moratorium on commercial whaling, the Southern Ocean Sanctuary and the factory ship moratorium. Japan cannot purport to do so in good faith.

⁷⁶⁵ See definition of ‘*abus de droit*’, *Dictionnaire de la terminologie du droit international*, Chapter 4, Section II.A(4).

⁷⁶⁶ See Chapter 3, Section I.C.

⁷⁶⁷ *Cheng, General Principles of International Law*, 122.

⁷⁶⁸ See Section III of this Chapter; see also Chapter 6.

B. JAPAN'S BEHAVIOUR WITH RESPECT TO THE IWC REVEALS A LACK OF GOOD FAITH

5.126 Japan's interaction with the IWC in relation to its implementation of JARPA II reveals unreasonableness on Japan's part, in breach of the requirement of good faith. This is particularly relevant given the IWC's role as the established decision-making organ under the ICRW.⁷⁶⁹ Japan consistently refuses to acknowledge the views or recommendations of the IWC on its special permit operations and fails for the most part to act on those views. On the rare occasion when Japan does take these views of the IWC into account, its response is at most cursory. Any good faith implementation of an operation under Article VIII would have due regard to and respond to the views of the IWC, particularly those urging the cessation of the lethal elements of any program.

5.127 Further, Japan consistently has refused to comply with the IWC's procedural requirements for prior review of special permits, laid down in paragraph 30 of the Schedule to the ICRW.⁷⁷⁰ Amongst other matters, paragraph 30 requires Japan to provide the Secretary of the IWC with "proposed scientific permits before they are issued and in sufficient time to allow the Scientific Committee to review and comment on them". Japan has refused repeatedly to comply with this requirement during the course of JARPA II, by failing to provide proposed permits for review prior to the commencement of the lethal hunt.⁷⁷¹ In doing so, it has breached its obligation to give effect to the ICRW in good faith.

5.128 In its implementation of JARPA II, Japan has failed consistently to comply with the relevant *Guidelines* laid down by the IWC, and has ignored the repeated

⁷⁶⁹ See Chapter 4, Section II.B(1).

⁷⁷⁰ See Chapter 4, Section I.D.

⁷⁷¹ *JARPA II Special Permits* [Annexes 82 – 87].

significant concerns and criticisms expressed by the IWC.⁷⁷² A clear indication of Japan's refusal to acknowledge the views and recommendations of the IWC was the failure to await the outcome of the final review of JARPA before proceeding with JARPA II.⁷⁷³ This lack of compliance and refusal to acknowledge the views expressed by the IWC is further evidence of Japan's lack of good faith in the implementation of Article VIII of the ICRW.

⁷⁷² See Section II.C(2) of this Chapter.

⁷⁷³ See Section II.C(1) of this Chapter.

SECTION V. CONCLUSION

5.129 This Chapter has established that JARPA II does not fall within the exception in Article VIII of the ICRW, as it is not scientific research and it is conducted for a real purpose other than scientific research.

5.130 Rather than devising and implementing a program in accordance with the four essential characteristics of scientific research, Japan has subverted normal scientific process by commencing with a pre-determined method – whaling – and attempting to “retro-fit” a program to match. JARPA II does not aim to contribute to scientific knowledge on the conservation and management of whales; JARPA patently failed to do so. The reason Japan persists with JARPA II is that its actual purpose is to continue whaling; in so doing, Japan is driven by its business model and the economic and other benefits generated for stakeholders.

5.131 Such conduct is not justified by reference to Article VIII. In particular, in conducting JARPA II:

- (1) Japan purports to rely on Article VIII to support large-scale whaling on a regular basis, which is fundamentally inconsistent with Article VIII’s character as a strictly limited exception;
- (2) Japan objectively fails to meet the requirements of Article VIII, and the legality of its program cannot be saved by the legal fiction Japan has created through the issue of special permits;
- (3) Japan’s whaling does not possess the four essential criteria of a program for purposes of scientific research;
- (4) Japan’s purpose is not scientific research, but in fact the continuation of whaling; and

(5) By issuing special permits for a program that is intended to subvert the moratorium on commercial whaling, and by ignoring relevant IWC *Guidelines* as well as the significant concerns expressed by the IWC in relation to JARPA II, Japan is not acting in good faith.

5.132 This conclusion is more than sufficient to disqualify Article VIII of the ICRW from providing a justification or excuse for Japan's conduct in pursuing its "scientific" whaling program over 24 years despite no or negligible scientific results.

5.133 The position is no different if one invokes the language of rights. Article VIII is formulated in terms of a permission to do a specified thing with a specified consequence – it is an exemption from the provisions of the Convention. It simply says – against the background of the regime of the Convention as it has developed over time – that "any Contracting Government may grant to any of its nationals a special permit" in the circumstances specified in Article VIII. It would be more accurate to describe this as a facility or power as distinct from a right.

5.134 But nothing turns on this question of language. If in a treaty a State party is given the power to do something, notwithstanding the other provisions of the treaty, it can be said that the State has a right to do that thing. The right or power derives from the treaty and is conferred subject to the limitations expressed in or clearly implied by the treaty. In the present case, States parties must decide whether the potential licensee is to be "permit[ted] to kill, take and treat whales for purposes of scientific research" and for no other purpose. The very terms of the conferral of the right or power establish its limits. Article VIII is not a power to set aside the disciplines of the whaling regime at large.

5.135 Even if a Contracting Government is considered as exercising a right by issuing a permit under Article VIII, it cannot do so in circumstances where the

granting of the permit involves an abuse of right. As the Permanent Court said in the *Free Zones* case:

A reservation must be made as regards the case of abuses of a right, since it is certain that France must not evade the obligation to maintain the zones by erecting a customs barrier under the guise of a control cordon.⁷⁷⁴

5.136 Exactly the same thing can be said here. To evade the obligation to observe the moratorium by establishing a system of commercial whaling under the guise of a program of “scientific research” would equally be a breach of a treaty, in this case, the ICRW. In fact that is what Japan is doing, as demonstrated in this and preceding Chapters. If the Court prefers to conduct its analysis in terms of the rubric of abuse of rights, then there has been an abuse of rights in the present case.⁷⁷⁵

⁷⁷⁴ *Free Zones of Upper Savoy and the District of Gex*, P.C.I.J. Ser A/B, No. 46, 7 June 1932, 167.

⁷⁷⁵ On abuse of rights, see *Certain German Interests in Polish Upper Silesia German Interests Case (Merits), Part II: Speeches Made and Documents Read in Court*, Speech of German Agent, 17 February 1926, Morning Session, P.C.I.J. Ser C, 11-I, 136ff; *Barcelona Traction, Light and Power Company Limited (Belgium v. Spain)* [1970] ICJ Reports 1, 324; *Certain Questions of Mutual Assistance in Criminal Matters (Djibouti/France)*, I.C.J. Reports 2008, 229, para. 145; *United States – Import Prohibition of Certain Shrimp and Shrimp Products, Report of the Appellate Body*, (1999) 38 ILM 119, para. 158; Cheng, *General Principles of International Law*, 122-129; Villiger, *Commentary on the 1969 Vienna Convention on the Law of Treaties*, 367.

CHAPTER 6 – BREACH OF MORATORIA AND THE SOUTHERN OCEAN SANCTUARY

6.1 Chapter 2 established that the ICRW provides a comprehensive regime for the regulation of whaling and that, in so doing, it provides for three types of whaling:

- (1) aboriginal subsistence whaling;
- (2) whaling under special permit for purposes of scientific research; and
- (3) commercial whaling.

6.2 Chapter 5 established that JARPA II is not special permit whaling for scientific purposes. Nor is it aboriginal subsistence whaling. JARPA II therefore falls within the remaining category of whaling contemplated by the ICRW: commercial whaling.

6.3 In this Chapter, Australia establishes that Japan's whaling under JARPA II is in contravention of the commercial whaling moratorium, the Southern Ocean Sanctuary and the factory ship moratorium under the ICRW.

SECTION I. BREACH OF THE COMMERCIAL WHALING MORATORIUM

A. APPLICATION OF THE COMMERCIAL WHALING MORATORIUM

6.4 Paragraph 10(e) of the Schedule, adopted in 1982, imposes a moratorium on commercial whaling:

Notwithstanding the other provisions of paragraph 10, catch limits for the killing for commercial purposes of whales from all stocks for the 1986 coastal and the 1985/86 pelagic seasons and thereafter shall be zero.

6.5 Although Japan initially objected to this moratorium, it subsequently withdrew its objection with the result that the commercial whaling moratorium took effect for Japan from 1 May 1987.⁷⁷⁶

B. JAPAN'S CONTRAVENTION OF THE COMMERCIAL WHALING MORATORIUM

6.6 Under JARPA II Japan killed a reported total of 3,264 minke whales and 19 fin whales in the six whaling seasons from 2005/06 to 2010/11.⁷⁷⁷ Chapter 5 established that this killing is not for scientific purposes. Moreover, JARPA II is clearly not aboriginal subsistence whaling. Given the ICRW regime for whaling is comprehensive, the killing is therefore “for commercial purposes”, rendering Japan in breach of the moratorium.

6.7 The commercial purpose of Japan's whaling can, in any event, be discerned from the design, architecture and structure of JARPA II, the manner in

⁷⁷⁶ See Chapter 2 of this *Memorial*, Section II.D(1) and Chapter 3, Section I.C. The commercial whaling moratorium took effect for Japan on 1 May 1987 with respect to commercial pelagic whaling, on 1 October 1987 with respect to commercial coastal minke and Bryde's whaling and on 1 April 1988 with respect to commercial coastal sperm whaling: IWC Circular Communication RG/VJH/16129, “Withdrawal of Objection to Schedule Paragraph 10(e) by Japan”, 1 July 1986 enclosing Note from the Ambassador of Japan to the United Kingdom to the Secretary of the International Whaling Commission [Annex 54].

⁷⁷⁷ Chapter 3, Section II.B.

which it is implemented and its underlying aims.⁷⁷⁸ In particular, Japan's killing of whales under JARPA II: (1) is directed towards production, sale and distribution; (2) is directed towards providing economic use or benefit; (3) is conducted on a commercial scale; and (4) responds to market forces.

(1) JARPA II killing is directed towards production, sale and distribution

6.8 The Parties to CITES describe an activity as having a commercial purpose if it “is directed toward resale, exchange, provision of a service or any other form of economic use or benefit”.⁷⁷⁹ In the *Oil Platforms Preliminary Objection Judgment*, the Court has considered the term “commerce” to include “not merely the immediate act of purchase and sale, but also the ancillary activities integrally related to commerce”.⁷⁸⁰ Also, in the *Dispute Regarding Navigational and Related Rights (Costa Rica v. Nicaragua)*, the Court regarded certain activities precedent and antecedent to purchase and sale as taking place “for the purposes of commerce”.⁷⁸¹

6.9 The commercial nature of JARPA II is revealed by its involvement in and direction towards production, sale and distribution of whale meat. So-called

⁷⁷⁸ See, for example, the relevant case law of the WTO dispute settlement bodies, including *European Communities – Conditions for the Granting of Tariff Preferences to Developing Countries (DS 246)*, Panel Report, 1 December 2003, paras. 7.198–7.199 and the relevant practice of Parties to CITES, in particular, Resolution Conf. 5.10 (Rev. CoP15), *Definition of “primarily commercial purposes”*, adopted at the Fifth Meeting of the Conference of the Parties, Buenos Aires, Argentina, 22 April–3 May 1985 (“*CITES Conference Resolution 5.10*”).

⁷⁷⁹ *CITES Conference Resolution 5.10*.

⁷⁸⁰ *Case Concerning Oil Platforms (Islamic Republic of Iran v. United States of America), Preliminary Objection, Judgment*, 12 December 1996, *I.C.J. Reports 1996*, 803, 819, para. 49; *Case Concerning Oil Platforms (Islamic Republic of Iran v. United States of America), Judgment*, 6 November 2003, *I.C.J. Reports 2003*, 161, 200, para. 80.

⁷⁸¹ *Case Concerning the Dispute Regarding Navigational and Related Rights (Costa Rica v. Nicaragua), Judgment*, 13 July 2009, 31, para. 73.

“scientific” whaling is undertaken to produce whale meat, sales of which sustain ongoing operations and ensure the economic survival of key participants in the industry. Whale meat is processed on board the *Nisshin-Maru* and then, pursuant to Government regulations and arrangements between the Institute of Cetacean Research and its Sales Agents, is on-sold and distributed to the market and to other consumers.⁷⁸² Authorised sales and distribution channels of whale meat are set out in Figure 8.⁷⁸³ Japan characterises its distribution of whale meat as being directed towards “public interest purposes” (such as schools, hospitals and public education initiatives) or towards “commercial purposes”, including wholesale and local markets, wholesale merchants, mass retailers, restaurants and other consumers and distributors.⁷⁸⁴ Consistent with the economic reliance of “scientific” whaling on whale meat sales revenue, the Government, the Institute of Cetacean Research, Kyodo Senpaku and other stakeholders devote significant efforts to creating and sustaining markets for whale meat in Japan.

(2) JARPA II killing is directed towards providing economic use and benefit

6.10 The Parties to CITES describe an activity as “commercial” if “its purpose is to *obtain economic benefit*...and is directed toward resale, exchange, provision of a service *or any other form of economic use or benefit*” [emphasis added].⁷⁸⁵

6.11 Japan’s so-called “scientific” whaling continues to sustain its pelagic whaling industry and provides a range of important economic benefits or uses to the industry and key stakeholders. “Scientific” whaling sustains the industry and provides the major source of income for both Kyodo Senpaku and the Institute of

⁷⁸² See Chapter 3, Section II.C.

⁷⁸³ Figure 8 – Whale Meat Sales Distribution Chain: Chapter 3, Section II.C.

⁷⁸⁴ See Chapter 3, Section II.C.

⁷⁸⁵ *CITES Conference Resolution 5.10.*

Cetacean Research. The business model which underpins Japan's "scientific" whaling – whereby funding for JARPA II derives from the sale of its "by-product", whale meat – creates and perpetuates an economic imperative for undertaking lethal methods of "research". By economic necessity, both Kyodo Senpaku and the Institute of Cetacean Research are compelled to continue whaling as their viability depends on revenue from whale meat production and sales.⁷⁸⁶ Indeed, continuing Japan's whaling and perpetuating its pelagic whaling industry were the reasons Japan commenced so-called "scientific" whaling in the Southern Ocean in 1988.⁷⁸⁷ This whaling has supported the industry and enabled Japan's pelagic whaling fleet to continue its operations without interruption since then.

6.12 Japan's "scientific" whaling also maintains the industry's pelagic whaling capacity and skills over the long term.⁷⁸⁸ The entities that undertake Japan's "scientific" whaling are in essence a continuation of Japan's commercial pelagic whaling industry which existed prior to 1987. In particular, Kyodo Senpaku is the successor company to Kyodo Hogeï, Japan's main commercial pelagic whaling company until 1987, and many of the assets, staff, and directors of Kyodo Hogeï were transferred directly to Kyodo Senpaku in 1987.⁷⁸⁹ The Institute of Cetacean Research was also a key participant in the whaling industry before being constituted in its current form in 1987.⁷⁹⁰ As revealed by a scientist involved in developing and implementing JARPA, Dr Toshio Kasuya, Japan established Kyodo Senpaku and the Institute of Cetacean Research in order to sustain the capacity of its pelagic whaling industry and to maintain the possibility of

⁷⁸⁶ See Chapter 3, Section III.A.

⁷⁸⁷ See Chapter 3, Section I.C.

⁷⁸⁸ See Chapter 3, Section III.D.

⁷⁸⁹ See Chapter 3, Section II.A(1).

⁷⁹⁰ See Chapter 3, Section II.A(2).

re-establishing authorised commercial whaling operations in the future.⁷⁹¹ Both Kyodo Senpaku and the Institute of Cetacean Research carry out the same activities as their predecessors and remain commercial in nature. Heads of both entities have continued to highlight publicly the importance of “scientific” whaling in maintaining their industry’s skills and technologies.⁷⁹²

6.13 “Scientific” whaling generates a continued supply of whale meat within Japan. As a former head of the Institute of Cetacean Research argued, “[s]cientific whaling supports and advances a culture of whale cuisine through the supply of by-products from its research”.⁷⁹³ It has also provided whale meat directly to key stakeholders such as government officials and employees of key participants in the whaling industry.⁷⁹⁴ Following the 2009/10 JARPA II whaling season, for example, some 1.7 tonnes of whale meat was distributed among crew members from Kyodo Senpaku.⁷⁹⁵ Clearly, the benefits that so-called “scientific” whaling provide to Japan’s pelagic whaling industry and to a close group of stakeholders provide strong reasons for Japan’s continuation of this whaling despite the absence of any meaningful scientific results after over two decades of “research”.⁷⁹⁶

⁷⁹¹ “Considering the Whaling Problem”, *Ecosophia* 16 (2005) 56, 61 [Annex 76]; see further, Chapter 3, Section III.D.

⁷⁹² See Chapter 3, Section III.D.

⁷⁹³ *Ohsumi, Half a Century in Pursuit of the Whale*, 158 [Annex 78].

⁷⁹⁴ See Chapter 3, Section II.C.

⁷⁹⁵ Kyodo Senpaku, “Production and handling of gifts and dispensations of meat from the 23rd Antarctic Ocean Cetacean Capture Program”, (Press Release, 11 May 2010) at Japan Whaling Association website, <<http://whaling.jp/press/press100511.html>> on 9 March 2011 [Annex 124].

⁷⁹⁶ See Chapter 5, Section I.A. and Section II.

(3) JARPA II killing is conducted on a commercial scale

6.14 The Parties to the *Convention for the Conservation of Antarctic Seals*⁷⁹⁷ have accepted that the term “commercial sealing” applies to circumstances where the number of seals taken exceeds what “could reasonably be required” for a take under the special permit provisions of that Convention.⁷⁹⁸

6.15 The scale of take under JARPA II is patently commercial. The number of whales taken by Japan under so-called “scientific” whaling programs since 1987 far exceeds the number of whales taken under special permit by any other Contracting Government to the IWC since 1946, and is well in excess of any “scientific” program adopted by Japan before 1987. Indeed, Japan has taken approximately 93.5% of all whales killed under special permit since the commercial whaling moratorium was adopted.⁷⁹⁹ The number of whales targeted each year by Japan rose progressively throughout the 18-year duration of JARPA, from 300 to a maximum of 440 minke whales. Under JARPA II this was increased considerably to a maximum of 935 minke whales, 50 fin whales and 50 humpback whales.⁸⁰⁰ These levels of take under both JARPA and JARPA II can only be consistent with commercial scale whaling.

6.16 As set out in Chapter 5, Japan has provided no cogent scientific rationale for the scale of its takes under either JARPA or JARPA II.⁸⁰¹ The only plausible explanation for Japan’s target catches is that they are in fact driven by commercial considerations. Pursuant to the “scientific” whaling business model, revenue from

⁷⁹⁷ *Convention for the Conservation of Antarctic Seals*, 1 June 1972, Cmnd. 7209 Treaty Series 45 (1978) (entered into force 11 March 1978).

⁷⁹⁸ Report of the 1988 Meeting to Review the Operation of the Convention for the Conservation of Antarctic Seals, London, 12-16 September, para. 29.

⁷⁹⁹ See Chapter 2, Section II.D(2).

⁸⁰⁰ See Chapter 3, Section II.B.

⁸⁰¹ See Chapter 5, Section II.B(4).

the sale of whale meat “by-products” funds ongoing operations, with the scale of target catches intended to enable these operations to be largely self-funded. Indeed, this was one of the central requirements for “scientific” whaling stipulated by the Government of Japan as early as 1984 when it first directed a small group to devise a “research” program that “will allow the whaling of a sufficient number of whales to cover costs”.⁸⁰² In 1987, Japan’s pelagic whaling industry had judged that an operation involving catches of 825 minke whales would be self-sustainable,⁸⁰³ and while political pressure led Japan to subsequently reduce its target catches under JARPA,⁸⁰⁴ the official target under JARPA II is now up to 935 minke whales, above the original proposed number of 825 minke whales.

6.17 By more than doubling its target catches under JARPA II, Japan has provided opportunity for its whalers to catch more whales and maximise revenue. At the same time, the industry together with the Government intensified their efforts to promote demand for whale meat in Japan, in an attempt to ensure that consumption rose in accordance with increased production. It was envisaged, for example, that a new company established in 2006 (Geishoku Rabo) would sell and distribute large amounts of whale meat by opening new sales channels alongside those of Kyodo Senpaku.⁸⁰⁵ Japan’s efforts to promote whale meat have failed to lift consumption appreciably and, driven by persistently weak demand, Japan has now lowered actual catches to be closer to those it took under JARPA. These catches remain far in excess of any take which could reasonably be required for scientific research. Indeed, as set out in Chapter 5, no lethal take

⁸⁰² “Debate: Pros and Cons of Scientific Whaling”, *Mainichi Shimbun*, 3 October 2005, 3 [column by T Kasuya] [Annex 129].

⁸⁰³ See Chapter 3, Section I.D.

⁸⁰⁴ See Chapter 3, Section I.D.

⁸⁰⁵ See Chapter 3, Section III.B.

is required to achieve Japan's objectives.⁸⁰⁶ It is clear that whale meat is not a so-called "by-product" of "research", but is in fact the intended product of a commercial whaling operation.

(4) JARPA II killing is driven by market forces

6.18 In submissions to the IWC, Japan has stated:

[T]he distinction between subsistence and commercial activities are to be sought in the degree to which market forces, as opposed to essentially non-market forces, determine the purpose and extent of the economic activity... Market forces, involving such strictly economic factors as maximising financial profitability and competitive economic advantage (increased market share) do not apply to subsistence activities.⁸⁰⁷

The same is true of the distinction between scientific and commercial purposes.

6.19 Japan's implementation of JARPA II is distinguished by its responsiveness to market forces. There has been a marked decline in demand for whale meat in Japan, with Japanese people now consuming less than one serve per person per year.⁸⁰⁸ After increasing its catch targets under JARPN II and, particularly, under JARPA II, Japan has been unable to sell all the whale meat produced in its "scientific" whaling operations and several thousand tonnes of whale meat (around 5,500 tonnes as of October 2010) are now stored in large freezers across Japan.⁸⁰⁹

⁸⁰⁶ See Chapter 5, Section II.B(3).

⁸⁰⁷ Government of Japan, "A Critical Evaluation of the Relationship between Cash Economies and Subsistence Activities", 1992, IWC/44/SEST5 233 [Annex 103].

⁸⁰⁸ T Miyazaki, "So That's Why! Economics: Marketing Power-up, Boosting Excess Consumption at Pubs and School Lunches", *Yomiuri Shimbun*, 5 September 2006 (morning edition), 11 [Annex 133].

⁸⁰⁹ J Sakuma, "Rapidly rising whale meat stockpiles and the emergence of hidden reserves: Freezers excluded from official statistics and Icelandic fin whale meat", *IKA-NET News* 47, January 2011 [Annex 81]; see also Chapter 3, Section III.C(1).

6.20 In response to declining demand for whale meat, Japan's whaling industry, together with the Government of Japan, has worked assiduously to promote whale meat consumption by lowering prices and conducting extensive whale meat marketing campaigns. Despite its purported role as a "scientific" body, the Institute of Cetacean Research has devoted significant resources to this whale meat promotion. As recently as January 2011, the Institute of Cetacean Research, Kyodo Senpaku and the Japan Whaling Association announced a suite of further measures to be taken to promote and strengthen whale meat sales.⁸¹⁰

6.21 As well as seeking to increase whale meat sales, Japan has lowered its actual catches under JARPA II to well below its official targets. Reduced catches and production of whale meat has limited the costs for freezer storage of additional whale meat. The Government of Japan admitted publicly that its actual catches are driven by whale meat sales, when a senior official stated in 2008 that the prospect of additional whaling to make up the previous year's "short-fall" would depend on sales outcomes.⁸¹¹ The Government also has admitted, in a statement by the Minister for Agriculture, Forestry and Fisheries in April 2010, that Japan has adopted confidential catch limits that are well below the official publicly announced targets. The Minister revealed that the catch in the 2009/10 whaling season (506 whales) was "approximately the number we had planned",⁸¹² despite the official target being 850 minke whales, and up to 935 minke whales.

6.22 Japan's deliberate decision to lower its catches, and therefore its whaling fleet's operating costs, is reflected in the reduction in the size of the fleet in the

⁸¹⁰ "Three whaling-related organisations: Promoting Whale Meat by Strengthening the Sales Structure", *Minato Shimbun*, 24 January 2011, 6 [Annex 152].

⁸¹¹ Government of Japan, Administrative Vice-Minister, Ministry of Agriculture, Forestry and Fisheries (T Shirasu), Transcript of Press Conference, 14 April 2008 [Annex 106].

⁸¹² Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 6, 7 April 2010, Speaker: 13/76 (Hirofumi Akamatsu, Minister for Agriculture, Forestry and Fisheries) [Annex 97].

2010/11 whaling season (from six vessels two years earlier to just four vessels) and the shortened duration of that season.⁸¹³ This reduction in the fleet's capacity limits any real prospect that it would in fact be able to achieve Japan's official targets.

6.23 The fact that Japan has lowered its actual catches under JARPA II in response to declining demand for whale meat, while continuing and strengthening efforts to promote whale meat consumption, evidences the predominant influence of market forces – rather than purported “scientific” objectives – over the program.

⁸¹³ See Chapter 3, Section III.C(3).

SECTION II. BREACH OF THE SOUTHERN OCEAN SANCTUARY

A. APPLICATION OF THE SOUTHERN OCEAN SANCTUARY

6.24 In 1994, the Commission adopted paragraph 7(b) of the Schedule, establishing the Southern Ocean Sanctuary. Paragraph 7(b) provides in relevant part:

In accordance with Article V(1)(c) of the Convention, *commercial whaling*, whether by pelagic operations or from land stations, *is prohibited in a region designated as the Southern Ocean Sanctuary*. This Sanctuary comprises the waters of the Southern Hemisphere southwards of the following line: starting from 40 degrees S, 50 degrees W; thence due east to 20 degrees E; thence due south to 55 degrees S; thence due east to 130 degrees E; thence due north to 40 degrees S; thence due east to 130 degrees W; thence due south to 60 degrees S; thence due east to 50 degrees W; thence due north to the point of beginning. This prohibition applies irrespective of the conservation status of baleen and toothed whale stocks in this Sanctuary, as may from time to time be determined by the Commission. [emphasis added]

6.25 Japan objected to the application of paragraph 7(b) to the extent that it related to the commercial whaling of minke whales. While that objection remains in force, Japan did not object to the application of paragraph 7(b) to any other baleen or toothed whale species.⁸¹⁴ Accordingly, the Southern Ocean Sanctuary applies to Japan in respect of its whaling for the other two species of whales targeted under JARPA II—fin and humpback whales.

6.26 The commercial whaling activity prohibited within the Southern Ocean Sanctuary is the same as that prohibited under the commercial whaling moratorium. While the language used in paragraph 7(b) of the Schedule (“commercial whaling”) is not identical to that of paragraph 10(e) (“killing [whales] for commercial purposes”), these are simply two ways of describing the same activity. Both prohibitions regulate the same category of whaling under the ICRW – commercial whaling.

⁸¹⁴ See Chapter 2, Section II.F.

B. JAPAN'S CONTRAVENTION OF THE SOUTHERN OCEAN SANCTUARY

6.27 Japan has taken 19 fin whales in the course of JARPA II to date.⁸¹⁵ Although Japan has not yet taken any humpback whales, it has not revised the JARPA II proposal to remove humpback whales as one of its target species. The special permits issued by Japan under JARPA II each year authorise the take of humpback whales.⁸¹⁶

6.28 Figure 5 demonstrates the areas in which Japan has conducted its whaling under JARPA II (as under JARPA), as well as the outline of the Southern Ocean Sanctuary; the figure shows that JARPA II has been conducted entirely within the Southern Ocean Sanctuary.⁸¹⁷

6.29 As Japan's hunting of fin whales under the program is conducted entirely within the Southern Ocean Sanctuary, it is contrary to paragraph 7(b) of the Schedule to the ICRW. Moreover, any take by Japan of humpback whales as planned under JARPA II would similarly contravene Japan's obligations under paragraph 7(b) of the Schedule.

⁸¹⁵ Figure 6 – Whales Killed Under JARPA and JARPA II: Chapter 3, Section II.B.

⁸¹⁶ *JARPA II Special Permits* [Annexes 82 to 87].

⁸¹⁷ Figure 5 – Japan's Areas of Whaling Operations under JARPA II: Chapter 3, Section II.B.

SECTION III. BREACH OF THE FACTORY SHIP MORATORIUM

A. OUTLINE AND APPLICATION OF THE FACTORY SHIP MORATORIUM

6.30 Paragraph 10(d) of the Schedule, inserted in 1979, establishes the factory ship moratorium:

Notwithstanding the other provisions of paragraph 10 there shall be a moratorium on the taking, killing or treating of whales, except minke whales, by factory ships or whale catchers attached to factory ships. This moratorium applies to sperm whales, killer whales and baleen whales, except minke whales.

6.31 Fin and humpback whales, two of the species targeted under JARPA II, are both species of baleen whales⁸¹⁸ to which the factory ship moratorium applies. As noted above, Japan has taken 19 fin whales under JARPA II and it has authorised the taking of humpback whales. JARPA II breaches the factory ship moratorium if it involves the “taking, killing or treating” of fin or humpback whales by “factory ships or whale catchers”.

6.32 The term “factory ship” is defined in Article II(1) of the ICRW as “a ship in which or on which whales are treated either wholly or in part”. The *Nisshin-Maru*, which Japan describes as the “research base vessel” for JARPA II, is a “factory ship” within the meaning of the Convention. Whales killed under JARPA II are processed on board the *Nisshin-Maru*, including by being cut up into whale meat products intended for subsequent sale and distribution.⁸¹⁹

6.33 The term “‘whale catcher’ means a ship used for the purpose of hunting, taking, towing, holding on to, or scouting for whales”.⁸²⁰ The so-called “sighting and sampling vessels” used in JARPA II fall squarely within this definition as they are used to hunt, harpoon and kill whales and then to tow them to the

⁸¹⁸ Schedule, paragraph 1(A); see also Chapter 2, Section IV.

⁸¹⁹ See Chapter 3, Section II.B.

⁸²⁰ ICRW, Article II(3).

Nisshin-Maru for processing. The photographs reproduced in Chapter 3 show the process occurring in practice.⁸²¹ By operating in conjunction with the *Nisshin-Maru*, these whale catchers are also “attached” to a factory ship within the meaning of the factory ship moratorium.

B. JAPAN’S CONTRAVENTION OF THE FACTORY SHIP MORATORIUM

6.34 Through the use of its factory ship and whale catchers for the taking, killing and treating of fin whales in the 2005/06, 2006/07, 2008/09, 2009/10, and 2010/11 whaling seasons, Japan has repeatedly breached the factory ship moratorium in paragraph 10(d) of the Schedule. Any take by Japan of humpback whales as planned under JARPA II would likewise contravene Japan’s obligations under paragraph 10(d) of the Schedule.

SECTION IV. CONCLUSIONS

6.35 Japan’s whaling under JARPA II is commercial whaling within the meaning of the ICRW. This whaling is contrary to the commercial whaling moratorium in paragraph 10(e) of the Schedule and, in respect of the take of fin whales, is also contrary to the factory ship moratorium under paragraph 10(d) and constitutes a breach of the Southern Ocean Sanctuary under paragraph 7(b).

⁸²¹ See Chapter 3, Section II.B.

CHAPTER 7 - REMEDIES

7.1 This *Memorial* has demonstrated that Japan has violated its international obligations in proposing and implementing JARPA II in the Southern Ocean. As set out in the *Articles on Responsibility of States for Internationally Wrongful Acts* adopted by the International Law Commission: “Every internationally wrongful act of a State entails the international responsibility of that State.”⁸²² This Chapter outlines the remedies sought by Australia as a consequence of the internationally wrongful acts committed by Japan. These remedies consist of:

- (1) a declaration that JARPA II is not a program for purposes of scientific research within the meaning of Article VIII of the ICRW and a declaration of Japan’s violations of its obligations under the ICRW; and
- (2) an order requiring the cessation of the internationally wrongful acts that continue to be committed by Japan.

7.2 The specific remedies requested by Australia are set out in the formal Submissions below.

SECTION I. DECLARATION OF THE COURT

7.3 Australia requests the Court to adjudge and declare that Japan, in proposing and implementing JARPA II in the Southern Ocean, is not conducting whaling for purposes of scientific research, and is, therefore in breach of its

⁸²² *Articles on Responsibility of States for Internationally Wrongful Acts*, adopted by the International Law Commission at its fifty-third session (2001), Article I, annexed to General Assembly Resolution 56/83, 12 December 2001 (“*Articles on State Responsibility*”).

international obligations under the ICRW as particularised in Chapter 6 of this *Memorial*.

7.4 As noted by the Court in the *Northern Cameroons Case*, “[t]hat the Court may, in an appropriate case, make a declaratory judgment is indisputable.”⁸²³ In the present dispute, a declaration as to the wrongfulness of Japan’s conduct is essential to ensure that any future whaling purportedly conducted under Article VIII is conducted in compliance with the comprehensive regime for the regulation of whaling established by Contracting Governments under the ICRW.

7.5 Such a declaration by the principal judicial organ of the United Nations will amount to a final determination of the proper application of the Article VIII exception. As such, it will oblige Japan to cease implementation of its so-called “scientific” whaling program in the Southern Ocean, or any other form of special permit whaling which is not for purposes of scientific research within the meaning of Article VIII, until it is brought into conformity with Japan’s international law obligations.

7.6 In particular, the Court is requested to adjudge and declare that Japan has violated its international obligations to:

- (a) observe the zero catch limit in relation to the killing of whales for commercial purposes (paragraph 10(e), Schedule to the ICRW);
- (b) refrain from undertaking commercial whaling of fin whales in the Southern Ocean Sanctuary (paragraph 7(b), Schedule to the ICRW);
and
- (c) observe the moratorium on taking, killing or treating of whales, except minke whales, by factory ships or whale catchers attached to factory ships (paragraph 10(d), Schedule to the ICRW).

⁸²³ *Case concerning the Northern Cameroons (Cameroon v. United Kingdom), Preliminary Objections, Judgment of 2 December 1963, I.C.J. Reports 1963, 37.*

SECTION II. DUTY OF CESSATION

7.7 As a consequence of the determination of Japan's unlawful conduct, as set out above, Japan is obliged to cease all internationally wrongful conduct which has a continuing character. Australia respectfully requests the Court to make an Order to that effect.

7.8 The obligation to cease internationally wrongful acts having a continuing character has been recognised by the Court. For example, in the *Military and Paramilitary Activities in and against Nicaragua Case*, the Court determined that:

[T]he United States of America is under a duty immediately to cease and refrain from all such acts as may constitute breaches of the foregoing legal obligations.⁸²⁴

7.9 This obligation is reflected also in Article 30(a) of the *Articles on State Responsibility*: “The State responsible for the internationally wrongful act is under an obligation...to cease that act, if it is continuing”. The commentary to that Article provides as follows:

The Tribunal in the Rainbow Warrior arbitration stressed ‘two essential conditions intimately linked’ for the requirement of cessation of wrongful conduct to arise, ‘namely that the wrongful act has a continuing character and that the violated rule is still in force at the time in which the order is issued’. While the obligation to cease wrongful conduct will arise most commonly in the case of a continuing wrongful act, article 30 also encompasses situations where a State has violated an obligation on a series of occasions, implying the possibility of further repetitions. The phrase ‘if it is continuing’ at the end of subparagraph (a) of the article *is intended to cover both situations*.⁸²⁵
[emphasis added]

7.10 With reference to the first situation covered by Article 30(a) – a continuing wrongful act – Japan continues with JARPA II, including through the annual issue of special permits for the conduct of whaling in the Southern Ocean. Indeed,

⁸²⁴ *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America)*. Merits, Judgment, I.C.J. Reports 1986, 14, 149, *dispositif* para. 12.

⁸²⁵ United Nations, *Report of the International Law Commission on the Work of its Fifty-third Session*, GAOR, Fifty-sixth Session, Supplement No. 10, UN Doc. A/56/10, 2001, 216.

JARPA II has no stated end date. Accordingly, Japan continues to violate the obligations enumerated above in proposing and implementing JARPA II.

7.11 With reference to the second situation contemplated by Article 30(a) – violation of obligations on successive occasions – in proposing and implementing JARPA, JARPA II and other special permit whaling programs, Japan has repeatedly violated its obligations under the ICRW, thus implying the possibility of further repetitions.

7.12 Australia respectfully requests the Court to order that Japan is obliged to refrain from authorising or implementing any special permit whaling which is not for purposes of scientific research within the meaning of Article VIII.

SUBMISSIONS

1. For the reasons given in this *Memorial*, and reserving the right to supplement, amplify or amend the present submissions, Australia requests the Court to adjudge and declare that Japan is in breach of its international obligations in authorising and implementing JARPA II in the Southern Ocean.

2. In particular, the Court is requested to adjudge and declare that, by its conduct, Japan has violated its international obligations to:
 - (a) observe the zero catch limit in relation to the killing of whales for commercial purposes;
 - (b) refrain from undertaking commercial whaling of fin whales in the Southern Ocean Sanctuary; and
 - (c) observe the moratorium on taking, killing or treating of whales, except minke whales, by factory ships or whale catchers attached to factory ships.

3. Further, the Court is requested to adjudge and declare that JARPA II is not a program for purposes of scientific research within the meaning of Article VIII of the *International Convention for the Regulation of Whaling*.

4. Further, the Court is requested to adjudge and declare that Japan shall:
 - (a) refrain from authorising or implementing any special permit whaling which is not for purposes of scientific research within the meaning of Article VIII;

- (b) cease with immediate effect the implementation of JARPA II; and
- (c) revoke any authorisation, permit or licence that allows the implementation of JARPA II.

W. M. Campbell
Agent of Australia
5 May 2011

CERTIFICATION

I certify that the annexes are true copies of the documents referred to and that the translations provided are accurate.

W. M. Campbell
Agent of Australia
5 May 2011

Appendix 1: W de la Mare, N Kelly, D Peel, *Antarctic Baleen Whale Populations*
(April 2011)

Antarctic Baleen Whale Populations

William de la Mare, Natalie Kelly, David Peel

April 2011

The Authors

Dr William de la Mare is a research scientist specialising in marine ecosystem analysis, integrated management of marine species, and statistical and numerical modelling. Dr de la Mare has specialised in developing management methods for marine living resources, and has extensive experience in developing statistical methods for scientifically assessing marine mammals and fish. Through his work on a revised management procedure for the International Whaling Commission, Dr de la Mare pioneered the use of simulation as a means for developing management policies and evaluating their potential performance.

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Dr David Peel is part of the CSIRO group that is working within AMMC to provide statistical modelling and analysis expertise. His background has mainly been within the area of fisheries science; quantifying species abundance and spatial-temporal distribution from aerial and/or sea based line-transect surveys, tag mark-recapture or genetic methods. Dr Peel has active research interests in model based survey design, spatial modelling, distance sampling, survey technology and state-space modelling.

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1. INTRODUCTION

1.1. The purpose of this paper is to provide a summary of current knowledge on the effects of whaling on Southern Hemisphere Antarctic baleen whale populations which have been subject to commercial or scientific whaling. Historical and current population abundance information (so far as it is reliably known) is provided with respect to each whale species so as to provide context for the whaling effect summaries.⁸²⁶

1.2. This paper is based on information that has broad acceptance within the Scientific Committee of the International Whaling Commission (IWC). The most important source of data for the estimation of current abundance of Antarctic baleen whales is a series of surveys carried out under the IWC's International Decade of Cetacean Research (IDCR) and Southern Ocean Whale and Ecosystem Research (SOWER) programs. These programs were overseen by the IWC Scientific Committee and involved a multinational scientific collaboration, including participation by Japan. It is important to note, however, that these programs are entirely independent of the Japanese Whale Research Program Under Special Permit in the Antarctic (JARPA) and its second phase (JARPA II).

1.3. The review covers those species designated to be taken under JARPA II, that is: Antarctic fin, humpback and minke whales. Antarctic blue whales are also included to provide context and information for the similarly exploited fin whale, about which very little is known. These four species belong to the group of species commonly known as rorquals.⁸²⁷ Apart from their inclusion in summary catch statistics, Southern Hemisphere sei whales and pygmy blue whales are not considered in detail here because they are found predominantly to the north of the South Polar Front which is usually considered to be the northerly extent of the Antarctic marine ecosystem (Knox 1970).

1.4. Information on trends in historic abundance of Antarctic baleen whales derives from the application of the IWC Scientific Committee's agreed population models.

⁸²⁶ In this paper the term abundance is synonymous with absolute abundance, unless otherwise qualified. Absolute abundance refers to the total number of animals in a population, after excluding those animals too small to be taken by commercial whaling. Occasionally reference is made to relative abundance, which is an index used to monitor a population's rate of increase or decrease.

⁸²⁷ Rorquals have a series of grooves in the skin running from below the mouth along the underside. These grooves allow the mouth to expand immensely when feeding.

1.5. Due to significant concerns arising from the Scientific Committee's review of their fundamental design and data analysis methods, this paper does not make use of estimates of abundance derived from JARPA or JARPA II. These concerns are discussed in detail in Section 2.3.2.

1.6. Following this introduction, the structure of this paper is as follows:

1.7. Section 2 provides general background information regarding the IWC Management Areas together with a brief explanation of the terminology and scientific concepts referred to throughout this paper. This includes a discussion of the problems with abundance estimates derived from JARPA and JARPA II data and an explanation of why these estimates do not form part of this paper's analysis.

1.8. Sections 3 to 6 provide an analysis of the effect of whaling on each of the relevant whale species targeted by JARPA II (in addition to Antarctic blue whales) by reference to factors such as general commercial and other whaling history, JARPA and JARPA II whaling history, stock structure, current population status and past and ongoing management issues.

1.9. Section 7 provides conclusions about the effect of whaling upon each of the relevant whale species and provides estimates of the current populations.

2. BACKGROUND INFORMATION

2.1. IWC MANAGEMENT AREAS

2.1. IWC Management Areas are important in this review because they delineate the regions of the Southern Ocean in which current and historic whale abundances have been estimated. The abundance of whales over time can be calculated by configuring a mathematical population model (further explained below in section 2.4) so that it accords with recent estimates of the number of whales in each Management Area. These calculations assumed that each Management Area contains a separate stock of whales and that the historic catch is known for each Area. The validity of these assumptions will be discussed in the sections below for each species.

2.2. According to the Schedule to the International Convention for the Regulation of Whaling (“the Convention”),⁸²⁸ stock boundaries for Southern Hemisphere baleen whales (excluding Bryde’s whales⁸²⁹) are specified by six Areas, I-VI; see Figure 1. Each of these six Areas stretch from the Equator to the coast of Antarctica delineated by meridians of longitude. Although these boundaries were not adopted by the IWC until the 1974/75 season, they had been used in the scientific literature for decades prior (Donovan 1991). A version of these boundaries was defined in the 1930s by Norwegian scientists, using catch positions of whales and positions of whaling vessels from Norwegian pelagic whaling records. Based on the geographical clustering of these predominantly blue and fin whale records, five ‘Areas’ were identified. The boundaries were further developed in the early 1940s when humpback catch, sighting and marking data were studied (Mackintosh 1942). Mackintosh concluded that the existing Areas accounted for putative stock or group differences in humpback whales in the Southern Ocean, and that the Areas also seemed to account for their north-south migrations between breeding and feeding grounds. Another Area, VI, was also added by Mackintosh. At the time Mackintosh published his paper on the stock boundaries it was recognised that there was no way of knowing whether the Areas accounted for migration and breeding areas of fins and blue whales (Donovan 1991). Subsequent reviews failed to develop a more appropriate area delineation system (Donovan 1991).

⁸²⁸ The Schedule is updated by the Commission annually and contains the IWC regulations concerning whaling operations (definitions, catch limits, seasons etc.).

⁸²⁹ In the Southern Hemisphere, the six Management Areas were not used for Bryde’s whales; this species does not migrate to Antarctic waters (Donovan 1991).

2.3. In summary, the Antarctic Management Areas are unlikely to delineate separate whale stocks. They survive simply because of a lack of alternatives. They are also linked to management approaches that are no longer in use. The IWC's Revised Management Procedure does not require the delineation of Management Areas that contain separate whale stocks (IWC 1994).

2.2. ASSESSING BREEDING STOCKS

2.4. Assessing the status of a breeding stock requires information on the distribution and movements of whales so that historical catches can be accurately assigned to each breeding stock (IWC 2010c; Annex H). Much of what is known about the distribution and movements of whales is based on historical catch data and 'Discovery' marks (Rayner 1940; Chittleborough 1959; Dawbin 1959; Chittleborough 1965; Dawbin 1966; Paton and Clapham 2006). Discovery marks are uniquely numbered metal cylinders that were fired into a whale at a known location, to be recovered at a later time if the whale was caught and processed. More recently genetic methods have been applied to improve the understanding of breeding stocks (Baker 1998; Anderson *et al.* 2010), as well as photo identification (Garrigue and Gibb 2007; Burns 2010) and satellite tagging (Dalla Rosa 2008; Lagerquist *et al.* 2008; Gales 2009; Gales 2010).

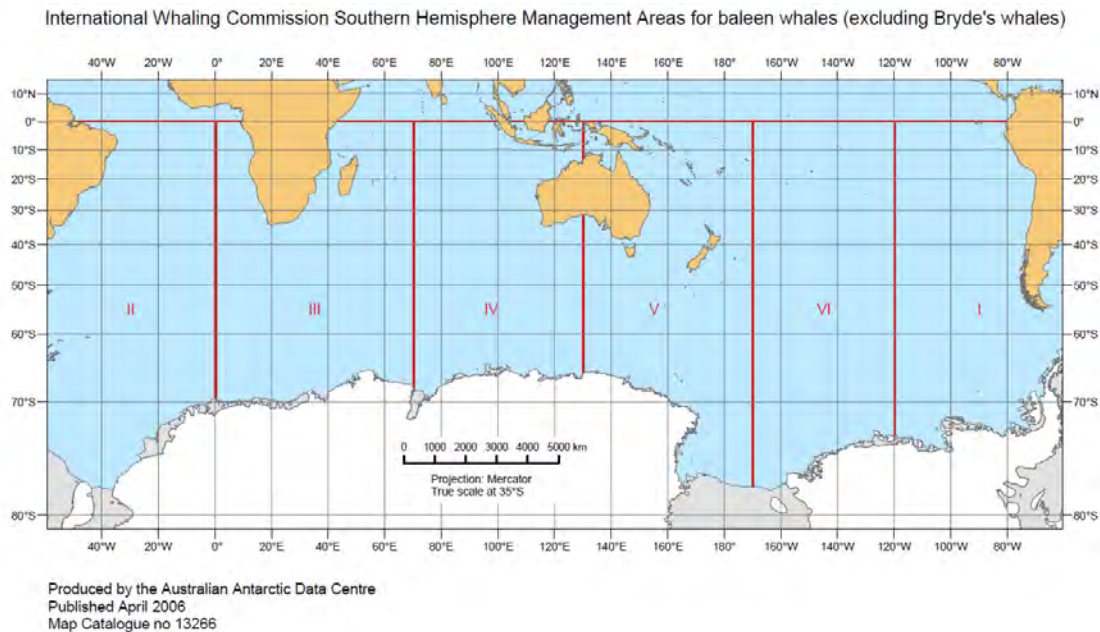


Figure 1. Southern Hemisphere baleen whale Management Areas (see IWC (1980), p582 for more details).

2.3. POPULATION ABUNDANCE ESTIMATES

2.5. Absolute abundance is estimated using sightings surveys. Sightings surveys involve counting the number of whales in a given area (that is density of whales in numbers per square kilometre) and scaling that density to the total area defined as containing the population. For example, if a survey covered 1% of the range of the population in a management area and encountered 100 whales, the population would be estimated to comprise 10,000 whales.

2.6. The class of methods used to estimate whale density in the IWC is known as line transect theory or distance sampling (Buckland *et al.* 1993). Whale density is estimated by sailing a ship (or in some instances flying an aircraft) along a predetermined route. Each leg of the predetermined route is in principle meant to be a random sample from all of the possible routes that could be used to cover the area being surveyed. Thus, surveys can be designed so that every whale should have an equal probability of being counted.

2.7. Counting the whales that someone sees is not difficult. The two challenging problems are:

- estimating the proportion of the total area in which the whales were counted, and
- estimating how many whales were not seen.

2.8. The abundance estimate is corrected for the numbers of whales that were estimated as being missed. For early surveys the methods had not yet been devised to estimate this probability and so it was assumed that all whales were seen.

2.3.1. Absolute abundance estimates from IDCR/SOWER programs

2.9. The information on absolute abundance used in this paper is based on circumpolar sightings surveys conducted to the south of 60°S. Although described as circumpolar, the surveys were in fact carried out in each Management Area in turn, with each circumpolar survey taking six years to complete. The first of these surveys, CP-I, ran between 1978/79 to 1983/84; CP-II between 1985/86 and 1990/91; and CP-III between 1991/92 and 2003/04. The surveys were usually conducted between late December and mid-February. Survey-related activities continued after mid-February in most years. The late season activities were largely experimental, and, so far, data from them are not used directly to obtain abundance estimates.

2.10. During each survey, two vessels covered a single IWC Management Area. Vessels used in the surveys were not ice-strengthened, so all surveys are strictly outside of the marginal pack-ice zone. Although the primary aim of the IDCR/SOWER surveys was to estimate minke whale abundance, all cetacean sightings were recorded (Branch and Butterworth 2001). The Scientific Committee has reviewed the results of these surveys each year.

2.11. The methodology of IDCR/SOWER may be affected by some, but not all, of the biases that affect JARPA and JARPA II surveys given in paragraph 2.12 (e.g., the effect of dynamic sea ice edges and changes in the number of whales in unsurveyed ice areas). Identifying and removing these biases remains a focus of the In-depth Assessment Subcommittee within the Scientific Committee (IWC 2010d).

2.3.2. JARPA / JARPA II abundance estimates

2.12. A review of estimates of minke whale abundance and population trends arising from JARPA was undertaken as part of an overall review of the program in 2006 (IWC 2006c) and discussed further in the Scientific Committee meeting immediately following (IWC 2008, p58). Due to many concerns documented during this review (IWC 2006c), the IWC has not accepted these abundance estimates or the utility of the data collected from JARPA and JARPA II surveys. Some of these concerns are based on the fundamental design of the program and others on the subsequent data analyses. These concerns, which mainly relate to conducting sighting surveys as part of a lethal whaling program, can be summarised as:

- a) Sections of the survey area remain unsurveyed. Unsurveyed areas may lead to bias in subsequent abundance estimates. During JARPA the four primary causes that led to areas being unsurveyed were:
 1. night steaming where the vessels kept travelling with no survey effort during night hours;
 2. catching up with the schedule of the survey;
 3. time taken to close in on a whale after it is spotted; and
 4. travelling in conditions that were too poor for sighting.
- b) JARPA did not employ ‘independent observers’. Independent observers enable the estimation of the numbers of whales that were not counted (Borchers *et al.* 1998). The absence of independent observers means that JARPA data cannot be used to estimate the probability of seeing any given whale.

- c) Combining data from different sighting modes (i.e., closing versus passing mode⁸³⁰) in estimates of animal density is a complex problem. Methods to overcome these differences in the analysis of JARPA data were considered inadequate.
- d) Due to the small number of sightings in some spatial strata of the JARPA survey design, estimation of “detection functions”⁸³¹ for these strata was compromised. There may also be problems with combining sighting data from different sighting vessels to estimate detection functions.
- e) The parallel transects derived from different sighting/sampling vessels (SSVs; under JARPA, there were two or three SSVs travelling together) were analysed as being independent. These transects are in fact spatially correlated and, as such, statistical error will be underestimated.
- f) Over the duration of JARPA, there was a change in the order in which the more northerly and southerly regions were surveyed. Earlier in the program, both north and south regions were surveyed simultaneously; in the later years, areas to the north were surveyed early in the season, followed by those in the south in the latter part of the season. The change in order may affect the results because the whales are migrating during the surveys.
- g) The effect of having a number of vessels operating in proximity on whale behaviour is largely unknown. This effect was not incorporated into abundance estimates from JARPA data.
- h) Although subsequent analyses of JARPA sighting data were based on the original ‘saw-tooth’ track design, the dynamic nature of the sea ice boundary (i.e., the southern edge of the survey area) meant realised survey tracks often diverged from the plan. The effect of diverging from the planned track was not incorporated into the abundance analyses.

2.13. Due to these concerns, sighting data from JARPA and the subsequent abundance estimates have not been used in the preparation of this report. The same concerns will apply to JARPA II sightings surveys since these are reported to use the same methods as JARPA (Nishiwaki *et al.* 2010, p2).

⁸³⁰ *Closing mode* refers to a method of conducting the survey where the ship leaves the survey track to confirm the species of whales sighted and to count whales in a school. In *passing mode* the ship does not deviate from the survey track.

⁸³¹ A detection function is a mathematical relationship that describes how the probability of seeing a whale changes with its distance from the observer.

2.4. POPULATION MODELLING

2.14. Population modelling is used to estimate how catches have changed the abundance of a whale population over time. This is achieved by fitting a population model to one or more estimates of absolute or relative abundance. The estimates of the population size and trend are generally more reliable when estimates of absolute abundance are used (de la Mare 1986).

2.15. The models used by the Scientific Committee are based on the BALEEN II model (de la Mare and Cooke 1993a, 1993b; Punt 1999). The BALEEN II model calculates the numbers of whales of each age, sex and state of sexual maturity. The models allow for animals with different ages to have different susceptibilities to capture. The models are used with information on the catch history and absolute and relative abundance estimates to calculate the total population number for each year from just prior to the start of exploitation onwards. The historical catch data determine how the population would have declined due to exploitation, while the absolute abundance estimates are used to ensure that the population trends are consistent with recent abundance. It should be noted when comparing current populations to their pre-exploitation levels that the model is generally applied with the assumption that the environment has not changed over time.

2.16. Bayesian and Maximum likelihood implementations⁸³² of the BALEEN II model have been applied to a range of whale species (Raftery *et al.* 1995; Wade 2002) and more recently humpback breeding stocks (Johnston 2002; Zerbini 2004; Jackson 2006; Ward 2006; Zerbini in press).

⁸³² Bayesian and Maximum likelihood are the two commonly used methods in statistics to fit models to data.

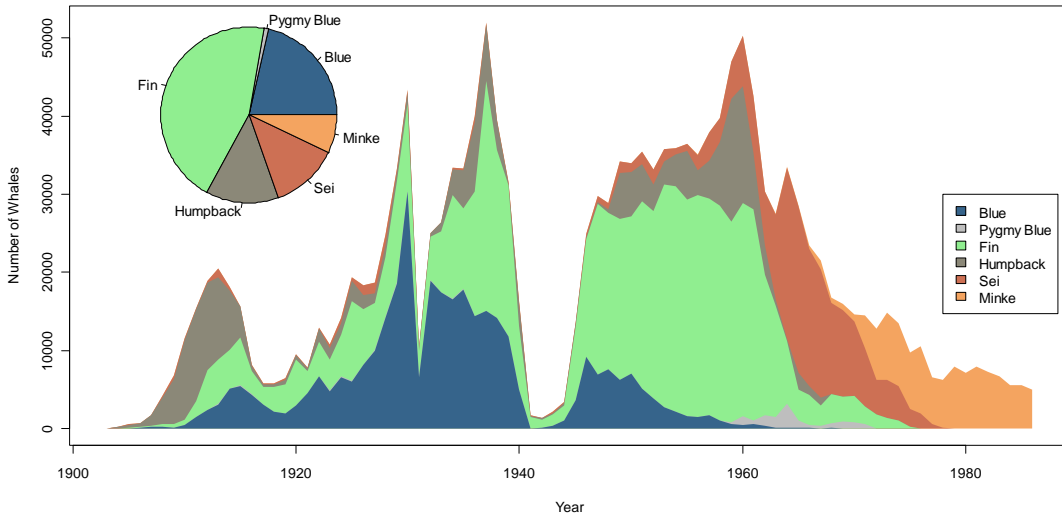


Figure 2. Total annual commercial catch of selected Southern Hemisphere whale species (data from IWC (2010e)).

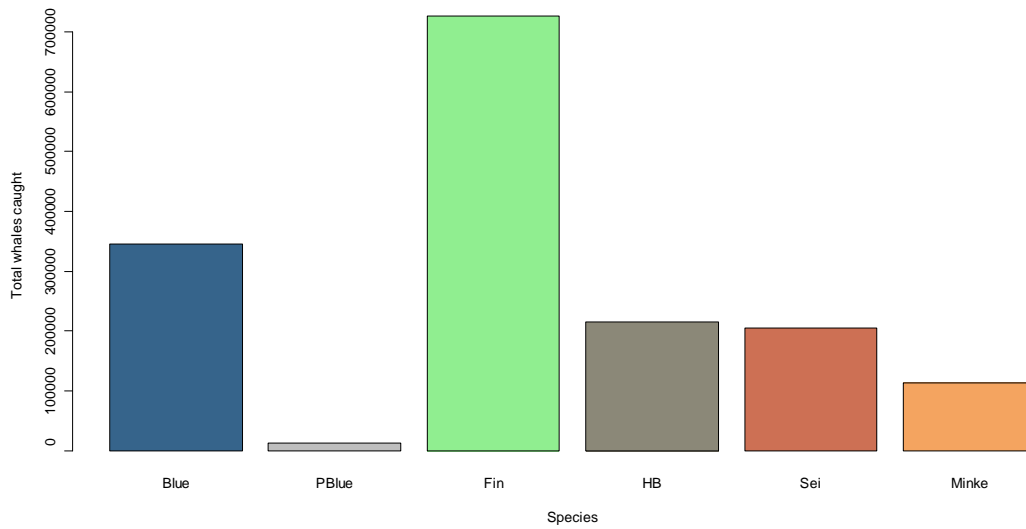


Figure 3. Total commercial catch (1903-1986) of selected Southern Hemisphere whale species (data from IWC 2010e).

3. BLUE WHALES

3.1. INTRODUCTION

3.1. Blue whales are the largest animal on Earth. The largest Antarctic blue whales recorded were caught off the South Shetlands and South Georgia with respective lengths of 31.7 and 32.6 m; (Sears and Perrin 2008). Two sub-species of blue whale occur in the Southern Hemisphere: Antarctic (or true) blue whales (*Balaenoptera musculus intermedia* [Burmeister, 1871]) and pygmy blue whales (*Balaenoptera musculus brevicauda* [Ichihara, 1966]). The focus of this section is on Antarctic blue whales. Little is known about the migration and distribution of blue whales (Branch *et al.* 2007). It is generally agreed they feed during the summer months near the ice edge and that an unknown proportion migrate northwards to breeding grounds during winter (Mackintosh 1966; Branch *et al.* 2007).

3.2. CATCH HISTORY

3.2.1. Commercial whaling history

3.2. Following the commencement of Antarctic whaling the blue whale catch steadily increased until peaking in the 1930/31 season when 30,365 animals were taken (IWC 2006b) (see Figure 2). This massive take resulted in the oversupply of whale oil, culminating in a collapse in the price. As a result, in the 1931/32 season, there was a substantial decrease in whaling effort. From this point on fin whales became the main component of Antarctic whaling due to the steady decline in the abundance of blue whales.

3.3. In 1963, the IWC finally gave blue whales partial protection, recognising that the many years of unsustainable blue whale catches had put the species in “serious danger of extermination” (Chapman 1964). The area between 40°-55°S and 0°-80°E corresponded to the distribution of the newly identified pygmy blue population. This region remained open for taking blue whales until 1965. However, 20% of the subsequent catches were reported to be Antarctic blue whales (Small 1971).

3.4. Despite being protected from 1963 onwards, blue whales were taken illegally by Soviet operations until an International Observer scheme came into effect in 1972. In total, a further 852 blue whales were taken (Zemsky 1995; Zemsky 1996; Branch 2004) from the extremely small population remaining after 1963.

3.5. Overall during the twentieth century 345,755 blue whales (Branch 2008c) were caught in the Southern Hemisphere from 1905 to 1976 (IWC 2006b) (see Figure 3 for a comparison across species of total catch numbers).

3.2.2. JARPA and JARPA II whaling history

3.6. Blue whales have not been targeted under either JARPA or JARPA II.

3.2.3. Other whaling history

3.7. Antarctic blue whales were also taken at coastal whaling stations in South Africa. Some blue whales were believed to have been taken by “pirate” whaling operations in the South Atlantic during the 1960s and 70s (Brownell and Yablokov 2002). Some hundreds of whales were taken illegally in 1954 off the Pacific coast of South America by the Panamanian registered *Olympic Challenger* (Barthelme *et al.* 1997). Blue whales were also taken by coastal whaling operations in Chile and Peru.

3.3. STOCK STRUCTURE

3.8. Within the Southern Ocean the Antarctic blue whales are considered to have a continuous circumpolar distribution and have been known to disperse widely (Branch *et al.* 2007). However, there has been some evidence of discrete feeding stocks (Sears and Perrin 2008) and there are circumpolar discontinuities where no whales seem to be present (Branch *et al.* 2007). The current Scientific Committee agreed assessment model for the Southern Hemisphere blue whale is to treat it as a single circumpolar stock, although it has been planned (IWC 2009a, Annex H, Section 5.2.1) to investigate more localised models, such as those described by Rademeyer (2003).

3.4. STATUS

3.4.1. Current/recent abundance

3.9. Antarctic blue whale abundance estimates based on the IDCR/SOWER surveys are 453 (CV = 0.40), 559 (CV = 0.47) and 2,280 (CV = 0.36), with mid-years of 1980/81, 1987/88 and 1997/98 respectively (Branch 2007a) (‘CV’ refers

to the coefficient of variation⁸³³). Although these CVs indicate low relative statistical precision, the estimates are still quite precise in absolute terms. The estimates indicate that the population is known accurately to within a few thousand animals, and hence it is quite certain that it is small.

3.4.2. Pre-exploitation numbers

3.10. The Scientific Committee uses a Bayesian statistical method to fit the BALEEN II model (Branch 2008b) to estimate a population trajectory and hence pre-exploitation numbers (see Section 2.4).

3.11. Based on Branch (2008b) the Scientific Committee (IWC 2009a) agreed on estimates of pre-exploitation abundance in the range⁸³⁴ of 235,000 – 307,000 whales. The population is estimated to have been depleted by twentieth century whaling to a minimum abundance in the range of 235 – 804 whales. The relative depletion at the point when the population reached its lowest level has a range of 0.10% – 0.28% of its original abundance.

3.12. More recently, the population is estimated to be increasing at a rate in the range 2.4–8.4% per annum. The most recent survey abundance estimate in 1997 is 2,280 (from Branch [2008a]), which is in the range 0.7 – 1.0% of the pre-exploitation abundance.

3.5. MANAGEMENT

3.13. The Antarctic blue whale was designated a protected species after 1963. On the introduction of the New Management Procedure in 1974, all Antarctic blue whales were classified as Protection Stocks, meaning that no commercial whaling of the species was permitted.⁸³⁵ A comprehensive assessment was initiated by the IWC in 2006 and completed in 2008 (IWC 2009a).

⁸³³ CV: coefficient of variation. A statistical measure of relative uncertainty of an estimate obtained as the ratio of the standard error to the mean. Lower values indicate more reliable estimates. A CV of less than 0.1 indicates good statistical precision, while values greater than 0.4 indicate poor statistical precision.

⁸³⁴ In this review the term range corresponds to the 95% confidence interval (CI). A 95% confidence interval is a numeric interval which is statistically expected to contain the true value of a quantity with 95% probability.

⁸³⁵ The New Management Procedure (NMP) aimed to bring stocks of whales to an optimal level at which the largest number of whales could be taken (i.e., the maximum sustainable yield or MSY) in perpetuity, without depleting the stock. In theory it allowed for the setting of catch limits to be

3.6. GENERAL ISSUES/STATUS

3.14. Although there are signs of population growth (Branch 2008a) the number of blue whales is still very low.

3.15. International status:

- Blue whales are listed as *Critically Endangered* by IUCN (Reilly 2008b)
- Blue whales are listed under Appendix 1⁸³⁶ of the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES).
- According to the Schedule to the Convention (IWC 1946), blue whales are currently considered a Protection Stock. There is to be no commercial whaling on Protection Stocks.

separate from political negotiation and contained within the legally binding Schedule. The NMP failed due to a lack of necessary information about the dynamics of whale populations.

⁸³⁶ Appendix 1 lists species that are the most endangered among CITES-listed animals and plants. They are threatened with extinction and CITES prohibits international trade in specimens.

4. FIN WHALES

4.1. INTRODUCTION

4.1. The fin whale (*Balaenoptera physalus* [Linnaeus 1758]) is the second largest of the great whales. In the Southern Hemisphere, females have an average length of around 26 m, with males slightly smaller at 25 m. The adult body mass is 60 to 80 metric tons (Aguilar 2008). Although fin whales are widely distributed, the following information refers primarily to those found in the Southern Hemisphere.

4.2. Fin whales do not display a well-defined social structure, and are generally found as singletons or small groups of up to seven (Bannister 2008). The only strong social connections seem to be between mothers and nursing calves, although larger transient groups may occur in highly productive feeding areas (Aguilar 2008).

4.3. Longevity of fin whales has never been properly established (Aguilar 2008), but it is thought that they can live for up to 90 years (Bannister 2008).

4.4. The general migratory pattern of fin whales is to travel from winter breeding grounds in the lower latitudes to their summer feeding grounds in the Polar Regions. In the Southern Hemisphere, mating occurs May-July; gestation lasts about 11 months (Aguilar 2008). Weaning occurs when calves attain an age of around 6-7 months. Mothers will be ready to mate again in a further 6 months. The pregnancy cycle takes around two years to complete. The proportion each year of the adult female population that is pregnant is around 38-49%.

4.5. Fin whale feeding grounds are thought to cover a wider range of latitudes than the other Antarctic rorquals and to be further from the ice-edge. Locations of winter breeding grounds are largely unknown as fin whales tend to migrate in the open ocean, obscuring migration routes and destinations.

4.6. As with Antarctic blue, humpback and minke whales, fin whales feed predominantly on Antarctic krill (*Euphausia superba*) during the summer months (Bannister 2008) and fast during the winter (Aguilar 2008).

4.2. CATCH HISTORY

4.2.1. Commercial whaling history

4.7. After initially targeting humpback and blue whales, the whaling industry increasingly turned to the more abundant fin whales (see Figure 2). According to

the most recent version of the IWC's catches database approximately 725,000 fin whales were killed in the Southern Hemisphere between 1903 and 2010 (IWC 2010e) (see Figure 3). During the period 1935-1970, around 30,000 fin whales were taken annually worldwide, making it the most frequently taken whale species during that period. The catch of fin whales started to wane in the early 1960s as the industry began to concentrate on sei whales. By the mid 1970s, less than 1,000 fin whales were being caught annually. In 1976, the IWC prohibited the killing of fin whales in the Southern Hemisphere.

4.2.2. JARPA and JARPA II whaling history

4.8. No fin whales were killed under JARPA. Under JARPA II, a total of 19 fin whales have been killed (10 in 2005/06, 3 in 2006/7, 1 in 2008/09, 1 in 2009/10 and 4 in 2010/11).

4.2.3. Other whaling history

4.9. As with blue whales, Antarctic fin whales were also taken at coastal whaling stations in South Africa. Fin whales were taken by "pirate" whaling operations in the South Atlantic in the 1960s and 70s (Brownell and Yablokov 2002). Some fin whales were taken illegally in the 1954 off the Pacific coast of South America by the *Olympic Challenger* (Barthelmess *et al.* 1997). Fin whales were also taken by coastal whaling operations in Chile and Peru.

4.3. STOCK STRUCTURE

4.10. Very little is known about the stock structure of fin whales in the Southern Hemisphere. Fin whales are not common and too few biopsy samples have been taken for genetic analysis to be useful. The identification of breeding grounds of fin whales is difficult as they do not concentrate in coastal waters.

4.4. STATUS

4.4.1. Current/recent abundance

4.11. The Scientific Committee accepted estimates of current circumpolar (and south of 60°S) fin whale abundance range from 5,455 (CV = 0.53) and 8,036 (CV = 0.58), depending on assumptions about survey sighting conditions and species

identification (Branch and Butterworth 2001). Data for these estimates were derived from the third circumpolar survey of the IDCR/SOWER program. Both of these abundance estimates are accompanied by large CVs, and therefore they are not in statistical terms significantly different. Some whales are likely to have been in more northerly waters during the surveys and these are not included in the estimates.

4.4.2. Pre-exploitation numbers

4.12. Currently there are no pre-exploitation abundance estimates for fin whales that have been endorsed by the Scientific Committee, although numbers between 235,000 (Mori and Butterworth 2006) and 325,000 (IUCN website [there is no indication as to the origin of this estimate]) have been suggested.

4.5. MANAGEMENT

4.13. Southern Hemisphere fin whales have not been the focus of much discussion within the IWC for a number of decades. In 2010 Southern Hemisphere fin whales were included in discussions by the Scientific Advisory Group (SAG). The SAG was assembled at the request of the Commission to aid in reviewing components of the discussions on the Future of the IWC (IWC 2010b). The SAG noted that although the fin whale stocks were depleted (see Section 4.4), the last assessment of fin whales was in 1976 (Chapman 1976; Allen 1977; Breiwick 1977) and very little information has been collected since then (IWC 2010a).

4.6. GENERAL ISSUES/STATUS

4.14. National and international status:

- Fin whales are listed as *Endangered* by the IUCN (Reilly 2008c).
- Fin whales are listed under Appendix 1 of CITES.
- Within Australia, fin whales are listed as Vulnerable under the *Environmental Protection and Biodiversity Conservation Act 1999* (DEWHA 2010).
- According to the Schedule to the Convention (IWC 1946), fin whales are currently considered a Protection Stock. There is to be no commercial whaling on Protection Stocks.

5. HUMPBACK WHALES

5.1. INTRODUCTION

5.1. Humpback whales (*Megaptera novaeangliae* [Borowski 1781]) are typically 14-15 m in length, although lengths up to 16-17 m have been recorded (Chittleborough 1965; Clapham 1999). Adult females are generally 1-1.5 m longer than males (Clapham 2008). Both sexes reach sexual maturity at an average of five years of age (Chittleborough 1965; Clapham 1992), with physical maturity occurring between 8-12 years later (Chittleborough 1965). The inter-birth interval is two years with calves born mid-winter on the low latitude breeding grounds, after a gestation of about 11-12 months (Chittleborough 1958; Clapham 1999). Longevity is not well known, but is probably around 50 years.

5.2. Humpback whales are highly migratory, with one of the longest known migration distances of any mammal (Palsbøll 1997), reaching over 11,000km (Bannister 2008). Most humpback whales spend the summer season on high-latitude feeding grounds and migrate to low latitude breeding/calving grounds during the winter (Dawbin 1966; Clapham 1999; Clapham 2000) (see Figure 6 for a general outline). It is thought a proportion of females may forego migration in some years and remain in the feeding grounds (Brown 1995). Due to the seasonal reproductive cycles being six months out of phase between the Northern and Southern Hemisphere humpback whale populations interbreeding or mixing is unlikely (Johnson 1984).

5.3. During summer humpback whales are abundant up to the ice edge (Chittleborough 1965; Dawbin 1966; Johnson 1984). Most feeding occurs in this productive cold water primarily on krill (euphausiids), in particular Antarctic krill (*Euphausia superba*) (Clapham 1999). Generally, the breeding/calving grounds are located in warmer low latitude areas, usually close to continental coastlines or islands (Clapham 2008).

5.4. The dispersion into separate breeding grounds divides the Southern Hemisphere population into a number of generally discrete breeding stocks (Johnson 1984) (see Figure 6). These breeding stocks often overlap, or mix, during the summer on the feeding grounds. The calves learn migration routes as they migrate with their mothers, which results in a relatively high fidelity to breeding and feeding grounds (Clapham 1996). However, it is known that individuals have changed breeding ground (Baker 1990; Clapham 2000).

5.2. CATCH HISTORY

5.2.1. Commercial whaling history

5.5. Whaling of humpback whales can be divided into two types: pelagic and shore-based Antarctic whaling in the higher latitude feeding grounds; and lower latitude coastal based whaling on the migration routes and breeding grounds (see Figure 4 for the amount of Southern Hemisphere humpback whaling of each type over time).

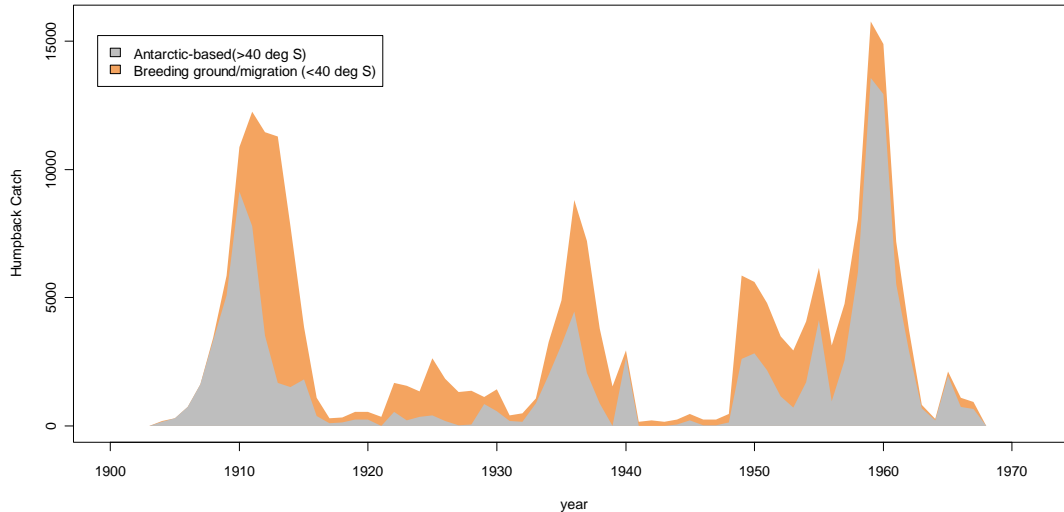


Figure 4. Plot of Southern Hemisphere humpback whale catches over time divided into Antarctic feeding ground (south of 40°S) and breeding ground/migration (north of 40°S) (data from Allison (2006)).

5.6. The first phase of Antarctic humpback whaling in South Georgia collapsed around the time of World War 1 after 27,000 humpback whales had been taken (Allison 2006; Ward 2006). During the 1930s humpback whale catches increased, significantly depleting the population and resulting in a sudden drop in catch rate. In response to this an International Conference on Whaling in 1937 granted humpback whales complete protection throughout Antarctica with effect from 1939, although there was a temporary suspension of the ban in 1940. Large-scale Antarctic whaling was interrupted during World War 2 due to the displacement and destruction of whaling fleets. The end of World War 2 saw the resumption of full scale whaling and in 1949, when the complete humpback whale protection was removed, large-scale humpback catches were resumed.

5.7. Intermittent but sometimes significant pre-war catches were taken by Australian coastal whaling operations⁸³⁷ (see Bannister [2008], p83) on stocks BSD and BSE (see Section 5.3 for an explanation of humpback whale breeding stocks). After World War 2 Australia started coastal whaling using land-based processing from Point Cloates, Carnarvon and Albany on the west coast of Australia, and Tangalooma (Moreton Is.), Byron Bay and Norfolk Island on the east coast (Chittleborough 1965). Under strict quotas (Bannister 2008), Australian land-based operations continued until 1962 when the IWC granted protection to the Southern Ocean humpback whale. Over the 14 year period after World War 2, 20,619 animals were taken from Australian land-based operations (see Tables 1 and 2 in Chittleborough [1965]).

5.8. New Zealand's whaling endeavours followed a similar pattern to Australia's with land-based coastal whaling on migration routes (Cook Strait, New Zealand),⁸³⁸ leading up to the population crash of the early 1960s when operations became economically unviable. A total of 5,714 whales (5,115 post war) were taken by New Zealand (Chittleborough 1965).

5.9. After an initial period of heavy catches (nearly 8,000 whales) off Mozambique and South Africa during 1908-15, stock BSC was subject to continuous but declining catches from Natal, South Africa and Madagascar (Angot 1951). Catches increased again in the late 1940s before the IWC's 10-year humpback whaling ban. This was followed by a short pulse of whaling activity in the late 1950s when humpbacks whales were again allowed to be caught. However, this activity soon dropped away due to low catch rates. In total, almost 20,000 animals from this breeding stock were taken in the period 1908-1966. Some catches of BSC whales were also taken by pelagic expeditions in and outside the Antarctic.

5.10. Overexploitation of humpback whales continued, leading up to substantial depletions in 1959 and 1960 as result of illegal Soviet operations. The result was a complete collapse of the population (and consequently catch rates) in 1962. The Australian west coast whaling catch-rate-per-unit-of-whaling-effort fell by a factor of 10 over the 13 years up to 1962 (see Table 1 of Chittleborough [1965]). The east coast population saw the same decrease in only four years (see Table 2 of Chittleborough [1965]). In response, the IWC banned commercial catches of humpback whales in the Southern Ocean in 1963.⁸³⁹ However, illegal Soviet

⁸³⁷ West coast 1912-1916 / 1922-1928, East coast Jervis Bay, NSW 1912-1916, Twofold Bay, NSW -1930 (Bannister 2008).

⁸³⁸ New Zealand also conducted some Antarctic pelagic whaling into the late 1930s and pelagic whaling off the west coast of New Zealand from 1935-1939.

⁸³⁹ Protection was granted by the IWC to humpback whales in 1958 for the North Atlantic, and 1966 for the North Pacific populations.

catches, which had begun in 1947, continued until 1973 (Yablokov *et al.* 1998; Clapham *et al.* 2009).

5.11. Humpback whales were particularly affected by the Soviet activities. Between 1947 and 1972 the Soviet Union reported to the IWC it took 2,710 humpback whales, when in fact it illegally took 48,702 (Clapham *et al.* 2009; see Table 9). This corresponds to half of the total post-war catch of humpback whales, with Antarctic Management Areas IV, V and VI bearing the brunt of most of the catches. The Soviet takes were significantly damaging to humpback whale stocks, obviously in terms of the sheer quantity of whales taken, but also due to the fact that:

- the catches were not evenly distributed over time, but rather a large proportion of the catch occurred in two consecutive summers;⁸⁴⁰
- the catches were spatially concentrated with the fleet taking every whale they came upon rather than different fleets around Antarctica taking smaller numbers; and
- whales were taken regardless of age, sex, size, or other considerations mandated by IWC regulations (such as not taking females accompanied by calves).

5.12. Overall, between 1904 and 1973, humpback whales were extensively caught (see Figure 5), with total numbers of approximately 220,000 taken from Antarctic stocks (Allison 2006); see Figure 3. The total post-war catch from the IWC Management Areas IV and V was greater than 65,000 animals (see Clapham *et al.* 2009, Table 9). Stock BSD incurred sustained depletion between 1949 and 1962 due to the combined effects of coastal and Antarctic pelagic whaling (see Figure 5). Stock BSE was relatively less affected until the massive Soviet catches from 1959 to 1962.

⁸⁴⁰ 11,778 were taken in the 1959/60 season and 8,872 in the 1960/61 season in IWC Management Areas IV and V (Clapham 2009, Table 5)).

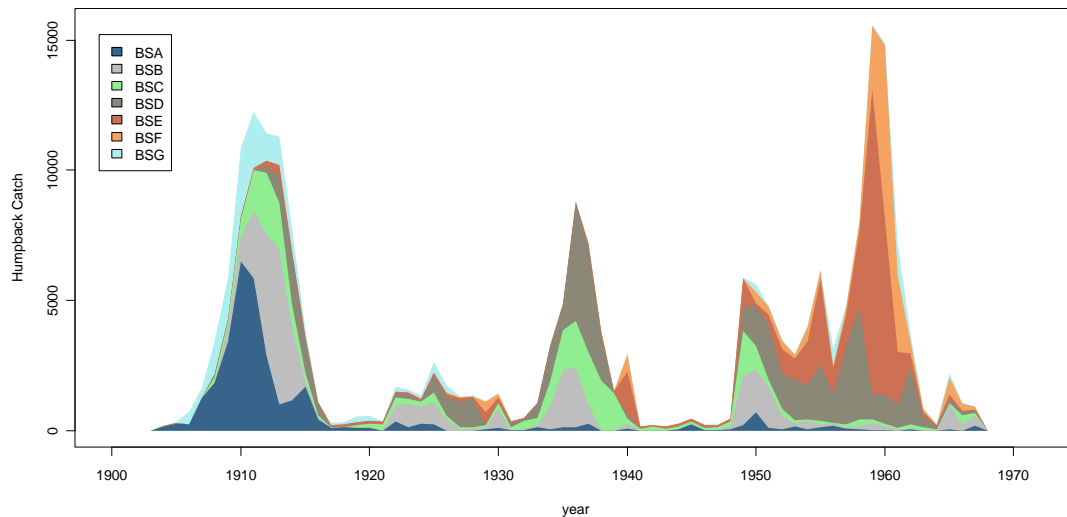


Figure 5. Southern Hemisphere humpback whale catches over time divided by Breeding Stock (data from Allison (2006)).

5.2.2. JARPA and JARPA II whaling history

5.13. A take of 50 humpback whales forms part of the JARPA II proposal and special permits are issued by Japan each year for that level of take. However, to date, no humpback whales have been killed under JARPA II.

5.2.3. Other whaling history

5.14. Around 16,000 humpback whales were taken in the era of open-boat whaling in the 19th century, predominantly in the Southern Hemisphere (Smith *et al.* 2006). Humpbacks were taken incidentally by open-boat whalers targeting predominantly sperm and right whales around Australia, New Zealand, Africa, South America and the islands of the South Pacific. These operations probably killed more animals than are included in the above estimate because of high rates of whales struck and killed but not successfully landed (Smith *et al.* 2006). A shore-based humpback whaling station operated in and around Twofold Bay on the east coast of Australia in the 19th and early 20th centuries. Some humpback whales were taken illegally in 1954 off the Pacific coast of South America by the *Olympic Challenger* (Barthelme *et al.* 1997). Humpback whales were also taken by coastal whaling operations in Chile and Peru.

5.15. Small-scale coastal subsistence hunting of humpback whales occurred in Tonga (BSE3) up until 1978 (Paterson 1984).

5.3. STOCK STRUCTURE

5.16. The Scientific Committee currently recognises eight distinct Southern Hemisphere humpback whale breeding stocks, BSA, BSB, BSC, BSD, BSE, BSF, BSG, and BSX⁸⁴¹ (IWC 2005, Annex H, Section 5.2 and Figure 1); see Figure 6. Although in this review we shall cover all seven Antarctic related stocks, we shall give special attention to the stocks (BSD, BSE, and BSF) which are linked to feeding grounds potentially affected by JARPA II as proposed (Areas IIIE to VIW)⁸⁴² (see Government of Japan 2005)). Due to uncertainty on stock boundaries we have also included some information on BSC.

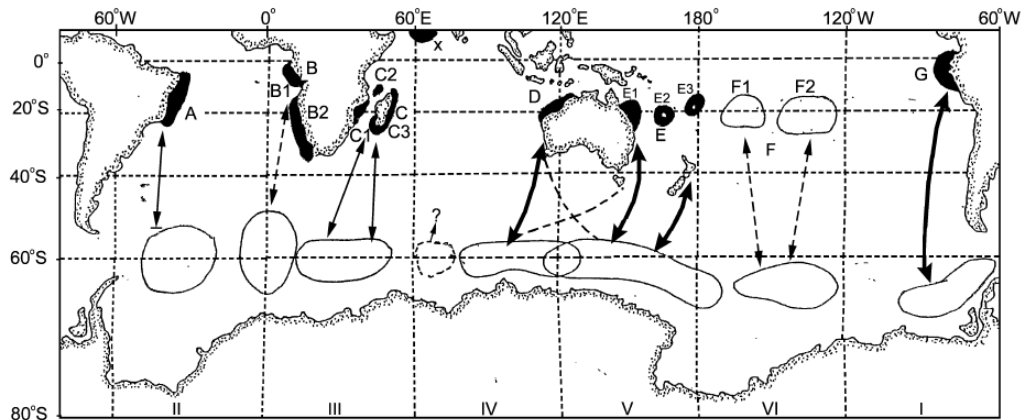


Figure 6. Hypothetical stock structure for Southern Hemisphere humpback whales, from (IWC (2005; Annex H p.13 Figure 1): “for illustrative and discussion purposes only. The areas and sub areas identified reflect approximate, rather than necessarily exact, boundaries. A dotted line represents hypothetical connections, thin lines represent a small number of documented connections between areas from resights using Discovery tags, photo-identification or genetics, or satellite tracked whales, and thick lines represent a large number of documented connections between areas from resights using Discovery tags, photo-identification or genetics, or satellite tracked whales.”

NOTE: This figure is from 2005. Since this time further understanding of breeding stocks has developed. The figure is included here as a general guide for breeding stock locations and movements rather than conclusive descriptions of breeding stock mixing/interactions.

⁸⁴¹ BSX corresponds to stocks found in the Arabian Sea. The IWC has grouped it with the other Southern Hemisphere stocks. We will not consider it in this review.

⁸⁴² These are the areas covered by JARPA (Government of Japan (2005; p 13)) although when humpback whale takes were proposed in 2005 it would seem that the longitudinal range for these takes was possibly 70°E to 170°W, i.e., IWC Management Areas IV and V (as indicated in Figure 1 of Government of Japan (2005)).

5.4. STATUS

5.4.1. Current/recent abundance

5.17. Humpback whale estimates are generally made in one of two locations: either at the lower latitude breeding grounds/migration routes (e.g., Noad 2006; Hedley 2008) or at the higher latitude Antarctic feeding grounds (for example the IDCR/SOWER program (Branch 2006b) (see Section 2.3). Breeding ground estimates will directly correspond to an individual breeding stock. Feeding ground estimates will often encompass a mixture of two (or more) breeding stocks due to range overlap. Partitioning these estimates by breeding stock requires assumptions about mixing rates (IWC 2010c, Annex H).

5.18. It is believed that the current total population of Southern Hemisphere humpback whales is of the order of 50,000 (41,800 estimated for the late 1990s/early 2000s, increasing at a rate in the range 5.8%–13.4% per year [Branch 2006b]). Individual breeding stocks seem to be increasing at rates between 4.6% and 10.5% per year (Childerhouse 2008) (see Table 1 for recent individual breeding stock estimates). Globally, recovery of humpback whales is underway (for example stocks BSD and BSE1 are showing rates of increase of over 10%⁸⁴³ (Bannister 2001; Noad 2008). However, concern remains for certain small subpopulations where little information is known and recovery has been slow (e.g., BSE2, BSE3 and BSF [Childerhouse 2008]).

5.4.2. Pre-exploitation numbers

5.19. The Scientific Committee is currently developing individual breeding stock models of the humpback whale population trajectory (Johnston 2002; Zerbini 2004; Jackson 2006; Ward 2006; Zerbini in press) (see Section 5.5 for more details). From these models pre-exploitation numbers will be able to be derived in due course.

5.20. Because no final population model parameters have been agreed for stocks BSD, BSE or BSF by the Scientific Committee it is not possible to report reliable pre-exploitation abundance. However, it is generally accepted that the breeding stocks suffered from extensive depletion, resulting in the populations being reduced to a fraction of their pre-exploitation levels (some global population estimates were in the order of 2–5 % of original population [Chapman 1974; Johnson 1984]).

⁸⁴³ Some populations showed estimated increases above 10% however the IWC has agreed rates above 10.6% are biologically unrealistic for humpback whales IWC (2007), Annex H, p3.

| Breeding Stock | Year | Absolute Abundance (CV or CI) | Source/Notes | Reference |
|-----------------------|-------------|--------------------------------------|---|--|
| BSA | 2005 | 6,251 (0.17) | Air-based survey off Brazil | (Andriolo 2006) |
| BSB | 2003 | 7,196 (0.15) | Based on genetic data from Iguela, Africa | (Collins 2008) |
| BSC | 2003 | 5,965 (0.17) | Ship-based survey off Mozambique | (Findlay and S. In Press) (Findlay and S. 2003) |
| BSD | 2008 | 21,750 (17,550-43,000) | Air and Land-based survey of Western Australia | (Hedley 2008) |
| BSE | 2004 | 7,090 (6,430-7,750) | Land based off Queensland coast (BSE1) | (Noad 2006) |
| | 2007 | 9,683 (8,556-10,959) | Land based off Queensland coast (BSE1) | (Noad 2008) |
| BSF | 2002 | 3,827 (0.12) | Photographic mark-recapture at New Caledonia (BSE2), Tonga (BSE3), Cook Islands and French Polynesia (BSF) | (Baker 2006) |
| | 1999-2004 | 2,361 (0.11) | Photographic mark-recapture and genetics at New Caledonia (BSE2), Tonga (BSE3), Cook Islands and French Polynesia (BSF) | (Constantine 2010) |
| BSG | 2006 | 6,504 (0.21) | Photographic mark-recapture at Ecuador | (Félix In Press) |
| Total Stock | 1991-2003 | 41,600 (0.11) (34,000-52,000) | Ship-based circumpolar survey covering South of 60°S | (Branch In Press) (Branch 2006b) |

Table 1. Recent absolute abundance estimates for humpback breeding stocks based on estimates compiled in Müller (2010).

5.5. MANAGEMENT

5.21. The IWC Management Areas are not consistent with current understanding of Southern Hemisphere humpbacks (IWC 2005, Annex H, Section 5.2) so the Scientific Committee now takes an individual breeding stock approach to BSA-BSG (as discussed in Section 5.3).

5.22. The Scientific Committee's sub-Committee on Other Southern Hemisphere Whale Stocks began its preliminary assessment of the Antarctic humpback whale populations in 2001. A comprehensive assessment was conducted in Hobart in 2006 (IWC 2006a). Since 2006, the sub-Committee has been focusing on assessing and building population trajectory models for the individual breeding stocks. A preliminary investigation has been done on a model that considers the whole Antarctic stock (Müller 2010), but at this stage the model is not ready to be used.

5.6. GENERAL ISSUES/STATUS

5.23. Some uncertainties remain about stock structure related to discreteness of stocks and site fidelity. Particularly in the case of stocks BSD, BSE and BSF, questions remain on the amount of mixing between stocks (in terms of breeding) and, at the population level, physical mixing on the feeding grounds. These uncertainties make the assignment of historical catches on the feeding grounds difficult and, hence, the determination of separate historical population trajectories problematic (IWC 2006a; IWC 2010c, Annex H).

5.24. The Oceanic sub-stocks (BSE2, BSE3, and BSF), in particular, are vulnerable to depletion. The stocks' migratory patterns are not completely known and the sub-stocks have not shown much recovery (Childerhouse 2008).

5.25. National and international status:

- Humpback whales are listed under Appendix 1 of CITES.
- The global population of humpback whales is currently listed as *Least Concern* by the IUCN (Reilly 2008a).
- The Oceanic breeding groups (BSE and BSF) are listed as *Endangered* by the IUCN (Childerhouse 2008).
- Within Australia, humpback whales stocks BSE and BSF are listed as Vulnerable under the EPBC Act (DEWHA 2010).
- According to the Schedule to the Convention (IWC 1946), humpback whales are currently considered a Protection Stock. There is to be no commercial whaling on Protection Stocks.

6. ANTARCTIC MINKE WHALES

6.1. INTRODUCTION

6.1. Currently, two species of minke whales are recognised: the Northern Hemisphere common minke, *Balaenoptera acutorostrata* (Lacépède 1804), and the Antarctic (or Southern Hemisphere, as it is often referred to in IWC literature) minke, *Balaenoptera bonaerensis* (Burmeister 1867). The Antarctic minke whale was officially recognised as a separate species by the IWC in 1999 (IWC 2001, p37). Minke whales (both Northern and Southern Hemisphere) are the smallest of the rorquals. Adult Antarctic minke whales are, on average, around 10-11 m in length and weigh between 8 to 10 tonnes, with females being slightly larger than males (Horwood 1990).

6.2. Also found in the Southern Hemisphere is a dwarf (or diminutive) minke form, which is closely related to the common minke whale. This dwarf form was officially recognised by the Scientific Committee as morphologically different from other minke whales in the Southern Hemisphere in 1989, and was henceforth considered separate for management purposes (IWC 1991, p113). The dwarf form is yet to be officially described as a separate species, and is still classified as *B. acutorostrata*. Dwarf minke whales do not tend to migrate as far south as Antarctic minke whales, although there have been sightings of the dwarf form at around 65°S (Bannister 2008). It is likely that less than 1% of minke whales found south of 60°S are the dwarf form (Leaper *et al.* 2008).

6.3. Minke whales in both hemispheres are thought to live up to around 50 years of age (Bannister 2008). The breeding cycle of a minke whale is around 14 months, and they usually conceive while still lactating (Horwood 1990); gestation period is 10 months and calving is in winter (Bannister 2008) with the peak birthing months being July and August (Perrin and Brownell 2002). The proportion of adult Antarctic female minke whales that are pregnant each year is 78% (Horwood 1990). Unlike humpback whales (Clapham 2008), the calves of minke whales do not follow their mothers into feeding areas. Instead, weaning is thought to take place prior to arrival at feeding areas (IWC 1991, p119). Sexual maturity is reached at 7-8 years for females and 8 years for males (Perrin and Brownell 2002). Antarctic minke whales migrate further south than any of the other baleen whales, and even occupy pack-ice in the austral summer months (Ainley *et al.* 2007). However, the locations of the breeding areas in winter are largely unknown (Bannister 2008). During the austral summer, minke whales can be found circumpolar between 55°S to the ice edge and into loose pack-ice (Perrin and Brownell 2002). They occur in highest densities along the edge of the pack ice, with densities decreasing with distance away from the ice (Kasamatsu *et al.* 1996). In winter, they travel to breeding areas located in the mid-latitudes (10-

30°S) in the Pacific, Indian and Atlantic Oceans (Perrin and Brownell 2002); although some animals may remain, at least for some time, in pack ice in the winter months (Thiele and Gill 1999). Antarctic minke whales have also been caught in temperate and tropical latitudes, and marking data suggests migration between these latitudes and the sea ice boundary around the Antarctic coastline (Horwood 1990).

6.4. Antarctic minke whales are considered to feed almost exclusively on Antarctic krill (*Euphausia superba*) during the summer months (Kawamura 1994), but are known to feed on ice krill (*Euphausia crystallophias*), particularly in major shallow embayments, and another euphausiid, *Thysanoessa macrura* (Bushuev 1986).

6.2. CATCH HISTORY

6.2.1 Commercial whaling history

6.5. Antarctic minke whales were the last species to be targeted by commercial whaling, after the larger great whales were depleted in the Southern Hemisphere (Perrin and Brownell 2002); see Figure 2. As Horwood (1990) points out, Antarctic minke whales were ignored by the whaling industry until they were the only abundant whale available. Minke whales have been caught predominantly for direct human consumption as meat rather than for whale oil (Horwood 1990).

6.6. In the mid-1960s, as sei whale catches were diminishing in the mid latitudes of the Southern Hemisphere, a land-based whaling industry in Brazil became interested in a nearby concentration of minke whales (Horwood 1990). The still abundant Antarctic minke whales also gained the attention of whaling operations in the Southern Ocean in the early 1970s (IWC 1973b, p20; Horwood 1990). Prior to this time, there was both little harvesting and, commensurately, little regulation by the IWC on Antarctic minke whale take. It was not until the 1972 Annual Meeting that a catch limit of 5,000 for Antarctic minke whales was adopted into the Schedule for the 1972/73 austral summer season (IWC 1974, p20). The catch limit applied only to pelagic operations (Horwood 1990). Although some Antarctic minke whales were caught from land stations, the majority of the catches have been taken by Antarctic pelagic fleets. The catch limits and reported catch numbers, are presented in Table 2 and Figure 7.

| Season ¹ | Management Areas | | | | | | Total | Catch |
|---------------------|---------------------|---------|----------|-----------|--------------|-------------|--------------------|-------|
| | I | II | III | IV | V | VI | | |
| | 60°-120°W | 0°-60°W | 0° -70°E | 70°-130°E | 130° E-170°W | 120° -170°W | | |
| 1972 | | | | | | | No catch limits | 3954 |
| 1973 | No Area restriction | | | | | | 5 000 ² | 6 530 |
| 1974 | No Area restriction | | | | | | 5 000 ² | 8 646 |
| 1975 | 3300 | | 4 140 | | 1 060 | | 7 000 ² | 8 153 |
| 1976 | 1 200 | 2 160 | 2 400 | 891 | 840 | 600 | 6 810 | 6 919 |
| 1977 | 1 062 | 2 041 | 3 003 | 1 600 | 1 524 | 402 | 8 900 | 8 920 |
| 1978 | 704 | 1 150 | 1 826 | 963 | 930 | 688 | 5 690 | 5 690 |
| 1979 | 738 | 1 272 | 2 510 | 1 389 | 563 | 371 | 6 221 | 6 205 |
| 1980 | 1 060 | 1 370 | 2 718 | 2 043 | 1 454 | 267 | 8 102 | 8 060 |
| 1981 | 910 | 1 176 | 1 237 | 2 386 | 1 250 | 467 | 7 072 | 6 989 |
| 1982 | 930 | 1 249 | 2 198 | 1 625 | 1 187 | 1 387 | 8 102 | 8 008 |
| 1983 | 852 | 656 | 1 116 | 1 969 | 1 896 | 937 | 7 072 | 7 072 |
| 1984 | 624 | 630 | 1 416 | 2 095 | 1 445 | 778 | 6 655 | 6 653 |
| 1985 | 563 | 376 | 844 | 974 | 1 013 | 877 | 4 224 | 5 566 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ³ | 4 969 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ³ | 4 969 |

¹ Season year refers to year an austral summer season ended

² Applicable to pelagic operations, south of 40°S, no coastal restrictions

³ As with footnote 2 above, but as Japan and USSR lodged objections, these countries were not bound by the zero catch limits and, bilaterally agreed on a quota of 4,000 each.

Table 2. International Whaling Commission catch limits and actual takes for minke whales in the Southern Hemisphere. Table structure and catch limits derived from Horwood (1990); actual takes updated using IWC (2010e).

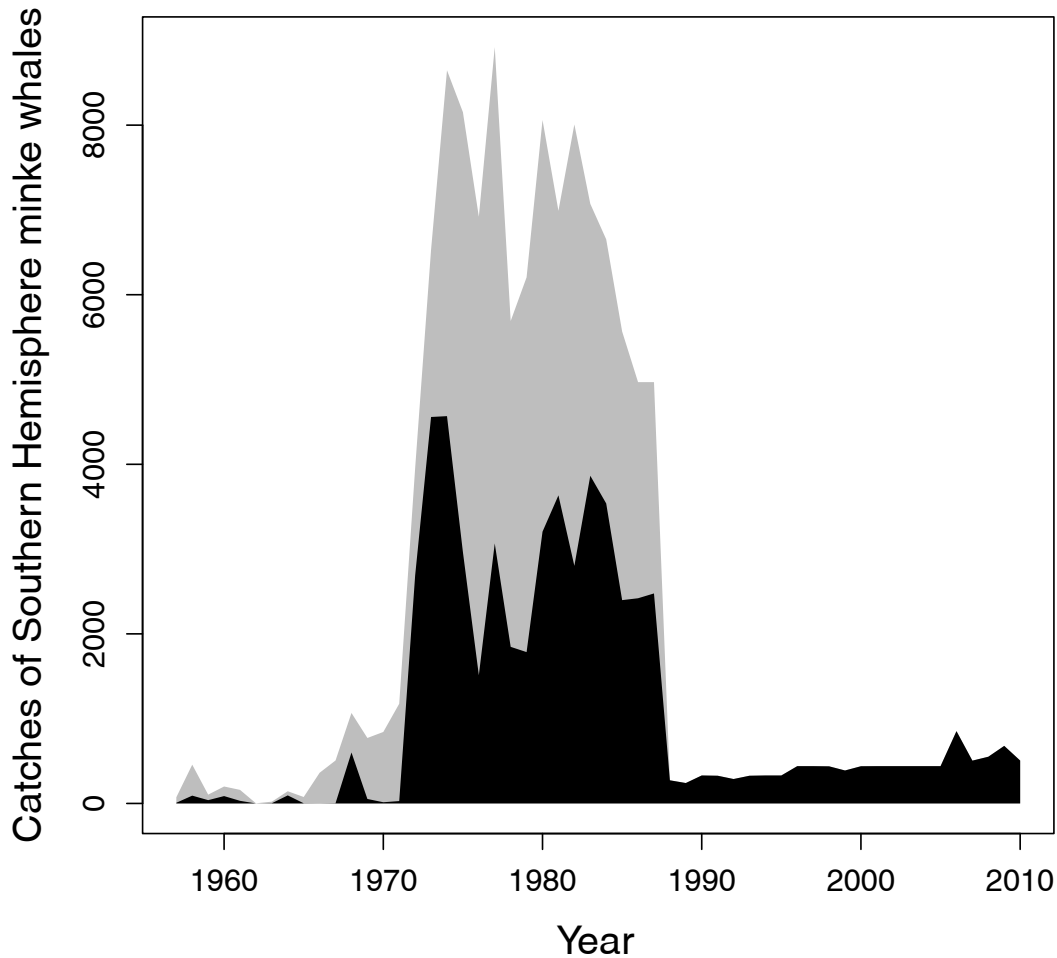


Figure 7. Catch of Southern Hemisphere minke whales from 1957. Grey indicates catches in all Management Areas; black indicates catches in Management Areas IV and V. Data from IWC (2010e).

6.7. The introduction of the New Management Procedure (NMP) in 1975 (IWC 1976, p26) coupled with the recognition of a decline in the number of whales killed relative to effort invested (in Area IV), led to attempts to classify the stocks under the NMP (Horwood 1990). However, in 1977, results were presented to the Scientific Committee to suggest that the population of Antarctic minke whales had been increasing prior to the early 1970s. This meant that the NMP could no

longer be applied (IWC 1978, p55).⁸⁴⁴ After this, there were disagreements within the Scientific Committee as to which Antarctic minke whale abundance and recruitment rates to use. In the end the Commission accepted a simple calculation of 3.5% of the current stock size as an appropriate catch limit for the 1977/78 season (IWC 1978, p57).

6.8. A substantial advance in assessment methods occurred after 1980 as results became available from the first of the IDCR research cruises undertaken in the Southern Ocean (Horwood 1990). Unfortunately, this new information did not resolve the issue of the proportion of the stock to recommend as the catch limit (possible rates ranging from 0.5% through to 7% were suggested), and there was still the issue as to whether the population of Antarctic minke whales was increasing prior to exploitation (Horwood 1990).

6.9. Commercial whaling of Antarctic minke whales was banned when IWC catch limits were set to zero in 1986. After this, both the USSR and Japan proceeded to take minke whales in the Southern Hemisphere 'under objection' to the moratorium in the 1985/86 and 1986/87 seasons, after which the USSR retired from whaling in the Southern Hemisphere. In January 1988, Japan commenced special permit catches under JARPA. By the end of the 2010/11 season the accumulated take of minke whales in the Southern Hemisphere stood at 123,337 whales (IWC [2010e] and including the catches taken during JARPA II updated to 2010/11).

6.2.2. JARPA / JARPA II catch history

6.10. 6,793 minke whales were killed under JARPA. JARPA II commenced in the 2005/06 season and continues without any specified end date. It represents a substantial increase in planned annual catches of minke whales compared to that in place under JARPA. 3,264 minke whales have been killed under JARPA II to date. The annual takes of minke whales under JARPA and JARPA II are given in Table 3.

⁸⁴⁴ The NMP assumes that population abundance does not vary prior to exploitation. The Antarctic minke whales did not appear to be consistent with this assumption.

| Season | Catch | | Season | Catch |
|---------|-------|--|----------------|------------|
| 1987/88 | 273 | | 1999/00 | 439 |
| 1988/89 | 241 | | 2000/01 | 440 |
| 1989/90 | 329 | | 2001/02 | 440 |
| 1990/91 | 327 | | 2002/03 | 440 |
| 1991/92 | 288 | | 2003/04 | 440 |
| 1992/93 | 330 | | 2004/05 | 440 |
| 1993/94 | 330 | | 2005/06 | 853 |
| 1994/95 | 330 | | 2006/07 | 505 |
| 1995/96 | 439 | | 2007/08 | 551 |
| 1996/97 | 440 | | 2008/09 | 679 |
| 1997/98 | 438 | | 2009/10 | 506 |
| 1998/99 | 389 | | 2010/11 | 170 |

Table 3. Annual take of minke whales from JARPA and JARPA II (shown in bold).

6.3. STOCK STRUCTURE

6.11. Antarctic minke whale stock structure remains highly uncertain. However, there does seem to be some evidence for at least two stocks of Antarctic minke whales in the area covered by JARPA (IWC 2006c): an idea dating back to the late 1970s, when the first assessment for minke whales was completed (see IWC 1982b). There is certainly no evidence that the current IWC Management Areas provide adequate boundaries for Antarctic minke whale populations (IWC 2006c). Despite the topic being regularly discussed within the Scientific Committee (see IWC [1983], p24 for an early example), there has never been compelling evidence for either abandoning or retaining the six Management Area/stock boundaries (I-VI).

6.4. STATUS

6.4.1. Pre-exploitation abundance

6.12. No generally accepted estimate of pre-exploitation abundance exists for Antarctic minke whales. However, some estimates of Antarctic minke whale numbers were reported to the Scientific Committee in the early 1970s, i.e., around the time these stocks were beginning to be exploited. Ohsumi and Masaki (1971), using Japanese scouting boat⁸⁴⁵ data (which predated JARPA by some 16 years), presented a circumpolar abundance estimate as a range of 150,000 to 200,000 animals (no statistical error was reported); Masaki (1973) derived a circumpolar relative abundance also with a range of 150,000 to 200,000 minke whales (no statistical error reported), south of 30°S during the austral summer, using early abundance estimation theory, as developed by Doi (1974). A revised estimate of 299,000 was presented by Ohsumi and Masaki (1974). Although these estimates were used to produce the early catch limits for Antarctic minke whales, they were superseded by developments in whale sighting methodology over the following decade.

6.13. Genetic methods have been developed to estimate the long-term historical population size of Antarctic minke whales. Recently Ruegg *et al.* (2010) estimated the historical population size of Antarctic minke whales to be 671,000 (374,000 – 1,150,000). However, there is a question of when in history this population size might have existed.

6.4.2. Current abundance

6.14. The Scientific Committee has considered a number of circumpolar and Management Area level abundance estimates using IDCR/SOWER data. The last circumpolar minke whale abundance estimate that the Scientific Committee endorsed was presented in 1993 using IDCR/SOWER data from surveys up to 1988/89 (Haw 1993); this estimate was of 761,000 (95% CI: 510,000 – 1,140,000).

6.15. Updated estimates derived from IDCR/SOWER data using the ‘standard method’ were presented in Branch (2006a) who gives the abundance of minke whales for the three circumpolar surveys in Table 4.

⁸⁴⁵ Scouting boats, as their name implies, were vessels that ranged widely over the oceans looking for concentrations of whales. They did not implement designed sightings surveys of the form that developed later under the IDCR/SOWER programs.

| Survey series | Point estimate | 95% Confidence Interval |
|---------------|----------------|-------------------------|
| CP-I | 645,000 | 492,000 – 864,000 |
| CP-II | 786,000 | 656,000 – 950,000 |
| CP-III | 338,000 | 290,000 – 397,000 |

Table 4. IDCR / SOWER minke whale abundance estimates

6.16. The abundance estimates presented by Branch (2006a) may be too low because the surveys will not have encountered whales in the marginal pack-ice zone or north of 60°S and because some minke whales that were potentially visible will be missed. Furthermore, the abundance estimates produced by Branch (2006a) have not been accepted by the Scientific Committee due to concerns about whether the large change in abundance estimates from the late 1980s through to the 1990s (see Table 4) is due to changes in abundance or in survey design or analysis methods.

6.17. In addition to the older standard method using IDCR/SOWER data, circumpolar abundance estimates for Antarctic minke whales using two new methods are currently being considered by the Scientific Committee. These methods arose, in part, due to the concerns about some of the known biases in the standard method. The first of these methods, known informally as the ‘OK method’, and most recently presented in Okamura and Kitakado (2010), does not assume that all minke whales that are located on the survey track will be seen, and makes some other assumptions different from those used by the standard method (Branch 2006a). The second of these methods, known as SPLINTR (SPatial LINE TRansect) - and most recently described in Bravington and Hedley (2010) - explicitly models the spatial distribution of minke whales, their school sizes and how spatial location will affect sighting conditions. Circumpolar abundance estimates from both methods are also given in Table 5. Both of these methods have been before the Scientific Committee for consideration for quite some time. A great deal of effort has gone into discovering why the OK and SPLINTR methods yield such contradictory results (detailed in IWC [2010d]). Both methods seem to be improvements over the standard method and abundance estimates from either method would probably have been accepted by the Scientific Committee had they been presented in the absence of the other.

6.18. Even though the abundance estimates derived using the standard, SPLINTR and OK methods have not been accepted by the Scientific Committee, they each demonstrate a significant decline in circumpolar minke whale abundance south of 60°S between CP-II and CP-III, (Table 5, and see IWC

(2010d)); this is despite the fact that the SPLINTR and OK methods account for biases associated with the standard method. Furthermore, this is contrary to the assumption that with the relatively low historical and current catch levels (see Section 6.2) compared to the current abundance estimate(s), the total population would be stable or increasing. There has been considerable debate as to whether this decrease in abundance (whichever method is used) is a real phenomenon or an artefact of changes in survey design and coverage (Branch 2007b). Absent any generally recognised reasons to suppose that there has been such a substantial decline in abundance, the two likely explanations are that there has been a change in the probability of seeing any given whale, or that there has been a substantial increase in the number of minke whales moving inside pack-ice during the summer months. A number of research programs are currently underway, including a study of historical and current summer sea ice extents (Murase 2010) and aerial surveys within the marginal pack-ice zone (Scheidat *et al.* 2007; Kock *et al.* 2009; Kelly *et al.* 2010).

| Estimation method | CP-I (1978/79 – 1983/84) | CP-II (1985/86 – 1990/91) | CP-III (1992/93 – 2003/04) |
|--------------------------------------|--------------------------|-----------------------------|-----------------------------|
| Standard (Branch 2006a) | 645 000 (0.143) | 786 000 (0.094) | 338 000 (0.080) |
| SPLINTR (Bravington and Hedley 2010) | -* | 747 000 (0.19) [#] | 382 000 (0.17) [#] |
| OK (Okamura and Kitakado 2010) | -* | 1 486 000 (0.17) | 712 000 (0.17) |

* Due to large changes in methodology between CPI and CPII, neither Bravington and Hedley (2010) nor Okamura and Kitakado (2010) attempted to estimate minke whale abundance from CPI data.

[#] The CVs reported here (taken from IWC (2010d)) are much wider than those reported in Bravington and Hedley (2010). Between preparation of Bravington and Hedley (2010) and of IWC (2010d) the authors included additional variance to account for changes in minke whale distribution from year to year.

Table 5. Circumpolar abundance estimates, south of 60°S, for Antarctic minke whales, by IDCR/SOWER survey (CPI-CPIII), for each of the three estimation methods discussed; coefficients of variation in brackets.

6.5. MANAGEMENT

6.19. Antarctic minke whales are not classified under the NMP. Because the NMP was not considered applicable, catch limits were set using an *ad hoc* procedure based on estimates of the number of whales that could be taken without changing the population size. However, these estimates were uncertain, and the Scientific Committee was usually only able to forward a wide range of estimates to the Commission. Catch limits for minke whales were set to zero from 1986/87. Simulation trials on the application of the Revised Management Procedure to Antarctic minke whales were completed in 1993.

6.6. GENERAL ISSUES/STATUS

6.20. National and international status:

- The circumpolar population of Antarctic minke whales is currently listed as *Data Deficient* by the IUCN (Reilly 2008a). Species would be reclassified as *Least Concern* if the population decreases noted in Section 6.4 are proven to be an artefact of population sampling; but, would be reclassified as *Endangered* if this decrease is real (Reilly 2008a).
- Antarctic minke whales are listed under Appendix 1 of CITES.

7. SUMMARY AND CONCLUSIONS

7.1. Blue whales were almost rendered extinct in the Antarctic. Commercial whaling took almost 350,000 whales and reduced their abundance to less than 1% of the original population. Although there are signs of population growth the number of blue whales is still very low (somewhere around two thousand whales).

7.2. Fin whales were the most important commercial species after the decline of blue whale abundance. Over 700,000 fin whales were taken in the Southern Hemisphere. The population status of fin whales is not known very precisely, but their population is likely to have been reduced by commercial whaling to less than a few percent of its original size. Estimates of recent abundance are in order of 5000-8000 whales, although some whales in more northerly waters will not have been counted.

7.3. Humpback whales were early targets of commercial whaling and were exploited on their feeding grounds in the Antarctic and on their coastal migration routes and breeding grounds. They were the target of large scale illegal Soviet whaling after they were ostensibly protected by the IWC in 1963. Approximately 220,000 Antarctic humpback whales were taken. Although probably depleted by commercial whaling to a few percent of their original abundance, a number of stocks appear to be recovering. The status of some small breeding populations around several Pacific Islands is uncertain.

7.4. Minke whales were virtually ignored by the whaling industry until the 1970s, after which they became the most numerically important species in the commercial catches until the 'moratorium' took effect in 1986/87. Although over 100,000 minke whales were taken by commercial whaling operations, the IWC's 'moratorium' decision limited the decline in the stocks. Estimates of current abundance are unclear. Different procedures for the analysis of abundance estimates also produce substantially different results. Estimates range from around 300,000 whales to more than 700,000 whales. The causes of the differences are yet to be identified. The most recent IDCR/SOWER survey estimates are significantly lower than those from earlier surveys. The reason for the estimated drop in abundance is unknown. Just over 10,000 whales have been taken to date by Japan under special permit.

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Appendix 2: M Mangel, *An Assessment of Japanese Whale Research Programs Under Special Permit in the Antarctic (JARPA, JARPA II) as Programs for Purposes of Scientific Research in the Context of Conservation and Management of Whales*, April 2011

**An Assessment of Japanese Whale
Research Programs Under Special
Permit in the Antarctic (JARPA,
JARPA II) as Programs for
Purposes of Scientific Research in the
Context of Conservation and
Management of Whales**

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1. EXECUTIVE SUMMARY

1.1. In this Expert Opinion, I provide an assessment of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) and JARPA II (the second phase) as programs for purposes of scientific research in the context of conservation and management of whales based on generally accepted scientific practice and criteria developed by the International Whaling Commission (IWC) for Special Permit research.

1.2. I begin with an overview of whaling in the Southern Ocean, as it pertains to the assessment of JARPA and JARPA II as programs for purposes of scientific research in the context of conservation and management of whales. I explain how the Revised Management Procedure (RMP) of the IWC is an advance in management ideas that allows effective conservation and management of whales without detailed biological knowledge and without use of lethally obtained data.

1.3. Consistent with generally accepted scientific practice and with criteria identified by the Scientific Committee of the IWC, my opinion is that the essential characteristics of a program for the purposes of scientific research in the context of conservation and management of whales are that the program:

- a) has defined and achievable objectives that aim to contribute knowledge that is important to the conservation and management of whale stocks;
- b) employs appropriate methods that are likely to achieve the stated objectives, including:
 - (i) lethal methods only where the objectives of the research cannot be achieved by any other means (for example, by the analysis of existing data and/or the use of non-lethal research techniques);
 - (ii) setting sample sizes using accepted statistical methodology; and
 - (iii) linking mathematical models to data consistently;
- c) includes periodic review of research proposals and results and adjustment in response to such review; and
- d) is designed to avoid adverse effects on the stocks being studied.

1.4. I then assess JARPA and JARPA II against those criteria and conclude that they meet none of them.

1.5. First, JARPA II does not - and JARPA did not - have defined and achievable objectives that aim to contribute knowledge that is important to the conservation and management of whales. JARPA II has - and JARPA had - broad and vague objectives that conflate exploration and exploitation. Their stated

objectives could be used to justify almost any activity that Japan wished to pursue. Their contribution to management remains undemonstrated after 24 years and the potential of JARPA II to bring new knowledge about the conservation and management of whales is very low, if it indeed exists at all.

1.6. Second, JARPA II does not - and JARPA did not - employ appropriate methods likely to achieve its stated objectives. Although a variety of empirical methods are in principle employed in JARPA II, a majority of effort is devoted to lethal take despite the existence of problems with the data generated by that lethal take and despite the existence of other, non-lethal, methods that can provide nearly all of the same information. The reasoning that underlies the setting of sample sizes (the number of animals killed) and the distribution of sampling effort is vague, unclear, and at times simply wrong. The links between the proposed models of the ecosystem and the field work, particularly lethal take, are weak and unclear.

1.7. Third, most of the work done in association with JARPA and JARPA II is published outside of standard peer-reviewed literature. Only about 15% of the published papers are peer-reviewed and potentially relevant to the stated objectives. Workers in JARPA and JARPA II have not demonstrated an ability to respond to criticism or to admit being wrong.

1.8. Fourth, there is no record of any attention being directed to avoiding unintended adverse consequences in the design of JARPA or JARPA II; indeed they proceed on the assumption that the take will have no effect on the stock.

1.9. My conclusion is that JARPA II is - and JARPA was - an activity for the collection of data in the Southern Ocean. However, both have failed at turning data into knowledge or in improving the conservation and management of whales. JARPA II is not a program for purposes of scientific research in the context of conservation and management of whales.

2. INTRODUCTION

2.1. I have been asked by the Government of Australia to prepare an independent report on the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) and related matters. The full terms of reference provided to me are found in Appendix B. Briefly, they are:

- *To identify and outline the essential characteristics of a program undertaken for purposes of scientific research; and*
- *To provide a critical analysis of the objectives, methodologies and other features of JARPA II and, in doing so, assess whether JARPA II has the essential characteristics of a program undertaken for purposes of scientific research.*

2.2. I was given background material briefly described in **Appendix C**.

2.3. In order to meet the terms of reference, it is essential to understand the characteristics of a program for purposes of scientific research in general and in the specific context of conservation and management of whales. It is also essential to understand the nature of JARPA II (and its predecessor JARPA), so that they can be assessed as to whether they may properly be characterized as programs for purposes of scientific research in the context of conservation and management of whales.

2.4. In this paper, I

- a) give a brief overview of whaling in the Antarctic, emphasizing the key points that are relevant for the subsequent analysis;
- b) identify the essential characteristics of a program for purposes of scientific research in general and in the specific context of conservation and management of whales;
- c) provide an overview of the relevant aspects of JARPA and JARPA II, and assess them against the essential characteristics of a program for purposes of scientific research in the context of conservation and management of whales; and
- d) conclude with a summary of that assessment.

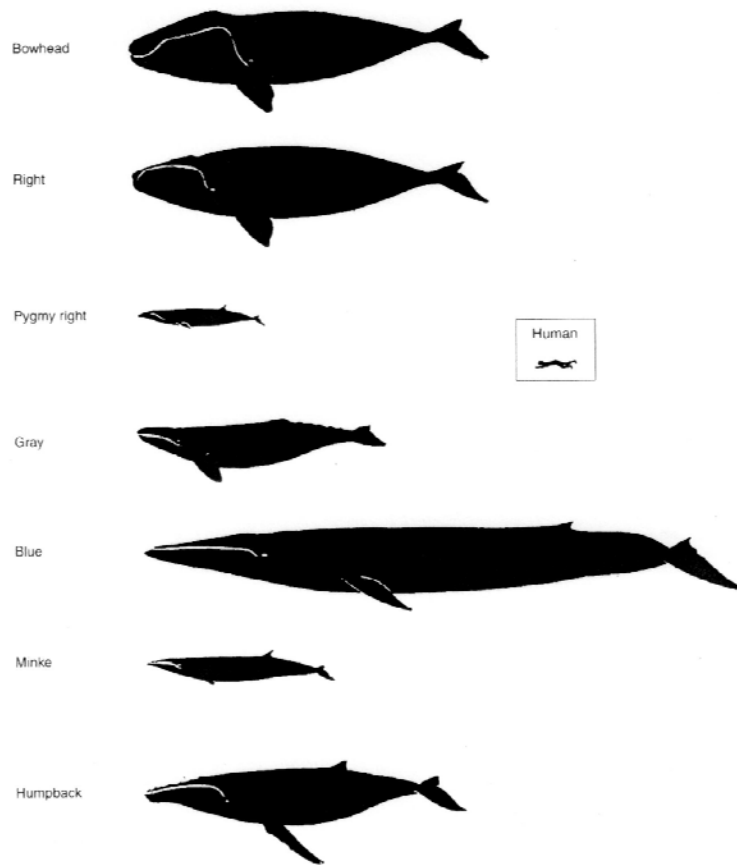
3. AN OVERVIEW OF WHALING IN THE ANTARCTIC

3.1. Modern commercial whaling began early in the 20th century, using land-based stations (Mackintosh 1965). The first Antarctic whaling station was established at South Georgia in 1904. Whaling at the South Shetland and Orkney Islands almost exclusively used factory ships, which were tankers fitted with a factory plant and moored in a harbor to function as a floating land station. Land-based whaling ran from about 1904 to 1928, after which the great era of pelagic (at sea) whaling followed. By 1930/31, there were 41 pelagic factories with over 200 catching vessels working in the Antarctic.

3.2. However, during the 1930/31 Antarctic whaling season, more whale oil was produced than the world market could absorb. Because of this, the whaling companies agreed to limit their output and devised a plan to regulate catches by the amount of oil produced. Since the species of major commercial take in the early 20th century were the blue, fin, sei, and humpback whales (Mackintosh 1965), an effort was made to put them into a common currency. One blue whale was considered the same as 2 fin, 2.5 humpback, or 6 sei whales; giving rise the notion of the Blue Whale Unit (BWU) (Gambell 1999, Gillespie 2005).

3.3. In the figure below (from Bannister 2002), I show the relative sizes of some of the whales.

3.4. The blue, fin, humpback and sei were called the great whales. At the time that the BWU was conceived, minke whales were not considered relevant to commercial whaling because of their small size. Tønnessen and Johnsen (1982) noted that, had minke whales been considered, one BWU would have been at least 30 and possibly up to 60 minke whales.



The International Whaling Commission

3.5. The inter-governmental International Whaling Commission (IWC) (Gambell 1999, Donovan 2002) is charged, among other things, with regulating whaling in the Southern Ocean. The IWC was established in 1946 through the International Convention for the Regulation of Whaling (ICRW). The ICRW consists of two parts: the convention itself and a schedule of regulations intended to govern whaling operations. Contracting Parties to the ICRW subscribe to:

- a) safeguarding for future generations the great natural resources represented by whale stocks;
- b) protecting all species of whales from further over-fishing;
- c) seeking the optimum level of whale stocks;
- d) providing an interval for recovery to certain species of whales now

depleted in numbers; and

- e) establishing a system of international regulation for the whale fisheries to ensure proper and effective conservation and development of whale stocks (Gillespie pg 396-397).

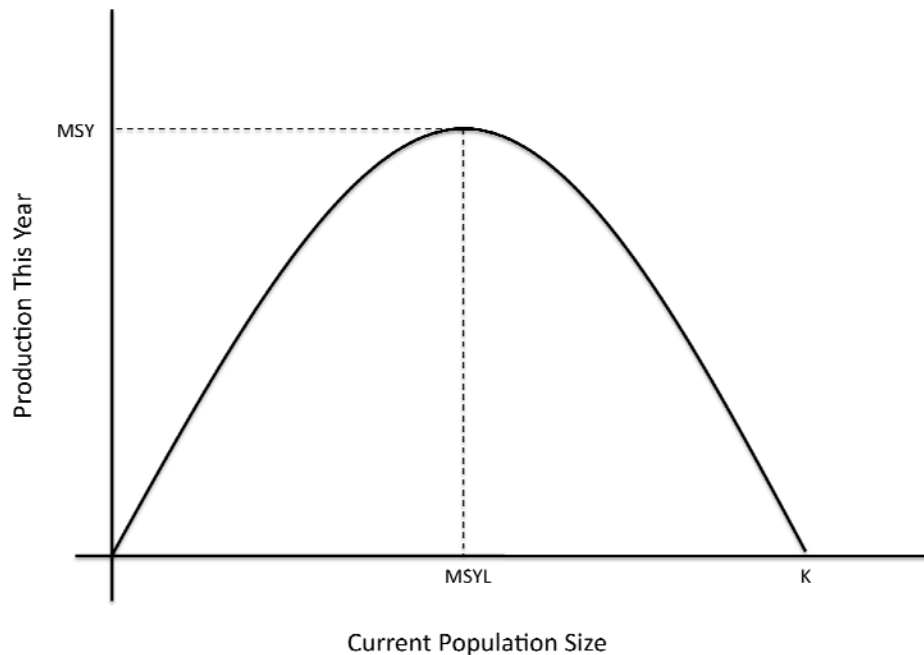
3.6. The IWC has a Scientific Committee that meets annually, usually for two weeks before the annual Commission meeting, and that often also holds *ad hoc* meetings between sessions.

3.7. From its inception until about 1972, the IWC regulated whaling using the BWU. The overall catch limit was initially set to 16,000 BWUs, with no reference to specific species except that some species (e.g. right whales, humpback whales) were designated as protected. This was essentially an open access fishery (as defined by Clark 2006), in which nations raced to catch as many whales as possible before the quota was reached, leading to waste during processing, an uneconomical increase in the number of catcher boats, and poor conservation of the whales (Donovan 2002). Furthermore, the quotas were often exceeded. By 1952 it was recognized that there were problems with this management procedure, and in 1963 a small group of eminent scientists appointed by the IWC recommended elimination of the BWU as a method of setting catch limits (Clapham and Baker 2002). By 1971/72 the catch limit had been reduced to 2,300 BWUs and both blue and humpback whales had been protected from commercial whaling.

Fundamentals of the Dynamics of Populations

3.8. I now briefly describe how the dynamics of populations are characterized and some of the terminology used in the management and conservation of whales.

3.9. In population dynamics, a key focus is the change in population size from one year to the next. This is called net production and is measured most simply as the number of individuals in one year minus the number of individuals in the previous year. Such net production usually depends upon current size of the population and is typically a peaked function of current population size as shown in the figure below:



3.10. When there are no individuals, in the absence of immigration, net production is 0 since without any individuals no new individuals can be produced.

3.11. When there are many individuals (indicated by K on the x-axis in the figure) net production is also zero because competition for food causes a balance between births and deaths. (The rates of birth and death, the latter commonly called the rate of mortality, are called the demographic (or biological) parameters of the population.) When such balance between births and deaths is achieved, the population is in a state known as carrying capacity. In the absence of environmental fluctuations, this is the size at which the population would stabilize if it were to remain unexploited.

3.12. The population size that maximizes net production is called the Maximum Sustainable Yield Level (MSYL) and the level of production associated with that population size is called Maximum Sustainable Yield (MSY). Any catch that is higher than the MSY indicated by the peak of the curve in Para 3.8 is not sustainable, since more is being taken from the population than is being produced by it. The MSY Rate (MSYR) is the ratio of MSY to MSYL. For many years, and continuing to this day in some cases, managing fisheries for MSY was a standard approach.

3.13. Ricker (1975) defined MSY as “[t]he largest average catch or yield that can continuously be taken from a stock under existing environmental conditions.” Ricker’s definition hinges on three key words: average, continuously, and

existing. That is, in nature there is not a single curve as shown in Para 3.8 but a family of such curves, depending upon environmental (both physical and biological) conditions. For example, the changing biomass of krill as water temperature changes will affect the carrying capacity for whales (Wiedenmann et al 2008). As environmental conditions vary, the shape of the curve, location of carrying capacity (K) and the value of MSY may also vary. Moreover, if one does not know the curve precisely and one does not know the current population size precisely, then one never knows that the catch is sustainable even assuming that environmental conditions are constant. Consequently, uncertainty and environmental variation make MSY a fragile concept for management purposes.

3.14. Larkin (1977) argued that MSY should be put to rest because, among other things, it led to yields that were too high and unsustainable. He wrote “[w]hatever lies ahead in the development of new concepts for harvesting the resources of the world’s fresh waters and oceans, it is certain that the concept of maximum sustained yield will alone not be sufficient” (Larkin 1977, 10). That is, MSY should be considered a constraint rather than a target since harvests greater than MSY are not sustainable (Mangel et al 2002).

The New Management Procedure

3.15. After 1972, the IWC abandoned the BWU and in 1974 adopted a realignment of its management procedures through the development of a New Management Procedure (NMP). The NMP was designed to calculate catch limits for whale populations using the fundamental principles of population dynamics as described in Paras 3.8-3.14. The goals of the NMP were to bring each of the whale stocks to the particular population level at which MSY could occur and to protect stocks whose population sizes were estimated to be below a fixed fraction of their pre-industrial exploitation level (Gambell 1999, Donovan 2002).

3.16. The NMP aimed to separate stocks into the three categories, based on the extent to which the size of the stock varied from MSYL (Gillespie 2005):

- a) initial management stocks (those considered to be above the size generating MSY and which could thus be harvested down to that level);
- b) sustained management stocks (which were close to the size generating MSY and would be maintained there); and
- c) protection stocks (those that would not be harvested).

3.17. However, over time it became clear that the NMP had serious problems (Cooke, 1995; de la Mare 1986abc, Holt 2004). The NMP was based on MSY, although at the time it was proposed, the data required to calculate MSY were lacking. Thus, two *ad hoc* rules were added. First, stocks that had been subject to stable catches over considerable periods of time would continue to be harvested as

long as there was no evidence of a decline. Second, for stocks that had not been subject to serious previous exploitation, catches would be limited to 5% of the estimated size of the stock. This rule was precautionary, in the sense that before harvest began, population estimates had to be obtained. However, the NMP did not deal with the question of how to incorporate the uncertainty in the estimates of population size. Indeed, one of the failings of the NMP was that it did not stipulate how existing data were to be used to assess the state of the stock and it could not handle uncertainty regarding the status of the stock in a robust manner (Cooke 1995, pg 652).

3.18. Cooke (1995, pg 648) noted

The main difficulty in operating the NMP was that there were insufficient data for its implementation. For most stocks there was no reliable estimate of population size, let alone an estimate of the MSY or the relation between the current population and the MSY level. Furthermore there was no particular incentive to collect data. Even if relatively good data had been available, there would still have been considerable uncertainty about the state of whale stocks with respect to the NMP criteria, but there were no guidelines as to how to cope with these uncertainties. Finally, the 'behaviour' of the procedure was unknown. By this is meant the expected long-term consequences of applying the procedure to whale stocks.

Indeed, it was still possible for whale stocks to be depleted even if the NMP were followed precisely and the population dynamics of the whales matched those assumed in the NMP because of the uncertainty associated with estimates of population size (Cooke 1995).

The 1982 Moratorium on Commercial Whaling

3.19. The IWC adopted the moratorium on commercial whaling in 1982, setting catch limits for all stocks at zero with effect from the 1986 coastal and the 1985/86 pelagic seasons. The commercial whaling moratorium remains in force today.

3.20. One of the objectives of the decision to institute the moratorium was to provide time for the IWC to establish its best estimate of population sizes together with a suitable procedure to facilitate sustainable catch limits. A moratorium on commercial whaling would also enable the IWC to develop mechanisms by which the whaling industry could be effectively regulated to avoid the problems of the past.

The Revised Management Procedure (RMP)

3.21. Because of the serious problems with the NMP, the IWC spent about a decade developing a Revised Management Procedure (RMP). The specific goals of the RMP are:

- a) to achieve stable catch limits, thus allowing the orderly development and regulation of the whaling industry;
- b) to manage acceptable risk and to ensure that a stock is not depleted to the point where the risk of extinction is not negligible; and
- c) to ensure the highest possible continuing yield from each whale stock.

3.22. In order to achieve the goals of the RMP, the IWC agreed that (IWC 1994, 1999):

- a) commercial whaling would be permitted only for populations in areas and seasons for which catch limits (calculated by its Scientific Committee and approved by the Commission) were in force;
- b) catches would reach a maximum level when a stock was at 72% of its unexploited level; and
- c) there would be no whaling on stocks that were below 54% of their unexploited level.

3.23. The aim of the RMP is not to attempt to calculate MSY or any other optimum level. Rather, it is intended to effectively manage whaling while dealing with the inherent uncertainty in the Southern Ocean ecosystem. Holt (2004, pg xii-xiii, italics added) described the RMP in this manner:

Although the RMP uses a population model for the estimation of stock status and the calculation of catch limits, the model itself is hugely simplified. *It does not attempt to emulate the dynamics of any real whale population, and, in fact, does not even explicitly include demographic parameters such as natural mortality rate.* Rather, the simple model is part of a freely invented algorithm that has been shown, by simulations, to meet the targets efficiently and to be robust to errors and such things as environmental changes (Holt 2004, pg xii-xiii, emphasis added).

3.24. In much the same way as a good card player will compute the odds that an opponent has a certain card, under the RMP statistical methods are used to produce a probability distribution for the catch limit and the current population size, which is measured as a fraction of the unexploited level. Catch limits are computed using a Catch Limit Algorithm (CLA), which sets the catch limit to be 0 if the population abundance is estimated to be less than 54% of its unexploited level. If population abundance is estimated to be more than 54% of unexploited level, then the catch limit is set at a specified fraction of the population above the unexploited level.

3.25. The data used in the CLA comprise only:

- a) total catch statistics based on previous whaling (past data); and
- b) data obtained through sighting surveys in which ships follow a prescribed track line and count the number of whales that are seen (current and future data).

3.26. The RMP thus eliminates the use of data obtained from whaling-dependent or other lethal-source data, which are often unreliable for purposes of management because they represent non-random samples of the population. Consistent with this, in 1995 the IWC adopted a Resolution (1995-9) that stated, among other things, “that scientific research intended to assist the comprehensive assessment of whale stocks and the implementation of the Revised Management Procedure *shall be undertaken by non-lethal means*” (emphasis added).

3.27. The development of modern computational tools, particularly the capacity to undertake extensive computer simulation, allowed thorough testing of the RMP (Kirkwood 1992, Cooke 1995). That is, the RMP was tested using sets of pseudo-data that had been generated by other, more complicated population models. The point of this testing was to ask the question: “how effective is the RMP in setting catch limits that maintain or restore populations to acceptable levels when various demographic parameters are unknown, or when the structure of the actual population dynamics differs from those assumed in the RMP?”

3.28. The tests allowed assessments of the performance of the RMP with incorrect assumptions about the dynamics of the stock, varying initial abundance, bias in sighting surveys, different relationships between true abundance and catch per unit effort (a common proxy for abundance), uncertain or inaccurate catch histories, and/or rare episodic events (e.g. epidemics). The tests showed that the RMP was robust to these variations, maintaining catch and preventing the depletion of the population (Cooke 1995). Most importantly, the tests allowed the IWC to conclude that the RMP functioned effectively without making specific assumptions about the population dynamics of whales and taking into account possible errors in historic catch record.

3.29. In contrast, I know of no peer-reviewed published paper that demonstrates fundamental flaws with the RMP that can only be corrected through field-based programs that involve lethal take.

3.30. In conclusion, the RMP is an “advance in management ideas” (Holt 2004, pg xiii) and consistent with other scientific work on the most effective level of complexity for models used in management of living marine resources (Ludwig and Walters 1985, Hilborn and Mangel 1997). As a member of the Committee of Scientific Advisors of the U.S. Marine Mammal Commission 1989-1996, I observed but did not participate in the development of the RMP. Returning to it now after a 15 year absence, I am able to assess it with a fresh viewpoint and concur with Holt that it is indeed a substantial advance in management.

3.31. In summary

- The Southern Ocean ecosystem is characterized by uncertainty in many dimensions including the dynamics of populations.
- The commercial whaling moratorium, effective since 1986, has allowed the IWC to develop and test the Revised Management Procedure (RMP) as an effective tool for the future management of whaling.
- The RMP
 - uses an intentionally simple model of population dynamics;
 - is designed so that lethally obtained data are not required;
 - is designed to encourage the collection of sighting information; and
 - has been rigorously tested and found to be robust to variations from its assumptions.

4. CHARACTERISTICS OF A PROGRAM FOR PURPOSES OF SCIENTIFIC RESEARCH

Science as a Process

4.1. The goal of science is to understand the natural world by providing a framework to account for observations already taken and to make predictions of new observations. This goal is achieved by putting new knowledge in the context of existing knowledge, recognizing that even when there is progress the conclusions are transient (that is, subject to ongoing testing and revision) but the methods are not. It is ongoing testing that is the basis for the self-correcting nature of science. Without that self-correction, one cannot claim to be doing science.

4.2. Modern science is complex, and this has led to the ‘cult of the expert’ (Jenkins 2004). However, much of the complexity can be understood without extensive technical training if one focuses on the characteristics of science as a process for converting data into knowledge. Jenkins (pg 6) wrote “[t]he essence of science is not some nuggets of information about the natural world but rather an ongoing process for gradually learning how the world works, with occasional breakthroughs in the form of major discoveries. At any given time, the understanding of a phenomenon is likely to be incomplete, with conflicting explanations and evidence. Scientists have learned to tolerate such uncertainty and even relish the challenges it offers.”

4.3. There are essentially two types of science: (i) textbook science (which most people learn in school) and (ii) science as practiced by scientists, or ‘frontier science’ (Pickett et al 2007).

4.4. Textbook science is typically identified with the notion of ‘the scientific method’, which involves:

- a) devising alternative hypotheses;
- b) devising an experiment (or several of them) with alternative possible outcomes; each of which will, as nearly as possible, exclude one or more of the hypotheses;
- c) carrying out the experiment so as to get as clear a result as possible; and
- d) recycling the procedure, making sub-hypotheses or sequential hypotheses to refine the possibilities that remain.

In textbook science, we repeatedly challenge a hypothesis with experiments, and if the hypothesis stands up to repeated experiments, it is treated as if it were true.

4.5. Textbook science is a simple, linear process; it is also a myth (Grinnell 2009, l. 70). Science as practiced is more complicated than this and the path to discovery is more convoluted. In the ecological sciences in particular, it is often impossible to conduct experiments, but observation can substitute for experiment (Mangel 2010). In consequence, scientists proceed by assembling many different strands of evidence, which, if collected properly, can be woven into a strong and intellectually sound fabric of conclusions.

4.6. Whether it is textbook or frontier, science does not consist of simply accumulating data. Indeed, we now often face the problem of data ‘poisoning’ by having too much data and too little understanding. Valiela (2001, pg 11) noted “[d]escription is not tantamount to understanding: descriptive data can not by themselves furnish an explanation of the mechanisms behind the observations, nor can they easily identify the processes that brought about the situation described. Complicated descriptions can become goals in themselves and may delude us into thinking progress has been made”. Gopnik (2009, pg 71) noted “[a]ll seeing is impregnated with thinking. If science were simply a bucket into which descriptions fell, it would be a heap of facts. It is in the jump beyond, to a general rule, a theory, even a vision, that science advances”.

4.7. Science as practiced by scientists invariably involves weaving many strands of data together to produce new knowledge. The way that this is done depends upon the problem that is being studied, especially in complicated ecological situations where experiments are difficult to impossible. Simply put, the essence of science is to extract knowledge from data and, if one does not know in advance how the data will be analyzed to extract such knowledge, one is not ready to collect the data.

4.8. In accord with generally accepted principles of scientific practice (Valiela 2001, Jenkins 2004, Pickett et al 2007) a program for purposes of scientific research:

- a) Has an over-arching conceptual framework that leads to a set of focused questions (hypotheses);
- b) Employs the correct set of empirical tools to answer the questions including setting sample sizes with sound statistical reasoning, and linking mathematical models and data appropriately;
- c) Has proper assessment through the community of scientists; and
- d) Is designed to avoid unintended negative ecological consequences.

An Over-Arching Conceptual Framework Leading to a Set of Focused Questions (Hypotheses)

4.9. A program for purposes of scientific research requires an over-arching conceptual framework. Without it, one simply does ‘exploratory analyses’ hoping that something interesting will arise from random activity. This rarely works; the Nobel-prize winning immunologist Peter Medawar once wrote “[n]o new principle has emerged from a heap of facts”. When people speak of “Newton’s Theory of Gravity” or “The Theory of Relativity” or “Darwin’s Theory of Evolution by Natural Selection” they mean such overarching conceptual frameworks.

4.10. The conceptual framework provides a clearly specified context and purpose and sets the ground for clearly defined and achievable objectives, but it does not itself lead to a program of work. Rather, it inspires and frames the investigation of particular questions and hypotheses.

4.11. To be testable, questions and hypotheses must be operationally defined – that is, it must be possible to answer the question using existing empirical or theoretical methods or there must be excellent prospect that new methods can be developed to answer the question. For example, Valiela (2001, pg 6) noted “[i]t is a waste of time, of course, to worry about the density of angels on any surface, let alone the head of a pin, unless we have a working seraphometer available”.

4.12. Any idea that cannot be operationally defined cannot be studied by empirical science. Similarly, objectives that cannot be tested are not scientific and thus not achievable. In many ecological settings, unlike textbook science, hypotheses may not be mutually exclusive in that an observation clearly excludes hypothesis “A” but not “B”. However, even in this case if the hypotheses are operationally defined it is possible to test them and assess the relative strength of the hypotheses provided by the data (Hilborn and Mangel 1997, Wolf and Mangel 2008).

4.13. In the ecological sciences, it is often impossible to conduct experiments. For example, it is not possible to undertake experimental manipulation when attempting to understand the dynamics of populations of blue whales. That is, there is no possibility to replicate an experiment, since there are so few individuals, those individuals may actually constitute a single population, and the time scale of their population dynamics is very long. Nevertheless, we are not prevented from asking questions about blue whales and observation provides a viable means by which to attempt to answer those questions (see for example, Branch et al 2004 on blue whales, Mangel 2010 on Steller sea lions).

The Correct Set of Tools

4.14. Once a set of questions has been established, a program for purposes of scientific research should focus on the important step of identifying the best tools that will answer those questions as clearly and unambiguously as possible. These tools should be selected following an evaluation of their effectiveness in achieving the stated objectives.

Setting Sample Sizes

4.15. Setting the size of a sample of data to be taken in order to estimate an unknown parameter so as to test a hypothesis depends on:

- a) how accurately the parameter needs to be known (how close the average value of the estimate is to the unknown parameter);
- b) how precisely it needs to be known (how much variation surrounds the estimate of the average value); and
- c) what kinds of statistical assessments will be done with the data.

Formal statistical methodology provides procedures by which the sample size required to obtain a specified confidence that we have in a particular conclusion can be determined.

Uses Models Appropriately

4.16. Models have become a cornerstone for extracting knowledge from data. A model is a stylized description used in analyzing or explaining a phenomenon. A model is not a hypothesis in itself. Models are rather tools used in the evaluation of hypotheses. Models serve a number of purposes, one of which is to assist in determining what needs to be measured and how accurate and precise the measurement needs to be. Models that are purported to be linked to field programs must be consistently and appropriately connected to the data from the field program.

Proper Assessment through the Community of Scientists

4.17. Scientists form communities and networks that link to the past and provide connectedness in the present. Grinnell (2009, 1.158) noted “[e]ach researcher or group of researchers initiates work in the context of prevailing experiences and beliefs – the starting point and justification for further action”. That is, individuals in a program for scientific purposes collaborate in a self-correcting community. Even the greatest geniuses of science (Newton, Darwin, Einstein) had networks and communities and made numerous corrections in their research programs.

4.18. Scientific debate and disagreement is good if it leads to questions that can be resolved by reliable research. Views that are not debatable because they are based on immutable assertions are not scientific since self-correction is not possible. A community with a free exchange of ideas allows scientists to identify occasions when they may be wrong in their research and affords them the opportunity to change their minds. Indeed, delight in the unexpected is the lifeblood of science: “[a]lmost alone in belief systems, science welcomes the disturbingly new” (Raymo 1991, pg 179). Grinnell (2009, l. 385) noted “[t]hey [scientists] are open to the possibility of being wrong”. Responding to critical comments and changing research paths is an essential part of the practice of science. An individual who is not open to the possibility of being wrong cannot be a scientist. Furthermore, the scientific community is obliged to expose assumptions, whether they arise from within science or from society, and to explore the implications of those assumptions as they affect the practice of science (Pickett et al 2007).

4.19. That is, scientists belong to a community of independent thinkers cooperating in a relatively free spirit so that a series of independent initiatives becomes organized into joint achievement by “mutually adjusting themselves at every successive stage to the situation created by all the others are who acting likewise” (Polanyi 1969, pg 51).

4.20. Individual scientists sit at the nexus of the world to be studied (in which discovery is the objective) and the research community (in which credibility is the metric). The individual scientist investigates the world and when he or she believes that a discovery is made, the process of conversion from discovery to credibility begins (Grinnell 2009, l. 83). The community of scientists is responsible for the proper assessment and quality control of scientific ideas, in which discovery becomes credibility, through the process of peer review.

4.21. Peer review is a key component for the assessment of the value of ideas (Resnik 2011) and is essential because when the value of an idea is undermined it must be rejected. Peer review both provides quality control on the level of standards of scholarship and methodology for the scientific community and it helps authors improve their research proposals and resulting manuscripts. Peer-review also leads to the generation and establishment of scientific opinion (Polanyi 1969), which is held not by a single individual, but by a collection of individual scientists each of whom endorses the opinions of others. Of course, scientific opinion can be wrong, but reliable science responds to valid criticism, which is how science advances.

4.22. Peer-review requires a multi-dimensional approach for both proposals for research and manuscripts describing the results of research (Polyani 1969). For problems in applied ecology, at the minimum peer-review assesses:

- a) plausibility of an idea;
- b) scientific value of an idea, consisting of accuracy, intrinsic interest, and importance;
- c) originality of an idea, (which is often assessed by the degree of surprise brought about by the idea); and
- d) applicability of an idea, assessed by how the work can inform the motivating applied question.

Plausibility and scientific value encourage conformity whereas originality encourages creative thinking and dissent. Applicability ensures that the ideas and the work contribute to solving the motivating applied problem.

4.23. The criteria in Para 4.22 can be melded into questions typically asked by referees assessing proposals for research (Grinnell 2009, l. 332):

- a) Is there is a question to be answered?
- b) Can the research group answer it?
- c) Will getting the answer will be worth the effort?

Unless the answers to all of these questions are “yes”, work should not begin.

4.24. For publications after work has already been done, the questions typically asked by referees are (Grinnell 2009, l. 715):

- a) Are the techniques appropriate?
- b) Could any scientist potentially have done the work?
- c) Are the results interpreted in an appropriate fashion?
- d) Are the studies reasonable in light of ideas previously accepted by the community?

Unless the answers to all of these questions are “yes”, the article should not be published.

4.25. Articles that are not peer-reviewed are considered to be ‘grey literature’ and are given less weight than those that have survived the peer-review process. As retractions in high profile journals show, peer review is not perfect, but it is nevertheless an essential characteristic of the practice of science.

4.26. In summary, it is essential to a program for purposes of scientific research that there be peer review from the outset of the research program (since a program should not begin until it has been assessed as feasible through a matching of methods and objectives); that there be peer review throughout the operation of the program (since throughout its duration a program should respond to deviations from objectives by adjusting methods or even abandoning the program in the face

of inadequate progress); and that the program end with publication of results in peer-reviewed literature (since it is through peer-reviewed publication that claims of discovery are given scientific credibility).

Is Designed to Avoid Unintended Negative Consequences

4.27. The history of human interaction with the natural world is replete with examples in which human interventions have led to unexpected and surprising consequences. Some of the best examples include those involving the resistance of bacteria to antibiotics and of insects and weeds to pesticides or herbicides respectively.

4.28. Scientific research may have unintended consequences that increase the chance that the population being studied will decline or possibly become extinct. For example, Harrison et al (1991) concluded that their very study of a population of butterflies in California may have lead to its extinction.

4.29. Thus a program for purposes of scientific research will be designed to achieve a clearly identified outcome while avoiding unintended negative consequences that will put the population or stock being studied at risk. This should include the identification of potential problems before fieldwork begins and monitoring of the risk of unintended negative consequences during empirical work.

IWC Criteria for Special Permit Whaling

4.30. The Scientific Committee of the IWC has spent many years considering how the broad concepts in the previous paragraphs apply to scientific research in the context of conservation and management of whales. Their most recent thinking is summarized in IWC (2009). According to IWC (2009), proposals for Special Permit research are to be structured according to:

- a) Objectives of the study (Paras 4.9-4.13; 4.39a);
- b) Methods to address the objectives (Paras 4.14-4.16; 4.39b)
- c) Assessment of potential effects of catches on the stocks involved (Paras 4.27-4.29; 4.39d);
- d) A note on the provisions for co-operative research for both field and analytical studies (Paras 4.17-4.26; 4.39c); and
- e) A list of scientists proposed to be sent to intersessional review workshops (Paras 4.17-4.26; 4.39c).

4.31. According to IWC (2009), the objectives of the study should:

- a) Be quantified to the extent possible;
- b) Be arranged in two or three categories (primary, secondary, ancillary);
- c) Include a statement for each primary category regarding whether it involves lethal sampling, non-lethal sampling, or both;
- d) Include at least a brief statement of the value of each primary objective assessed according to the ability to i) improve the conservation and management of whales stocks; ii) improve the conservation and management of other living marine resources in the ecosystem; and/or iii) test hypotheses not directly related to the management of living marine resources; and
- e) Refer, particularly for d(i) and d(ii), to past recommendations of the Scientific Committee, carrying out implementations or reviews of the RMP, improved understanding of other high priority issues, or recommendations of other inter-governmental agencies.

4.32. According to IWC (2009), the methods should include:

- a) Field methods that describe the species studied, the number, time frame and area; the sampling protocol for lethal aspects; and an explanation of why non-lethal methods or analyses of past data are insufficient;
- b) Laboratory methods;

- c) Analytical methods, including when appropriate estimates of whether the proposed sample sizes will be sufficient to provide accurate answers to the questions being studied; and
- d) A time frame with intermediary targets.

4.33. According to IWC (2009), the assessment of potential effects of the proposed take on the stock should include:

- a) A summary of what is known concerning stock structure in the area concerned;
- b) An estimate of abundance of the species to be studied, including an assessment of the level of uncertainty of the estimates of abundance;
- c) Submission of a simulation study on the effects of permitted takes on the catch, taking into account uncertainty and projecting forward for the life of the proposed permit, and into the future.

4.34. IWC scientists, like marine mammal biologists in general, understand that sometimes lethal take can provide information that other means of study cannot (Paras 4.31, 4.32). For example, although progress is being made, there are still no effective non-lethal means of aging whales, so if age information is absolutely required, then lethal take is also required.

4.35. Lethal take destroys the object of study and thus eliminates the possibility of future information gained from the animal that is killed. Thus, scientists must ask how much information is gained using a lethal method relative to the information gained using a non-lethal method. Consequently, before using lethal take, one must carefully weigh the balance between the immediate information produced by killing the individual animal and the loss of future information that could be obtained were a non-lethal method used. In my opinion, only when the balance is strongly in favor of the former should the lethal take be used. That is to say, the information gained must be proportional to the impact resulting from the loss of the individual.

4.36. The Society for Marine Mammalogy, the only international professional society of marine mammalogists, recently published guidelines for treatment of marine mammals in field research in its official journal *Marine Mammal Science*. These guidelines recognize that lethal take may sometimes be appropriate and state that (Gales et al 2009, pg 736):

- a) researchers should use alternative non-lethal procedures when they are available and satisfy the objectives of the research;
- b) animals should be killed in the most humane and rapid method available;
- c) any population or stock-scale impacts should be minimized through prudent selection of animals (e.g., avoidance of reproductive females if

possible) and sample size; and

- d) where possible on-going activities outside the research community (e.g., hunts, by-catch events, strandings) should be utilized as a source of material for scientific studies of marine mammals.

4.37. The IWC criteria also recognize that when a scientific study is motivated by an important applied problem such as the conservation and management of whales, another crucial dimension is whether the knowledge extracted from the data can be used to answer the motivating applied problem. If the work cannot provide an answer to the motivating problem, it has failed in the key aspect of scientific inquiry, even if it produces other data. That is, a program that is motivated by an applied problem such as the conservation and management of whales must contribute to knowledge that informs the motivating problem. It is the responsibility of the proposers to demonstrate the objectives are both achievable with the methods proposes and that the work will contribute to the motivating applied problem.

Assessment Criteria Used in This Report

4.38. Consistent with the criteria for generally accepted scientific research and the IWC criteria described above, I now describe what I consider to be the essential characteristics of a program for purposes of scientific research in the context of the conservation and management of whales.

4.39. A program for the purposes of scientific research in the context of conservation and management of whales:

- a) has defined and achievable objectives that aim to contribute knowledge that is important to the conservation and management of whale stocks;
- b) uses appropriate methods that are likely to achieve the stated objectives, including:
 - (i) lethal methods only where the objectives of the research cannot be achieved by any other means (for example, by the analysis of existing data and/or the use of non-lethal research techniques);
 - (ii) setting sample sizes using accepted statistical methodology; and
 - (iii) linking mathematical and statistical models to data consistently;
- c) includes periodic review of research proposals and results and adjustment in response to such review; and
- d) is designed to avoid adverse effects on the stocks being studied.

5. DESCRIPTION AND ASSESSMENT OF JARPA AND JARPA II AS PROGRAMS FOR PURPOSES OF SCIENTIFIC RESEARCH IN THE CONEXT OF CONSERVATION AND MANAGEMENT OF WHALES

5.1. It is now possible to provide an overview of the relevant aspects of JARPA II together with an assessment of those aspects against the essential characteristics of a program for purposes of scientific research in the context of conservation and management of whales. Although my primary focus is JARPA II, several aspects of the assessment are retrospective (e.g. peer review) and others are prospective (the feasibility of the research plan to achieve the goals). Consequently, I consider both JARPA and JARPA II.

5.2. In brief, the analysis in this section leads to the following conclusions:

- a) The objectives of JARPA II are broad and poorly defined, often based on science by assertion in which statements are made as if they have been demonstrated but they in fact have not, and are formulated in a way that conflates exploration and exploitation.
- b) Although a variety of empirical methods are used, the majority of effort in JARPA II is directed toward lethal take, with sighting surveys compromised because they are conducted in conjunction with lethal take. The connection between JARPA II as a field activity and management models such as the RMP has not been demonstrated, and the process for setting sample sizes in JARPA II is not based on solid statistical reasoning or analyses of the accuracy required to meet the stated objectives.
- c) Individuals participating in JARPA II are disconnected from the self-correcting community of scientists and have not demonstrated the ability to revise or correct their work or methodologies, in particular by changing their minds concerning lethal take. The majority of the work conducted in association with JARPA and JARPA II is published outside the standard peer-review process and much of the work that is published in standard peer-reviewed literature refers only to the physiology and biochemistry of reproduction in whales, topics that are irrelevant to the stated objectives of JARPA and JARPA II.
- d) There is no record of any attention being directed to avoiding unintended negative consequences in the design of JARPA II.

5.3. By reference to the conclusions in Para 5.2, the general practice of science, and the IWC criteria for Special Permit Research, I conclude that JARPA II is not

a program for purposes of scientific research in the context of conservation and management of whales.

A program for purposes of scientific research in the context of conservation and management of whales has defined and achievable objectives that aim to contribute knowledge that is important to the conservation and management of whales

Vague & general objectives

5.4. Neither the goals of JARPA, nor those of JARPA II, have been clearly stated as defined and achievable objectives, nor as scientific questions or hypotheses that will contribute knowledge important to the conservation and management of whales.

5.5. In 1987 the objectives of JARPA were summarized as:

- Objective 1: Estimation of biological [demographic] parameters to improve the stock management of the Southern Hemisphere minke whale.
- Objective 2: Elucidation of the role of whales in the Antarctic marine ecosystem.

5.6. In 1995-97 two additional objectives were added:

- Objective 3: Elucidation of the effect of environmental change on cetaceans [whales and dolphins].
- Objective 4: Elucidation of the stock structure of the Southern Hemisphere minke whales to improve stock management.

5.7. Objective 1 was relevant to the NMP but is not relevant to the RMP; in addition, it was not achieved. Objectives 2, 3, and 4 are so broad that they can be used to justify almost any activity. Objectives 3 and 4 were added with little or no justification or connection to results that had previously been obtained under the program at the date of their addition. A program for purposes of science research will adjust its goals and objectives as information is obtained and analyzed, but this needs to be done with clear justification and reference to results obtained to date.

5.8. JARPA II continues the pattern established by JARPA of having broad objectives (IWC 2007a, pg 6):

- Objective 1: Monitoring of the Antarctic ecosystem.
- Objective 2: Modeling competition among whale species and developing future management objectives.

- Objective 3: Elucidation of temporal and spatial changes in stock structure.
- Objective 4: Improving the management procedure for minke whale stocks.

5.9. The objectives of JARPA II comprise a mixture of ecological monitoring and modeling (Objectives 1 and 2), field work (Objective 3), and management (Objective 4) with little, if any, intellectual connection. These objectives demonstrate confusion between monitoring (which may be important if tied to management, but cannot be considered research since there is no focused question or hypothesis) and management on the one hand, and alleged scientific investigation on the other.

5.10. Since lethal take without demonstrated scientific need is involved, the objectives of JARPA II blur potential scientific exploration and resource exploitation. Furthermore, as with JARPA, the objectives are so broad as to allow almost any activity.

The 'krill surplus' hypothesis

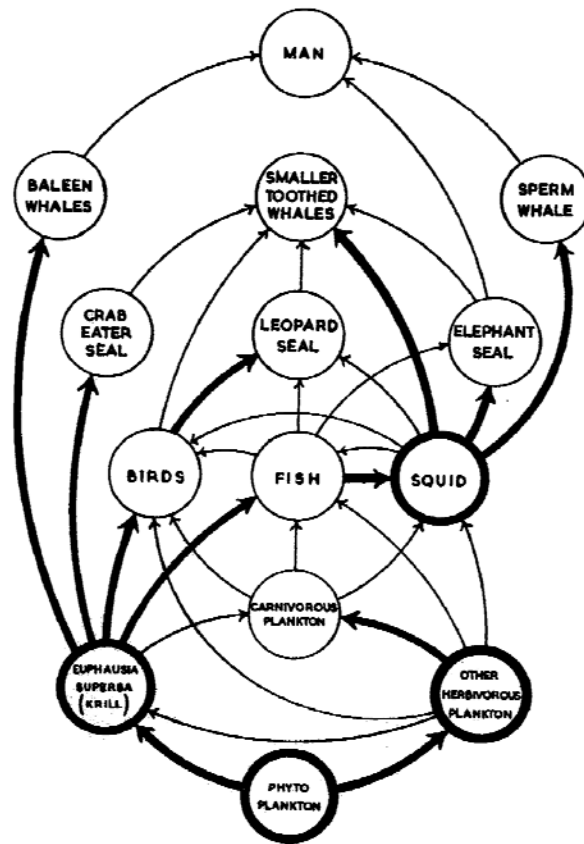
5.11. As described above (Para 4.9ff), the application of an overarching conceptual framework should lead to a set of focused questions or hypotheses to be investigated since without clear questions the likelihood of developing new knowledge is slight.

5.12. However, the only clearly identifiable hypothesis in JARPA or JARPA II is the krill surplus hypothesis, according to which the over-harvesting of the great whales lead to a krill surplus, which in turn lead to an abundance of minke whales. For example, Tamura and Konishi (2009) wrote “[t]his rapid decreasing of large baleen whales species provided the annual surplus of krill as much as 150 million tonnes (Laws, 1977ab). This surplus became available for other krill predators... This phenomenon is called ‘krill surplus from the depletion of baleen whales’” (pg 23).

5.13. Among JARPA workers, the krill surplus hypothesis quickly went from hypothesis (that is, an idea to be investigated and possibly rejected) to theorem (that is, a demonstrated result whose truthfulness is known). For example in the review of JARPA undertaken by the government of Japan, Murase et al (2006) wrote “[k]rill surplus’ caused by intensive commercial harvesting of large whales... has been central theorem of the Antarctic ecosystem study” (pg 1). In describing the possible 'krill surplus' as a 'central theorem', Murase et al suggest that it has already been proven. This is simply not the case, as will be explained below.

5.14. The Antarctic continues to be unveiled as an ecosystem of intriguing complexity in which simple predictions fail (Karentz and Bosch 2001). The figure

below (Mackintosh 1965) illustrates the network of interactions between predators and prey (arrows going from prey to predator).



5.15. From this figure, it is clear that the krill surplus hypothesis as applied in JARPA and JARPA II deals with only a small part of the entire Southern Ocean ecosystem. In addition, neither JARPA nor JARPA II are capable of testing it (Paras 5.36-5.37).

Data collected and the RMP

5.16. The literature concerning JARPA and JARPA II contains a variety of references to whaling policy that will be based on Maximum Sustainable Yield (MSY), which, as described above, has effectively been discarded by the IWC (Para 3.23ff). As noted, the RMP explicitly avoids the use of lethal-take data as a means of estimating abundance, instead placing a strong emphasis on data obtained by means of sighting surveys.

5.17. JARPA and JARPA II provide no demonstration of how the fieldwork undertaken in those programs would actually contribute to the analysis of MSY, MSYR, or to improving flaws in the RMP. In particular, JARPA II does not make clear how the improvement of management procedures for minke whale stocks can be considered scientific research, which might be appropriate if the RMP had been shown to be seriously flawed. However, neither JARPA nor JARPA II has demonstrated the existence of serious problems with the RMP.

5.18. JARPA was not relevant to the RMP, which (unlike the NMP) deliberately does not depend on accurate estimates of demographic parameters. In spite of this, JARPA II continues along the same path as JARPA. In particular, the collection of demographic parameters of whales by lethal take remains central in JARPA II, but has no relevance to the RMP.

Ecosystem model

5.19. At the meeting of the IWC that followed the 2006 Intersessional Workshop (IWC 2007b), “Japan re-iterated the goal of JARPA II, i.e. to develop an ecosystem model leading to sustainable use through multi-species management” (IWC 2007b, pg 41). Ecosystem-level models refer to conceptual, mathematical, or statistical models that include many components of the ecosystem, rather than a focus on a single species.

5.20. Although the development of ecosystem-level models is a foundation for Ecosystem Based Fisheries Management (Mangel 2010a), the contribution of JARPA or JARPA II as field programs to ecosystem-level management models is never made clear. Even though JARPA II’s objectives have changed, its practice has not been altered so as to collect the type of data required for a far broader ecological study (see Paras 5.36-5.37).

5.21. One of the justifications of JARPA and JARPA II is that they will provide the scientific information that is required for the resumption of commercial whaling. It is remarkable that the JARPA and JARPA II documents lack even the beginnings of a bioeconomic model providing investigation about the required biological and economic circumstances to make commercial whaling on minke whales feasible, although it had been recognized long before JARPA began that a bioeconomic model would provide key insights into the future commercial whaling of minke whales (Lockyer 1976). Such models are clearly the province of scientific research since they provide the biological, economic and mathematical foundations for effective conservation and management as time-dependent phenomena (Clark 2010).

5.22. In summary,

- It is difficult to impossible to clearly identify the hypotheses of either JARPA or JARPA II;

- Both programs offer broad objectives that conflate science, management, and exploitation;
- Their stated objectives could be used to justify almost any activity that Japan wished to pursue.
- Their contribution to management remains undemonstrated and the potential of JARPA II to bring new knowledge about the conservation and management of whales is very low, if it indeed exists at all.

In my opinion, JARPA II fails to meet the essential first characteristic of a program for the purposes of scientific research in the context of conservation and management of whales.

A program for the purposes of scientific research in the context of conservation and management of whales employs appropriate methods likely to achieve the stated objectives, including (a) use of lethal methods only where the objectives of the research cannot be achieved by any other means (i.e. by the analysis of existing data and/or the use of non-lethal research techniques); (b) setting sample sizes using accepted statistical methodology; and (c) linking mathematical and statistical models to data consistently

Appropriate empirical tools

5.23. Scientific research on whales in the Southern Ocean can use a variety of tools for empirical research including:

- a) sighting surveys in which whales are counted from ships or aircraft (including photo-identification of individuals);
- b) lethal take;
- c) DNA analyses based on biopsies;
- d) biochemical analyses; and
- e) satellite tagging.

Sightings surveys

5.24. Sightings surveys are a common feature of research in all global whale populations and if conducted appropriately may be a useful empirical tool for assessing the abundance and distribution of whales. Recent JARPA II cruises sighted blue, fin, sei, minke, humpback, southern right, sperm, and southern bottlenose whales (e.g. Ishikawa et al 2008).

5.25. Sighting surveys can provide information on population density (Burt and Borchers 1997), movement (Bannister et al 1999, Rock et al 2006), the relationship between physical habitat and whale distribution (Kasamatsu et al 2000) and the relationship between the abundance of food (krill) and whale distribution (Murase et al 2002).

5.26. As described above (Para 3.23ff), the RMP uses sighting surveys in order to estimate abundance and does not rely on lethally acquired information. However, some of the sighting surveys in JARPA and JARPA II are compromised because their methods involve both counting whales and preparation for lethal take.

Lethal take

5.27. In contrast to sighting surveys, lethal take is not a common feature of research in all global whale populations. While it cannot be excluded that there may be situations in which lethal take may contribute to a program for purposes of scientific research in the context of conservation and management of whales, JARPA and JARPA II simply assert but do not demonstrate that lethal take is required. In addition, lethal methodology is a disproportionate focus in JARPA and JARPA II.

5.28. Japan sought to justify lethal take as a means of obtaining age estimates that could then inform the rate of natural mortality (required for the NMP but not the RMP), but, as noted in the final review of JARPA, the effort failed.

5.29. This is because there are significant problems with the lethally derived data used for aging. Ear plugs of whales have a structure of alternating light and dark bands. Thus, in principle the age of a whale can be determined by counting the bands, much as with tree rings (Morris 1972, Roe 1967, Lockyer 1974, de la Mare 1985). However, the difficulties in the interpretation of growth layers make ear plug growth layers only somewhat reliable indicators of age. Furthermore, there are problems with reading the ear plugs at all and often a large number of the killed animals do not provide readable ear-plugs (Lockyer 2010).

5.30. As described in Para 4.14 a tool should only be selected for use after evaluating its effectiveness in achieving the stated objectives. Japan conducted no such evaluation. For ear plugs such an evaluation was done only after nearly 25 years of JARPA and JARPA II (Lockyer 2010) and ear plugs failed to provide information about the age dependence of the rate of natural mortality. Whether alternatives exist or not for aging, the approach of JARPA had demonstrably failed, but JARPA II continues along this track.

Other tools

5.31. Other common tools used in the study of populations of whales include

- a) DNA analysis based on biopsies;
- b) biochemical analyses; and
- c) satellite tagging.

5.32. In the last 20 years, DNA and other molecular technologies for population studies have advanced enormously. A small sample of tissue now yields a sufficient amount of DNA for many different types of analyses on population structure, animal gender, inter-relatedness of individuals and other population scale parameters (Waples and Gaggiotti 2006).

5.33. Similarly, it is now possible to measure the concentration of many pollutants in whales by taking non-lethal biopsy samples (Kunito et al 2002) and to assess reproductive status from hormone concentrations in the blubber of minke whales (Mansour et al 2002). Awruch et al (2008) demonstrated that size at maturity in a shark could be obtained using blood samples measuring hormones. These papers suggest a promising avenue of investigation for a non-lethal method of determining reproductive status in whales.

5.34. Over the last 20 years, tagging whales with radio transmitters and associated technology for collecting and analyzing data has progressed rapidly (Fedak 2004, Freitas et al 2008). Satellite tags have an antenna that protrudes through the skin, so that the whale eventually rejects them much like a splinter is ejected. Mate et al (2007) reviewed the advances in satellite tags. Currently, tags last long enough to cover either leg of the annual migration or the whole feeding season and within the decade will likely last for multiple seasons. These longevities are sufficient to answer the critical questions about stock structure required to apply the RMP multi-stock rules.

5.35. In 1987, the Government of Japan (Japan 1987, pg 43) noted that “[i]f mark [or tag] and mark recapture could be available both in the low latitude (breeding ground) and the high latitude (feeding ground), this method [mark-recapture] would certainly produce information with the highest accuracy ever obtained by any other methods ever adopted in the past for ascertainment of stock movement, migration, and identification”. At the time that this was written, the longevity of tags was only about 3 weeks. However, this gold standard of methodology - called for by Japan nearly 25 years ago - can now be achieved. That is, non-lethal means are now a practicable way for determining stock structure.

Linking methods to objectives

5.36. Japan has suggested that JARPA and JARPA II can test the krill surplus hypothesis. (Japan 2000, pg 1). However, neither JARPA nor JARPA II is sufficiently broad or deep to be able to test the krill surplus hypothesis as a scientific hypothesis. Indeed, it may be impossible to test the krill surplus hypothesis at all (Ainley et al 2007). Nicol et al (2007) observed

It [the krill surplus hypothesis] is just difficult to support or refute without appropriate long-term, systematically collected, dataset on krill and its major predators. With a few notable exceptions, we are not in a position to be able to indicate whether most of the major krill consumers have globally increased or decreased as a result of the demise of the great whales, nor how these predators might now be responding to the recovery of some of these whale populations. Furthermore, we remain unable to estimate robustly global krill consumption now or in the past; data which are essential for examining the krill surplus hypothesis (pg 292).

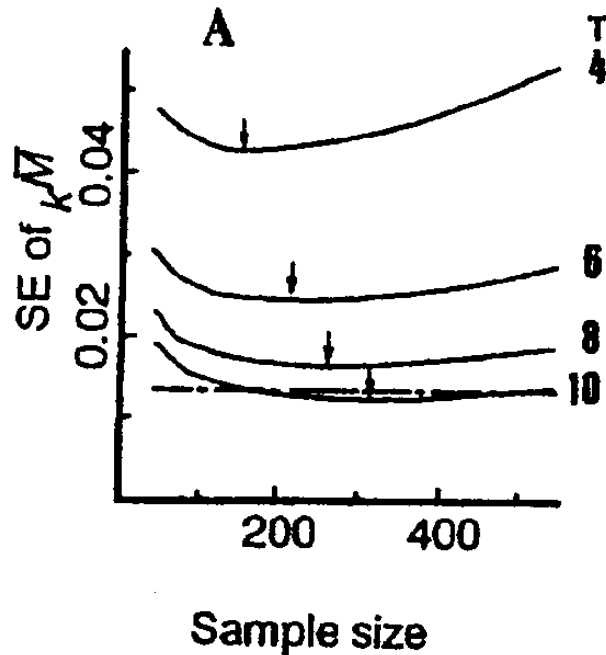
5.37. That is, given the enormous difficulties and the many uncertainties surrounding the krill surplus hypothesis, a program intended to investigate it would need to begin with a broad focus on the interactions between different predators of krill and krill consumption by all such predators (see image in Para 5.14). JARPA and JARPA II do not do this since their narrow focus is purportedly on three (in practice, essentially just one) species of whale. Rather, JARPA and JARPA II have used the krill surplus hypothesis to conflate research and exploitation.

Setting sample sizes

5.38. In the case of both JARPA and JARPA II, sample size indicates the number of whales to be killed. It is very difficult to understand the statistical basis for setting the level of lethal take in either JARPA or JARPA II.

5.39. Early in JARPA, Tanaka et al (1992) computed the sample size (lethal take) associated with the error in an estimate of the rate of natural mortality. The resulting curves (Tanaka et al 1992, Figure 6) were very flat. I have reproduced one panel below (the others are similar).

5.40. The x-axis in this figure is the sample size (the number of whales killed) and the y-axis is a measure of error in the estimate of the rate of natural mortality. The different curves in this figure show the error in the estimate of the rate of natural mortality plotted as a function of the sample size under various assumptions about the accuracy of the data.



5.41. The arrows denote the sample size that gives the minimum standard error. All else being equal, these arrows would point to the sample size that one would choose were one's goal to minimize the error of the estimate.

5.42. However, the curves are very flat, suggesting that many fewer whales could be taken with only a minimal loss of accuracy. For example, using the curve marked $T=10$, note that taking 100 whales rather than 300 whales only marginally decreases the accuracy of the estimate of natural mortality rate, suggesting that many fewer whales could be taken without compromising the resulting analysis. That is to say, many fewer whales killed will produce virtually the same level of accuracy.

5.43. Indeed, Tanaka et al (1992) themselves noted that takes in the range of 200-400 whales provided the same accuracy, but then stated that “[h]owever, in the actual research, other factors should be taken into consideration” (pg 419) to increase sample size. The other factors are not explained in the context of objectives nor are they justified through any statistical considerations. There is no analysis provided to show how either knowledge or management would be improved by having the marginally improved estimate of the rate of natural mortality associated with a take of 300 rather than 100 individuals.

5.44. Lack of statistical clarity continues in JARPA II. For example, in responding to the discussion of the proposal for JARPA II by Childerhouse et al (2006), Hatanaka et al (2006) wrote that catches “under JARPA II have been calculated as the minimum required to obtain statistically significant data. *Given that the stocks to be sampled are abundant and, for humpback and fin whales,*

increasing rapidly, it is quite logical that the sample size is correspondingly large” (italics added).

5.45. This conclusion is not logical at all. According to generally accepted scientific and statistical methodology, the determination of a sample size must be grounded in statistical reasoning. Whether the stocks are sufficiently abundant may affect the practicability of taking a particular sample size, but it should in no way affect the actual determination of the sample size.

5.46. I consider that the spatial distribution of the lethal take is also important. The IWC has divided the Southern Ocean into six sectors for reporting catches and other data. In the years between the 1963/64 season and the 1985/1986 season the vast majority of Japanese minke whaling take was in IWC Areas IV and V [which are the areas closest to Japan], with very few whales taken from Areas I and II [where much more fuel and time would be needed to operate] (Ohsumi 1979).

5.47. The proposal for JARPA (Japan 1987) noted that “very little information was obtained [from commercial activity] for Area I and Area II” (pg 8). One might therefore expect the focus of a program for purposes of scientific research to be on Areas I and II, in order to gain more information about those regions, but instead the focus in both JARPA and JARPA II is in Areas IV and V because it “makes the research more efficient” (pg 8). That may be true if one measures efficiency in terms of whales killed per effort, but less so if efficiency is measured in terms of new knowledge.

5.48. That is, because the effort in JARPA II is in regions in which Japan traditionally whaled, JARPA II is collecting data that in large part already exist from commercial whaling (before JARPA) and JARPA itself. The potential development of new knowledge in this situation is very low.

Linking mathematical models to data

5.49. Ecosystem models are one of the objectives of JARPA II, but the JARPA II proposal (Japan 2005, pg 11) discusses modeling competition among whale species and future management objectives with no reference to other components of the ecosystem. The models used in Appendix 9 of the proposal for JARPA II (pg 81-82) do not require the detailed information that JARPA II sets out to collect.

5.50. Indeed, neither JARPA nor JARPA II offer explanation for the assertion made under those programs that to obtain the necessary data for the models requires lethal take, nor do they offer an explanation or indication as to how those data are to be used in the models. After nearly 20 years of JARPA effort, Mori and Butterworth (2006) offered a “first step towards modeling the krill-predator

dynamics of the Antarctic ecosystem”. Their model (pg 225ff) does not require the data from lethal take that is purportedly essential under JARPA II.

5.51. In summary,

- Although a variety of empirical methods are in principle employed in JARPA II, a majority of effort is devoted to lethal take for which there are other, non-lethal methods that can provide nearly all of the same information.
- The lethal take data are not required for the RMP.
- There are problems with the lethally derived data and many animals are killed without providing any useable data.
- Other tools (DNA and biochemical analyses from skin biopsies, satellite tagging) can provide much the same information as that provided by lethal take.
- Japan has not demonstrated that its objective of developing an ecosystem model (Para 5.8) is attainable with the data it collects through lethal research.
- JARPA II is insufficiently broad to test the krill surplus hypothesis, which has been treated not as a hypothesis but as a proved theorem in most of JARPA and all of JARPA II.
- The reasoning that underlies the setting of sample sizes (the number of animals killed) or the distribution of sampling effort is vague, unclear or simply wrong at times.

In my opinion, JARPA II fails when measured against the second essential characteristic of a program for purposes of scientific research in the context of conservation and management of whales.

A program for purposes of scientific research has periodic review of research proposals and results and adjustment in response to those reviews.

5.52. In the development of a program for the purposes of scientific research in any applied context, the responsibility is on the proposers to demonstrate that the objectives are important and attainable with the methods proposed and will contribute to the applied problem. This should be done through peer review of proposals and resulting papers. Although the proposals for JARPA and JARPA II had some form of review within the Scientific Committee of the IWC, there is no evidence that they went through rigorous and anonymous peer-review by experts in the field or that the proposals were substantially changed in response to the comments obtained in review.

5.53. Workers involved in JARPA began, and those in JARPA II continue with and consistently defend the position that ‘lethal take is required’ (Ohsumi 1995) with no demonstration of ability to change their minds or respond to feedback when lethal take is discussed.

5.54. For example, in 1998 JARPA workers argued “Genetic analyses using DNA can be conducted using biopsy sampling. However, the number of samples required in studies on stock identification in the case of the southern minke whale is large, and consideration of sampling collection should be taken into account” (IWC 1998, pg 412). DNA technology has changed so much since 1998 that this is no longer the case (Para 5.32) but there has been no change in the position of workers in JARPA II to reflect this.

5.55. The vague justifications for setting sample sizes (Paras 5.39-5.48) and the justification of lethal takes as a means of cost recovery (Ohsumi 1995) are examples of assumptions and policies that come from outside the scientific sphere. However, workers involved in JARPA and JARPA II have not exposed these assumptions and policies.

5.56. In 2010, Japan submitted a list of the scientific contributions of JARPA and JARPA II (and the north Pacific equivalents) to the IWC (Japan 2010). This list shows 195 IWC Scientific Committee and other meeting documents and 107 peer-reviewed journal publications listed for JARPA and JARPA II.

5.57. I divided the roughly one-third (107 of 302) of the publications that were peer-reviewed into categories of management (including genetic methods for stock identification and humane killing, ecology (including environmental toxicology), evolution and population genetics, and reproductive physiology or lipid biochemistry. The papers on management and ecology are potentially relevant to the objectives of JARPA and JARPA II, those in evolution less so, and

those in reproductive physiology or biochemistry not even mentioned in the objectives.

5.58. Of these peer-reviewed publications, slightly less than half (51 of 107) deal with management or ecology. That is, only about one-sixth (one-half of one-third, or around 15%) of the articles are peer-reviewed and potentially relevant to the broadly stated objectives. Only about one-fourth of the papers in management or ecology appear in the ecological literature outside of IWC publications. In short, 1/12 (one-quarter of one-third) of the publications dealing with whale ecology and management have appeared in literature outside IWC publications.

5.59. Nearly 40% (39 of 107) of the peer-reviewed articles relate to reproductive physiology, or lipid biochemistry, which could be viewed as representing an opportunistic use of samples obtained because of the use of lethal methods. However, it is not clear how the knowledge about *in vitro* fertilization of minke whale eggs with previously frozen sperm, attempts to inject sperm into frozen and then thawed eggs, or to mature minke whale eggs *in vitro* are even remotely relevant to the objectives of JARPA or JARPA II as set out in the proposals for those programs.

5.60. Japan has asserted (IWC 2007) “that for ethical reasons, many western scientific journals refuse to accept papers based on lethal studies of whales”. Since there is no supporting information for this assertion, it is difficult to determine how frequently such refusals occur and if they are based on the purported ethical reasons or the objective quality of the submitted work.

5.61. I note, however, that the IWC’s journal *The Journal of Cetacean Research and Management* and *Marine Mammal Science* (see Para 4.36) both publish papers based on lethal studies, as long as the work is of sufficient quality and was conducted legally. Some more general journals, such as *Animal Behavior* do not consider work based on lethal studies, but others, for example *Oecologia* or *Polar Biology*, do consider work based on lethal studies.

5.62. In summary,

- The review of proposals for JARPA and JARPA II has been weak and the response to reviews even weaker.
- Workers in JARPA and JARPA II have not demonstrated an ability to respond to criticism or to admit being wrong.
- Workers in JARPA and JARPA II have not exposed assumption and policies that come from outside sources.
- Only about 15% of the papers produced by JARPA and JARPA II appear in peer-reviewed literature and are relevant to the objectives as laid out in the proposals.

In my opinion, JARPA II fails when measured against the third essential characteristic of a program for purposes of scientific research in the context of conservation and management of whales.

A program for purposes of scientific research in the context of conservation and management of whales is designed to avoid adverse effects on the stocks being studied

5.63. Estimates of the number of minke whales in the Southern Ocean have fluctuated considerably and are still highly uncertain, but for the purposes of this paper one may consider the estimate to be of the order of magnitude of 300,000-500,000 individuals (Gambell 1999, Gillespie 2005). Minke whale takes from 1974 to 1984 were of the order of 5,000 per year, and takes during the eighteen years of JARPA averaged just over 435 individuals per year. Under JARPA II, the takes number around 550 animals per year.

5.64. It was assumed in JARPA, and continues to be assumed in JARPA II, that lethal takes will have no effect on the dynamics of the stock (Nakamura 1991, 1993; Nakamura et al 1993). The danger is that this is a self-fulfilling prophecy: when one analyzes data assuming that there is no effect of the catch on the dynamics of the stock, then one will be forced to draw that conclusion since it is built into the analysis itself. Put another way: the assumption of no effect of research takes on populations is a preconceived conclusion.

5.65. Furthermore, if there are multiple local populations within the sampling area of JARPA II, the possibility exists that takes are unevenly distributed across different local populations, which can lead to different impacts. While unlikely, some depletion of small populations could be occurring and JARPA II would not be able to measure or monitor such impacts.

5.66. Using the estimated overall population size may be misleading for another reason. JARPA and JARPA II sample minke whale schools that are typically 1-4 individuals, containing a mixture of mature and immature individuals (Kato et al 1989, Fujise et al 1993, Kasamatsu et al 1993, Nishiwaki et al 2005). In population biology there is a phenomenon known as the Allee effect (Courchamp et al 2008, Mangel et al 2010) in which once the size of the population becomes sufficiently small (for example through anthropogenic effects) the population continues to decline, even if the original reason for the decline is removed. There are many causes for of Allee effects (Courchamp et al 2008), one of which is the disruption of social structure as would happen by removing individuals from small schools. The importance of social structure in minke whale feeding schools is still uncertain, but there is no mention in any of the JARPA or JARPA II literature of Allee effects, and nor of any efforts made to confirm that the populations under consideration do not show Allee effects.

5.67. In summary,

- Japan has not shown that JARPA II will not adversely affect the stocks, instead, it simply assumes that this will be so;
- There may be a whole range of indirect effects on the populations that are not even considered in JARPA II.
- A well-designed program of research would recognize these possibilities and check for them, even if the likelihood of an adverse effect on the overall population were small.

Thus, I consider that JARPA II is inconsistent with the fourth characteristic of a program for purposes of scientific research in the context of conservation and management of whales.

6. CONCLUSION

6.1. A program for purposes of scientific research in the context of conservation and management of whales must do much more than simply collect data; the data must be capable of forming the basis of new knowledge. Indeed, methods that generate the most data often do not generate the most knowledge. JARPA is an example of an activity that collected data but which failed to generate additional knowledge. On the basis of the materials I have reviewed, I consider that JARPA II will continue as an activity for the collection of data but, similarly to JARPA, will contribute little new knowledge relevant to the conservation and management of whales.

6.2. Scientific research work should begin with a question as opposed to an answer, since retrofitting a problem to a solution is almost never a good approach. Most importantly, the collection of data should never begin until one knows how it will be analyzed and used. Both JARPA and JARPA II began with an answer that lethal take is required and without clear plans of how data were to be/or will be analyzed or used.

Defined and achievable objectives that aim to contribute knowledge that is important to the conservation and management of whales

6.3. In 2005 the objectives of JARPA II were:

- a) monitoring of the Antarctic ecosystem (including whales, krill and the feeding ecology of whales, and the effects of contaminants of cetaceans, monitoring of cetacean habitat);
- b) modeling competition among whale species (including constructing a model of competition among whale species and new management objectives including the restoration of the cetacean ecosystem);
- c) elucidation of temporal and spatial changes in stock structure; and
- d) improving the management procedure for Antarctic minke whale stocks.

6.4. These objectives are based on considerable science by assertion, in which claims are stated as if they were demonstrated through rigorous study but actually are not.

6.5. The objectives of JARPA II are extremely broad and lack focus. Experience with JARPA suggests that the broad and vague objectives of JARPA II effectively allow any activity, and are used to provide justification for lethal take.

6.6. The RMP of the IWC provides a practical and well-tested approach for the management of future Southern Ocean whaling. It is an excellent compromise between the complexity of the model and the availability of data, and is capable of dealing with the high levels of uncertainty in the Southern Ocean ecosystem.

6.7. The data that are proposed for collection during JARPA II are not required for the RMP and the information on stock mixing (which is today better collected through combinations of satellite tagging and genetic analysis) will only peripherally contribute to any reconsideration of IWC regulations concerning stocks. Thus, the potential applicability of JARPA II to the RMP is low, if it exists at all.

6.8. In my opinion, JARPA II fails to meet the first criterion to characterize it as program for purposes of scientific research in the context of conservation and management of whales.

Appropriate methods that are likely to achieve the stated objectives, including:

- i. lethal methods only where the objectives of the research cannot be achieved by any other means (for example, by the analysis of existing data and/or the use of non-lethal research techniques);*
- ii. setting sample sizes using accepted statistical methodology; and*
- iii. linking mathematical and statistical models to data consistently;*

6.9. The methodology of JARPA II includes modeling, sighting surveys, biopsies, and lethal take. However, the expressed requirement for lethal take is science by assertion and the contribution of JARPA II as a field program to management models is not demonstrated.

6.10. The mathematical models proposed in association with JARPA II are, to a very large extent, independent of the field data collected in JARPA II, especially the lethal data.

6.11. Sighting surveys, biopsies, and modeling are all effective empirical tools that are available to address the currently stated objectives. Lethal take is not required to meet the objectives of JARPA II.

6.12. Even if lethal take were required, the process for setting sample sizes of lethal take in JARPA II is not based on solid statistical reasoning or analyses of the accuracy required to meet objectives.

6.13. In my opinion, JARPA II fails to meet the second criterion to characterize it as program for purposes of scientific research in the context of the conservation and management of whales.

Periodic review of research proposals and results and adjustment in response to such review.

6.14. Most of the work conducted in association with JARPA and JARPA II is published outside the standard peer-review process. Much of the work that is published in standard peer-reviewed literature is on physiology and biochemistry of reproduction in whales, topics irrelevant to the stated objectives of JARPA and JARPA II. Only about 15% of the papers resulting from JARPA and JARPA II are both peer-reviewed and relevant to stated objectives.

6.15. Scientists in JARPA and JARPA II have demonstrated an unwillingness to change their minds, particularly with respect to the asserted requirement for lethal take.

6.16. In my opinion, JARPA II fails to meet the third criterion characterizing a program for purposes of scientific research in the context of conservation and management of whales.

Is designed to avoid adverse effects on the stocks being studied

6.17. There is no record that JARPA II is designed with any attention directed to avoiding unintended consequences.

6.18. In my opinion, JARPA II fails to meet the fourth criterion characterizing a program for purposes of scientific research in the context of conservation and management of whales.

Overall Assessment of JARPA II

6.19. JARPA II is an activity that collects data in the Southern Ocean. However, by reference to standard accepted practice of science and the IWC Special Permit criteria, it is not a program for purposes of scientific research in the context of conservation and management of whales.

7. LITERATURE CITED

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8. APPENDICES

Appendix A. Biographical Details Concerning Marc Mangel

(Web page: <http://www.soe.ucsc.edu/~msmangel/>)

Marc Mangel is Distinguished Professor of Applied Mathematics and Statistics, Jack Baskin Endowed Professor of Technology and Information Management, and Director of the Center for Stock Assessment Research at the University of California Santa Cruz, where he has served since 1996. At Santa Cruz, he also directed the Geographic Information Systems Laboratory (1996-1999), served as Associate Vice Chancellor, Planning and Programs (1997-1999) and chaired the Department of Applied Mathematics and Statistics (2007-09). Since 1 July 2010, he has also chaired the Program in Technology and Information Management.

From 1980-1996, Mangel was at the University of California Davis, where he served as Assistant, Associate and Full Professor for eight years in the Department of Mathematics and eight years in the Department of Zoology/Section of Evolution and Ecology. He chaired the Department of Mathematics (1984-1989) and was founding Director of the Center for Population Biology (1989-1993).

His awards include the Koopman Paper Prize from the Operations Research Society of America, 1982; JASA Applications Paper from the American Statistical Association, 1983; Joseph Myerhoff Fellowship, Weizmann Institute of Science, 1987; John Simon Guggenheim Memorial Fellowship, 1987; Fulbright Senior Research Fellowship, Oxford University, 1988; George Gund Foundation Distinguished Environmental Scholar, Case Western Reserve University, 1992; Distinguished Statistical Ecologist, International Association for Ecology, 1998; Mote Eminent Scholar, Florida State University, 2000; Fellow, California Academy of Sciences, 2000; Fellow American Association for the Advancement of Science, 2003; UCSC Academic Senate Excellence in Teaching Award, 2003; Frohlich Fellow, CSIRO Hobart, 2006; Astor Lecturer, University of Oxford, 2007; Kaeser Lecturer University of Wisconsin, 2008; Fellow of the Royal Society of Edinburgh, 2009; the award for the best paper (out of 95) published in *The Transactions of the American Fisheries Society* for 2009, for their work on life history models of steelhead trout on the Central Coast of California, and Lamberson Ecology Trust Lecturer Humboldt State University, 2010.

Mangel has numerous journal publications and books that include *Decision and Control in Uncertain Resource Systems* (1985, Academic), *Dynamic Modeling in Behavioral Ecology* (with Colin Clark, 1988, Princeton), *The Ecological Detective. Confronting models with data* (with Ray Hilborn, 1997, Princeton University Press), *Dynamic State Variable Models in Ecology: Methods and Applications* (with Colin Clark, 2000, Oxford University Press), and *The Theoretical Biologist's Toolbox. Quantitative methods for ecology and evolutionary biology* (2006, Cambridge, University Press). He edited *Classics of Theoretical Biology* (A Special Issue of the Bulletin of Mathematical Biology. Part I: Volume 52 Numbers 1,2. Part II: Volume 53, Numbers 1,2), *Sex Allocation and*

Sex Change: Experiments and Models (Lectures on Mathematics in the Life Sciences, Volume 22) and *Proceedings of the Second International Symposium on Krill* (Canadian Journal of Fisheries and Aquatic Sciences 57(Supplement 3)). He has supervised more than 50 undergraduate research projects or senior theses, 20 PhD students and 28 post-doctoral colleagues.

Mangel and Douglas Butterworth were the first two invited experts to the Scientific Committee of the Commission for the Conservation of Marine Living Resources (CCAMLR) and he served on the US delegation to CCAMLR in 1991. His work on southern ocean krill has been supported by NOAA Fisheries (1994-97), the US National Science Foundation (1998-2002) and the Lenfest Ocean Program (2006-2010). Mangel served for six years (1990-1996) on the Committee of Scientific Advisors of the US Marine Mammal Commission and in that role lead the effort to update the Principles for the Conservation of Wild Living Resources (Mangel et al 1996). He served on the Special Committee on Seals for the Natural Environment Research Council of the UK from 2004-2011, chairing it from 2008-2011.

Appendix B. Terms of Reference provided by the Government of Australia

The focus of your report should be on the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II). However, your report should draw on references to the First Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA), where it is relevant.

Your report should reflect your honest belief as to the issues and questions posed.

Please address the following matters/questions in your report:

- a) identify and outline the essential characteristics of a program undertaken for purposes of scientific research; and
- b) provide a critical analysis of the objectives, methodologies and other features of JARPA II and, in so doing, assess whether JARPA II has the essential characteristics referred to in paragraph (a).

Appendix C - Background Material Provided by the Government of Australia

The Government of Australia provided the following material:

- The International Convention for the Regulation of Whaling, 1946;
- A range of IWC documents relating to special permit whaling, including
 - resolutions of the Commission concerning special permit whaling and JARPA and JARPA II from 1987 to 2007;
 - relevant extracts of the annual reports of the Commission and Scientific Committee from 1985 to 2009, including discussions on special permit whaling and the RMP;
 - reports of the IWC interim and final reviews of JARPA;
 - summary of special permits issued 1951 to 1987;
- A collection of documents prepared by the Government of Japan, including
 - research proposals in relation to JARPA and JARPA II, from 1987 to 2005;
 - cruise reports in relation to JARPA and JARPA II, from 1988 to 2010;
 - special permits issued in relation to JARPA and JARPA II;
 - report of the Government of Japan review meeting of JARPA, 18-20 January 2005;
 - documents submitted to the IWC interim and final reviews of JARPA; and
 - publications listed on the Institute of Cetacean Research website.

In addition, I was provided with a range of scientific papers and publications. Any paper cited appears in the list of Literature Cited.

LIST OF DOCUMENTS ANNEXED TO THIS MEMORIAL

VOLUME II

TREATIES

1. *The International Convention for the Regulation of Whaling*, Washington D.C., 2 December 1946, 161 UNTS 74 (entered into force 10 November 1948)
2. *Convention for the Regulation of Whaling*, Geneva, 24 September 1931, 155 LNTS 349 (entered into force 16 January 1935)
3. *International Agreement for the Regulation of Whaling*, London, 8 June 1937, 190 LNTS 79 (entered into force 7 May 1938)
4. *Protocol amending the International Agreement on the Regulation of Whaling*, London, 24 June 1938, 196 LNTS 131 (entered into force 30 December 1938)
5. *Protocol amending the International Agreement for the Regulation of Whaling*, London, 7 February 1944, UKTS 1946 No. 61 (Cmd. 6990) (entered into force 5 October 1945)
6. *Protocol amending the International Agreement for the Regulation of Whaling of 8 June 1937 and the Protocol for the Regulation of Whaling of 24 June 1938*, London, 26 November 1945, 11 UNTS 43 (entered into force 3 March 1947)

IWC DOCUMENTS

Resolutions

7. Resolution on Scientific Permits, Appendix 2, Chairman's Report of the Thirty-Seventh Annual Meeting, *Rep. int. Whal. Commn* 36, 1986, 26
8. Resolution on Republic of Korea's Proposal for Special Permits, Appendix 2, Chairman's Report of the Thirty-Ninth Annual Meeting, *Rep. int. Whal. Commn* 38, 1988, 28

9. Resolution on Icelandic Proposal for Scientific Catches, Appendix 3, Chairman's Report of the Thirty-Ninth Annual Meeting, *Rep. int. Whal. Commn* 38, 1988, 28
10. Resolution on Japanese Proposal for Special Permits, Appendix 4, Chairman's Report of the Thirty-Ninth Annual Meeting, *Rep. int. Whal. Commn* 38, 1988, 29
11. Resolution on Norwegian Proposal for Special Permits, Appendix 1, Chairman's Report of the Fortieth Annual Meeting, *Rep. int. Whal. Commn* 39, 1989, 30
12. Resolution on the Icelandic Proposal for Scientific Catches, Appendix 2, Chairman's Report of the Fortieth Annual Meeting, *Rep. int. Whal. Commn* 39, 1989, 30-31
13. Resolution on the Issuance of Special Permits for the Purposes of Scientific Research, Appendix 3, Chairman's Report of the Fortieth Annual Meeting, *Rep. int. Whal. Commn* 39, 1989, 31
14. Resolution on the Icelandic Proposal for Scientific Catches, Appendix 1, Chairman's Report of the Forty-First Annual Meeting, *Rep. int. Whal. Commn* 40, 1990, 35
15. Resolution on Norwegian Proposal for Special Permits, Appendix 2, Chairman's Report of the Forty-First Annual Meeting, *Rep. int. Whal. Commn* 40, 1990, 36
16. Resolution on the Proposed Take by Japan of Whales in the Southern Hemisphere under Special Permit, Appendix 3, Chairman's Report of the Forty-First Annual Meeting, *Rep. int. Whal. Commn* 40, 1990, 36
17. Resolution on Norwegian Proposal for Special Permits, Appendix 1, Chairman's Report of the Forty-Second Meeting, *Rep. int. Whal. Commn* 41, 1991, 47
18. Resolution on Special Permit Catches by Japan in the Southern Hemisphere, Appendix 2, Chairman's Report of the Forty-Second Meeting, *Rep. int. Whal. Commn* 41, 1991, 47-48
19. Resolution on Special Permit Catches by Japan in the Southern Hemisphere, Appendix 2, Chairman's Report of the Forty-Third Meeting, *Rep. int. Whal. Commn* 42, 1992, 46
20. Resolution on USSR Proposal for Special Permit Catches in the North Pacific, Appendix 3, Chairman's Report of the Forty-Third Meeting, *Rep. int. Whal. Commn* 42, 1992, 47

21. Resolution on Special Permit Catches by Japan in the Southern Hemisphere, Appendix 7, Chairman's Report of the Forty-Fifth Annual Meeting, *Rep. int. Whal. Commn* 44, 1994, 33
22. Resolution on Norwegian Proposal for Special Permits, Appendix 8, Chairman's Report of the Forty-Fifth Annual Meeting, *Rep. int. Whal. Commn* 44, 1994, 33
23. Resolution on Scientific Permits, Resolution 1994-8, Appendix 15, Chairman's Report of the Forty-Sixth Annual Meeting, *Rep. int. Whal. Commn* 45, 1995, 46-47
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**Annex 1: *The International Convention for the Regulation of Whaling*, Washington D.C.,
2 December 1946, 161 UNTS 72 (entered into force 10 November 1948)**

INTERNATIONAL CONVENTION FOR THE REGULATION OF WHALING, 1946

International Convention for the Regulation of Whaling

Washington, 2nd December, 1946

The Governments whose duly authorised representatives have subscribed hereto,

Recognizing the interest of the nations of the world in safeguarding for future generations the great natural resources represented by the whale stocks;

Considering that the history of whaling has seen over-fishing of one area after another and of one species of whale after another to such a degree that it is essential to protect all species of whales from further over-fishing;

Recognizing that the whale stocks are susceptible of natural increases if whaling is properly regulated, and that increases in the size of whale stocks will permit increases in the number of whales which may be captured without endangering these natural resources;

Recognizing that it is in the common interest to achieve the optimum level of whale stocks as rapidly as possible without causing widespread economic and nutritional distress;

Recognizing that in the course of achieving these objectives, whaling operations should be confined to those species best able to sustain exploitation in order to give an interval for recovery to certain species of whales now depleted in numbers;

Desiring to establish a system of international regulation for the whale fisheries to ensure proper and effective conservation and development of whale stocks on the basis of the principles embodied in the provisions of the International Agreement for the Regulation of Whaling, signed in London on 8th June, 1937, and the protocols to that Agreement signed in London on 24th June, 1938, and 26th November, 1945; and

Having decided to conclude a convention to provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry;

Have agreed as follows:-

Article I

1. This Convention includes the Schedule attached thereto which forms an integral part thereof. All references to "Convention" shall be understood as including the said Schedule either in its present terms or as amended in accordance with the provisions of Article V.
2. This Convention applies to factory ships, land stations, and whale catchers under the jurisdiction of the Contracting Governments and to all waters in which whaling is prosecuted by such factory ships, land stations, and whale catchers.

Article II

As used in this Convention:-

1. "Factory ship" means a ship in which or on which whales are treated either wholly or in part.
2. "Land station" means a factory on the land at which whales are treated either wholly or in part.

3. "Whale catcher" means a ship used for the purpose of hunting, taking, towing, holding on to, or scouting for whales;

4. "Contracting Government" means any Government which has deposited an instrument of ratification or has given notice of adherence to this Convention.

Article III

1. The Contracting Governments agree to establish an International Whaling Commission, hereinafter referred to as the Commission, to be composed of one member from each Contracting Government. Each member shall have one vote and may be accompanied by one or more experts and advisers.
2. The Commission shall elect from its own members a Chairman and Vice-Chairman and shall determine its own Rules of Procedure. Decisions of the Commission shall be taken by a simple majority of those members voting except that a three-fourths majority of those members voting shall be required for action in pursuance of Article V. The Rules of Procedure may provide for decisions otherwise than at meetings of the Commission.
3. The Commission may appoint its own Secretary and staff.
4. The Commission may set up, from among its own members and experts or advisers, such committees as it considers desirable to perform such functions as it may authorize.
5. The expenses of each member of the Commission and of his experts and advisers shall be determined and paid by his own Government.
6. Recognizing that specialized agencies related to the United Nations will be concerned with the conservation and development of whale fisheries and the products arising therefrom and desiring to avoid duplication of functions, the Contracting Governments will consult among themselves within two years after the coming into force of this Convention to decide whether the Commission shall be brought within the framework of a specialized agency related to the United Nations.
7. In the meantime the Government of the United Kingdom of Great Britain and Northern Ireland shall arrange, in consultation with the other Contracting Governments, to convene the first meeting of the Commission, and shall initiate the consultation referred to in paragraph 6 above.
8. Subsequent meetings of the Commission shall be convened as the Commission may determine.

Article IV

1. The Commission may either in collaboration with or through independent agencies of the Contracting Governments or other public or private agencies, establishments, or organizations, or independently

- (a) encourage, recommend, or if necessary, organize studies and investigations relating to whales and whaling;
 - (b) collect and analyze statistical information concerning the current condition and trend of the whale stocks and the effects of whaling activities thereon;
 - (c) study, appraise, and disseminate information concerning methods of maintaining and increasing the populations of whale stocks.
2. The Commission shall arrange for the publication of reports of its activities, and it may publish independently or in collaboration with the International Bureau for Whaling Statistics at Sandefjord in Norway and other organizations and agencies such reports as it deems appropriate, as well as statistical, scientific, and other pertinent information relating to whales and whaling.

Article V

1. The Commission may amend from time to time the provisions of the Schedule by adopting regulations with respect to the conservation and utilization of whale resources, fixing (a) protected and unprotected species; (b) open and closed seasons; (c) open and closed waters, including the designation of sanctuary areas; (d) size limits for each species; (e) time, methods, and intensity of whaling (including the maximum catch of whales to be taken in any one season); (f) types and specifications of gear and apparatus and appliances which may be used; (g) methods of measurement; and (h) catch returns and other statistical and biological records.
2. These amendments of the Schedule (a) shall be such as are necessary to carry out the objectives and purposes of this Convention and to provide for the conservation, development, and optimum utilization of the whale resources; (b) shall be based on scientific findings; (c) shall not involve restrictions on the number or nationality of factory ships or land stations, nor allocate specific quotas to any factory ship or land station or to any group of factory ships or land stations; and (d) shall take into consideration the interests of the consumers of whale products and the whaling industry.
3. Each of such amendments shall become effective with respect to the Contracting Governments ninety days following notification of the amendment by the Commission to each of the Contracting Governments, except that (a) if any Government presents to the Commission objection to any amendment prior to the expiration of this ninety-day period, the amendment shall not become effective with respect to any of the Governments for an additional ninety days; (b) thereupon, any other Contracting Government may present objection to the amendment at any time prior to the expiration of the additional ninety-day period, or before the expiration of thirty days from the date of receipt of the last objection received during such additional ninety-day period, whichever date shall be the later; and (c) thereafter, the amendment shall become effective with respect to all Contracting Governments which have not presented objection but shall not become effective with respect to any Government which has so objected until such date as the objection is withdrawn. The Commission shall notify each Contracting Government immediately upon receipt of each objection and withdrawal and each Contracting Government shall acknowledge receipt of all notifications of amendments, objections, and withdrawals.

4. No amendments shall become effective before 1st July, 1949.

Article VI

The Commission may from time to time make recommendations to any or all Contracting Governments on any matters which relate to whales or whaling and to the objectives and purposes of this Convention.

Article VII

The Contracting Government shall ensure prompt transmission to the International Bureau for Whaling Statistics at Sandefjord in Norway, or to such other body as the Commission may designate, of notifications and statistical and other information required by this Convention in such form and manner as may be prescribed by the Commission.

Article VIII

1. Notwithstanding anything contained in this Convention any Contracting Government may grant to any of its nationals a special permit authorizing that national to kill, take and treat whales for purposes of scientific research subject to such restrictions as to number and subject to such other conditions as the Contracting Government thinks fit, and the killing, taking, and treating of whales in accordance with the provisions of this Article shall be exempt from the operation of this Convention. Each Contracting Government shall report at once to the Commission all such authorizations which it has granted. Each Contracting Government may at any time revoke any such special permit which it has granted.
2. Any whales taken under these special permits shall so far as practicable be processed and the proceeds shall be dealt with in accordance with directions issued by the Government by which the permit was granted.
3. Each Contracting Government shall transmit to such body as may be designated by the Commission, in so far as practicable, and at intervals of not more than one year, scientific information available to that Government with respect to whales and whaling, including the results of research conducted pursuant to paragraph 1 of this Article and to Article IV.
4. Recognizing that continuous collection and analysis of biological data in connection with the operations of factory ships and land stations are indispensable to sound and constructive management of the whale fisheries, the Contracting Governments will take all practicable measures to obtain such data.

Article IX

1. Each Contracting Government shall take appropriate measures to ensure the application of the provisions of this Convention and the punishment of infractions against the said provisions in operations carried out by persons or by vessels under its jurisdiction.
2. No bonus or other remuneration calculated with relation to the results of their work shall be paid to the gunners and crews of whale catchers in respect of any whales the taking of which is forbidden by this Convention.
3. Prosecution for infractions against or contraventions of this Convention shall be instituted by the Government having jurisdiction over the offence.
4. Each Contracting Government shall transmit to the Commission full details of each infraction of the provisions of this Convention by persons or vessels under the jurisdiction of that Government as reported by

its inspectors. This information shall include a statement of measures taken for dealing with the infraction and of penalties imposed.

Article X

1. This Convention shall be ratified and the instruments of ratifications shall be deposited with the Government of the United States of America.
2. Any Government which has not signed this Convention may adhere thereto after it enters into force by a notification in writing to the Government of the United States of America.
3. The Government of the United States of America shall inform all other signatory Governments and all adhering Governments of all ratifications deposited and adherences received.
4. This Convention shall, when instruments of ratification have been deposited by at least six signatory Governments, which shall include the Governments of the Netherlands, Norway, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America, enter into force with respect to those Governments and shall enter into force with respect to each Government which subsequently ratifies or adheres on the date of the deposit of its instrument of ratification or the receipt of its notification of adherence.

5. The provisions of the Schedule shall not apply prior to 1st July, 1948. Amendments to the Schedule adopted pursuant to Article V shall not apply prior to 1st July, 1949.

Article XI

Any Contracting Government may withdraw from this Convention on 30th June, of any year by giving notice on or before 1st January, of the same year to the depository Government, which upon receipt of such a notice shall at once communicate it to the other Contracting Governments. Any other Contracting Government may, in like manner, within one month of the receipt of a copy of such a notice from the depository Government give notice of withdrawal, so that the Convention shall cease to be in force on 30th June, of the same year with respect to the Government giving such notice of withdrawal.

The Convention shall bear the date on which it is opened for signature and shall remain open for signature for a period of fourteen days thereafter.

In witness whereof the undersigned, being duly authorized, have signed this Convention.

Done in Washington this second day of December, 1946, in the English language, the original of which shall be deposited in the archives of the Government of the United States of America. The Government of the United States of America shall transmit certified copies thereof to all the other signatory and adhering Governments.

Protocol

to the International Convention for the Regulation of Whaling, Signed at Washington Under Date of December 2, 1946

The Contracting Governments to the International Convention for the Regulation of Whaling signed at Washington under date of 2nd December, 1946 which Convention is hereinafter referred to as the 1946 Whaling Convention, desiring to extend the application of that Convention to helicopters and other aircraft and to include provisions on methods of inspection among those Schedule provisions which may be amended by the Commission, agree as follows:

Article I

Subparagraph 3 of the Article II of the 1946 Whaling Convention shall be amended to read as follows:

"3. 'whale catcher' means a helicopter, or other aircraft, or a ship, used for the purpose of hunting, taking, killing, towing, holding on to, or scouting for whales."

Article II

Paragraph 1 of Article V of the 1946 Whaling Convention shall be amended by deleting the word "and" preceding clause (h), substituting a semicolon for the period at the end of the paragraph, and adding the following language: "and (i) methods of inspection".

Article III

1. This Protocol shall be open for signature and ratification or for adherence on behalf of any Contracting Government to the 1946 Whaling Convention.
2. This Protocol shall enter into force on the date upon which instruments of ratification have been deposited with, or written notifications of adherence have been received by, the Government of the United States of America on behalf of all the Contracting Governments to the 1946 Whaling Convention.
3. The Government of the United States of America shall inform all Governments signatory or adhering to the 1946 Whaling Convention of all ratifications deposited and adherences received.
4. This Protocol shall bear the date on which it is opened for signature and shall remain open for signature for a period of fourteen days thereafter, following which period it shall be open for adherence.

IN WITNESS WHEREOF the undersigned, being duly authorized, have signed this Protocol.

DONE in Washington this nineteenth day of November, 1956, in the English Language, the original of which shall be deposited in the archives of the Government of the United States of America. The Government of the United States of America shall transmit certified copies thereof to all Governments signatory or adhering to the 1946 Whaling Convention.

**International Convention
for the
Regulation of Whaling, 1946**

Schedule

*As amended by the Commission at the 62nd Annual Meeting
Agadir, Morocco, June 2010*



International Convention for the Regulation of Whaling, 1946 Schedule

EXPLANATORY NOTES

The Schedule printed on the following pages contains the amendments made by the Commission at its 62nd Annual Meeting in June 2010. The amendments, which are shown in **italic bold** type, came into effect on 11 January 2011. In Tables 1, 2 and 3 unclassified stocks are indicated by a dash. Other positions in the Tables have been filled with a dot to aid legibility. Numbered footnotes are integral parts of the Schedule formally adopted by the Commission. Other footnotes are editorial. The Commission was informed in June 1992 by the ambassador in London that the membership of the Union of Soviet Socialist Republics in the International Convention for the Regulation of Whaling from 1948 is continued by the Russian Federation. The Commission recorded at its 39th (1987) meeting the fact that references to names of native inhabitants in Schedule paragraph 13(b)(4) would be for geographical purposes alone, so as not to be in contravention of Article V.2(c) of the Convention (*Rep. Int. Whal. Comm.* 38:21).

I. INTERPRETATION

1. The following expressions have the meanings respectively assigned to them, that is to say:

A. Baleen whales

"baleen whale" means any whale which has baleen or whale bone in the mouth, i.e. any whale other than a toothed whale.

"blue whale" (*Balaenoptera musculus*) means any whale known as blue whale, Sibbald's rorqual, or sulphur bottom, and including pygmy blue whale.

"bowhead whale" (*Balaena mysticetus*) means any whale known as bowhead, Arctic right whale, great polar whale, Greenland right whale, Greenland whale.

"Bryde's whale" (*Balaenoptera edeni*, *B. brydei*) means any whale known as Bryde's whale.

"fin whale" (*Balaenoptera physalus*) means any whale known as common finback, common rorqual, fin whale, herring whale, or true fin whale.

"gray whale" (*Eschrichtius robustus*) means any whale known as gray whale, California gray, devil fish, hard head, mussel digger, gray back, or rip sack.

"humpback whale" (*Megaptera novaeangliae*) means any whale known as bunch, humpback, humpback whale, humpbacked whale, hump whale or hunchbacked whale.

"minke whale" (*Balaenoptera acutorostrata*, *B. bonaerensis*) means any whale known as lesser rorqual, little piked whale, minke whale, pike-headed whale or sharp headed finner.

"pygmy right whale" (*Caperea marginata*) means any whale known as southern pygmy right whale or pygmy right whale.

"right whale" (*Eubalaena glacialis*, *E. australis*) means any whale known as Atlantic right whale, Arctic right whale, Biscayan right whale, Nordkaper, North Atlantic right whale, North Cape whale, Pacific right whale, or southern right whale.

"sei whale" (*Balaenoptera borealis*) means any whale known as sei whale, Rudolphi's rorqual, pollack whale, or coalfish whale.

B. Toothed whales

"toothed whale" means any whale which has teeth in the jaws.

"beaked whale" means any whale belonging to the genus *Mesoplodon*, or any whale known as Cuvier's beaked whale (*Ziphius cavirostris*), or Shepherd's beaked whale (*Tasmacetus shepherdii*).

"bottlenose whale" means any whale known as Baird's beaked whale (*Berardius bairdii*), Arnoux's whale (*Berardius arnuxii*), southern bottlenose whale (*Hyperoodon planifrons*), or northern bottlenose whale (*Hyperoodon ampullatus*).

"killer whale" (*Orcinus orca*) means any whale known as killer whale or orca.

"pilot whale" means any whale known as long-finned pilot whale (*Globicephala melaleuca*) or short-finned pilot whale (*G. macrorhynchus*).

"sperm whale" (*Physeter macrocephalus*) means any whale known as sperm whale, spermacete whale, cachalot or pot whale.

C. General

"strike" means to penetrate with a weapon used for whaling.

"land" means to retrieve to a factory ship, land station, or other place where a whale can be treated.

"take" means to flag, buoy or make fast to a whale catcher.

"lose" means to either strike or take but not to land.

"dauhval" means any unclaimed dead whale found floating.

"lactating whale" means (a) with respect to baleen whales - a female which has any milk present in a mammary gland, (b) with respect to sperm whales - a female which has milk present in a mammary gland the maximum thickness (depth) of which is 10cm or more. This measurement shall be at the mid ventral point of the mammary gland perpendicular to the body axis, and shall be logged to the nearest centimetre; that is to say, any gland between 9.5cm and 10.5cm shall be logged as 10cm. The measurement of any gland which falls on an exact 0.5 centimetre shall be logged at the next 0.5 centimetre, e.g. 10.5cm shall be logged as 11.0cm.

However, notwithstanding these criteria, a whale shall not be considered a lactating whale if scientific (histological or other biological) evidence is presented to the appropriate national authority establishing that the whale could not at that point in its physical cycle have had a calf dependent on it for milk.

"small-type whaling" means catching operations using powered vessels with mounted harpoon guns hunting exclusively for minke, bottlenose, beaked, pilot or killer whales.

II. SEASONS

Factory Ship Operations

2. (a) It is forbidden to use a factory ship or whale catcher attached thereto for the purpose of taking or treating baleen whales except minke whales, in any waters south of 40° South Latitude except during the period from 12th December to 7th April following, both days inclusive.
- (b) It is forbidden to use a factory ship or whale catcher attached thereto for the purpose of taking or treating sperm or minke whales, except as permitted by the Contracting Governments in accordance with sub-paragraphs (c) and (d) of this paragraph, and paragraph 5.
- (c) Each Contracting Government shall declare for all factory ships and whale catchers attached thereto under its jurisdiction, an open season or seasons not to exceed eight months out of any period of twelve months during which the taking or killing of sperm whales by whale catchers may be permitted, provided that a separate open season may be declared for each factory ship and the whale catchers attached thereto.
- (d) Each Contracting Government shall declare for all factory ships and whale catchers attached thereto under its jurisdiction one continuous open season not to exceed six months out of any period of twelve months during which the taking or killing of minke whales by the whale catchers may be permitted provided that:
 - (1) a separate open season may be declared for each factory ship and the whale catchers attached thereto;
 - (2) the open season need not necessarily include the whole or any part of the period declared for other baleen whales pursuant to sub-paragraph (a) of this paragraph.
3. It is forbidden to use a factory ship which has been used during a season in any waters south of 40° South Latitude for the purpose of treating baleen whales, except minke whales, in any other area except the North Pacific Ocean and its dependent waters north of the Equator for the same purpose within a period of one year from the termination of that season; provided that catch limits in the North Pacific Ocean and dependent waters are established as provided in paragraphs 12 and 16 of this Schedule and provided that this paragraph shall not apply to a ship which has been used during the season solely for freezing or salting the meat and entrails of whales intended for human food or feeding animals.

Land Station Operations

4. (a) It is forbidden to use a whale catcher attached to a land station for the purpose of killing or attempting to kill baleen and sperm whales except as permitted by the Contracting Government in accordance with sub-paragraphs (b), (c) and (d) of this paragraph.
- (b) Each Contracting Government shall declare for all land stations under its jurisdiction, and whale catchers attached to such land stations, one open season during which the taking or killing of baleen whales, except minke whales, by the whale catchers shall be permitted. Such open season shall be for a period of not more than six consecutive months in any period of twelve months and shall apply to all land stations under the jurisdiction of the Contracting Government, provided that a separate open season may be declared for any land station used for the taking or treating of baleen whales, except minke whales, which is more than 1,000 miles from the nearest land station used for the taking or treating of baleen whales, under the jurisdiction of the same Contracting Government.
- (c) Each Contracting Government shall declare for all land stations under its jurisdiction and for whale catchers attached to such land stations, one open season not to exceed eight continuous months in any one period of twelve months, during which the taking or killing of sperm whales by the whale catchers shall be permitted; provided that a separate open season may be declared for any land station used for the taking or treating of sperm whales which is more than 1,000 miles from the nearest land station used for the taking or treating of sperm whales under the jurisdiction of the same Contracting Government.
- (d) Each Contracting Government shall declare for all land stations under its jurisdiction and for whale catchers attached to such land stations one open season not to exceed six continuous months in any period of twelve months during which the taking or killing of minke whales by the whale catchers shall be permitted (such period not being necessarily concurrent with the period declared for other baleen whales, as provided for in sub-paragraph (b) of this paragraph); provided that a separate open season may be declared for any land station used for the taking or treating of minke whales which is more than 1,000 miles from the nearest land station used for the taking or treating of minke whales under the jurisdiction of the same Contracting Government.

Except that a separate open season may be declared for any land station used for the taking or treating of minke whales which is located in an area having oceanographic conditions clearly distinguishable from those of the area in which are located the other land stations used for the taking or treating of minke whales under the jurisdiction of the same Contracting Government; but the declaration of a separate open season by virtue of the provisions of this sub-paragraph shall not cause thereby the period of time covering the open seasons declared by the same Contracting Government to exceed nine continuous months of any twelve months.

- (e) The prohibitions contained in this paragraph shall apply to all land stations as defined in Article II of the Whaling Convention of 1946.

Other Operations

5. Each Contracting Government shall declare for all whale catchers under its jurisdiction not operating in conjunction with a factory ship or land station one continuous open season not to exceed six months out of any period of twelve months during which the taking or killing of minke whales by such whale catchers may be permitted. Notwithstanding this paragraph one continuous open season not to exceed nine months may be implemented so far as Greenland is concerned.

III. CAPTURE

6. The killing for commercial purposes of whales, except minke whales using the cold grenade harpoon shall be forbidden from the beginning of the 1980/81 pelagic and 1981 coastal seasons. The killing for commercial purposes of minke whales using the cold grenade harpoon shall be forbidden from the beginning of the 1982/83 pelagic and the 1983 coastal seasons.⁸
7. (a) In accordance with Article V(1)(c) of the Convention, commercial whaling, whether by pelagic operations or from land stations, is prohibited in a region designated as the Indian Ocean Sanctuary. This comprises the waters of the Northern Hemisphere from the coast of Africa to 100°E, including the Red and Arabian Seas and the Gulf of Oman, and the waters of the Southern Hemisphere in the sector from 20°E to 130°E, with the Southern boundary set at 55°S. This prohibition applies irrespective of such catch limits for baleen or toothed whales as may from time to time be determined by the Commission. This prohibition shall be reviewed by the Commission at its Annual Meeting in 2002.⁹
- (b) In accordance with Article V(1)(c) of the Convention, commercial whaling, whether by pelagic operations or from land stations, is prohibited in a region designated as the Southern Ocean Sanctuary. This Sanctuary comprises the waters of the Southern Hemisphere southwards of the following line: starting from 40 degrees S, 50 degrees W; thence due east to 20 degrees E; thence due south to 55 degrees S; thence due east to 130 degrees E; thence due north to 40 degrees S; thence due east to 130 degrees W; thence due south to 60 degrees S; thence due east to 50 degrees W; thence due north to the point of beginning. This prohibition applies irrespective of the conservation status of baleen and toothed whale stocks in this Sanctuary, as may from time to time be determined by the Commission.

However, this prohibition shall be reviewed ten years after its initial adoption and at succeeding ten year intervals, and could be revised at such times by the Commission. Nothing in this sub-paragraph is intended to prejudice the special legal and political status of Antarctica.¹⁰

Area Limits for Factory Ships

8. It is forbidden to use a factory ship or whale catcher attached thereto, for the purpose of taking or treating baleen whales, except minke whales, in any of the following areas:
- in the waters north of 66°N, except that from 150°E eastwards as far as 140°W, the taking or killing of baleen whales by a factory ship or whale catcher shall be permitted between 66°N and 72°N;
 - in the Atlantic Ocean and its dependent waters north of 40°S;
 - in the Pacific Ocean and its dependent waters east of 150°W between 40°S and 35°N;
 - in the Pacific Ocean and its dependent waters west of 150°W between 40°S and 20°N;
 - in the Indian Ocean and its dependent waters north of 40°S.

Classification of Areas and Divisions

9. (a) *Classification of Areas*
Areas relating to Southern Hemisphere baleen whales except Bryde's whales are those waters between the ice-edge and the Equator and between the meridians of longitude listed in Table 1.
- (b) *Classification of Divisions*
Divisions relating to Southern Hemisphere sperm whales are those waters between the ice-edge and the Equator and between the meridians of longitude listed in Table 3.
- (c) *Geographical boundaries in the North Atlantic*
The geographical boundaries for the fin, minke and sei whale stocks in the North Atlantic are:

FIN WHALE STOCKS

NOVASCOTIA

South and West of a line through:
47°N 54°W, 46°N 54°30'W,
46°N 42°W, 20°N 42°W.

NEWFOUNDLAND-LABRADOR

West of a line through:
75°N 73°30'W, 69°N 59°W, 61°N 59°W,
52°20'N 42°W, 46°N 42°W and
North of a line through:
46°N 42°W, 46°N 54°30'W, 47°N 54°W.

WEST GREENLAND

East of a line through:
75°N 73°30'W, 69°N 59°W,
61°N 59°W, 52°20'N 42°W,
and West of a line through
52°20'N 42°W, 59°N 42°W,
59°N 44°W, Kap Farvel.

⁸The Governments of Brazil, Iceland, Japan, Norway and the Union of Soviet Socialist Republics lodged objections to the second sentence of paragraph 6 within the prescribed period. For all other Contracting Governments this sentence came into force on 8 March 1982. Norway withdrew its objection on 9 July 1985 and Brazil on 8 January 1992. Iceland withdrew from the Convention with effect from 30 June 1992. The objections of Japan and the Russian Federation not having been withdrawn, this sentence is not binding upon these governments.

⁹At its 54th Annual Meeting in 2002, the Commission agreed to continue this prohibition but did not discuss whether or not it should set a time when it should be reviewed again.

¹⁰The Government of Japan lodged an objection within the prescribed period to paragraph 7(b) to the extent that it applies to the Antarctic minke whale stocks. The Government of the Russian Federation also lodged an objection to paragraph 7(b) within the prescribed period but withdrew it on 26 October 1994. For all Contracting Governments except Japan paragraph 7(b) came into force on 6 December 1994.

¹¹Paragraph 7(b) contains a provision for review of the Southern Ocean Sanctuary "ten years after its initial adoption". Paragraph 7(b) was adopted at the 46th (1994) Annual Meeting. Therefore, the first review is due in 2004.

EAST GREENLAND-ICELAND

East of a line through:
Kap Farvel (South Greenland),
59°N 44'W, 59°N 42'W, 20°N 42'W,
and West of a line through:
20°N 18'W, 60°N 18'W, 68°N 3'E,
74°N 3'E, and South of 74°N.

NORTH NORWAY

North and East of a line through:
74°N 22'W, 74°N 3'E, 68°N 3'E,
67°N 0', 67°N 14'E.

WEST NORWAY-FAROE ISLANDS

South of a line through:
67°N 14'E, 67°N 0', 60°N 18'W,
and North of a line through:
61°N 16'W, 61°N 0', Thyboron
(Western entrance to Limfjorden, Denmark).

SPAIN-PORTUGAL-BRITISH ISLES

South of a line through:
Thyboron (Denmark), 61°N 0', 61°N 16'W,
and East of a line through:
63°N 11'W, 60°N 18'W, 22°N 18'W.

MINKE WHALE STOCKS**CANADIAN EAST COAST**

West of a line through:
75°N 73'30'W, 69°N 59'W, 61°N 59'W,
52°20'N 42'W, 20°N 42'W.

CENTRAL

East of a line through:
Kap Farvel (South Greenland),
59°N 44'W, 59°N 42'W, 20°N 42'W,
and West of a line through:
20°N 18'W, 60°N 18'W, 68°N 3'E,
74°N 3'E, and South of 74°N.

WEST GREENLAND

East of a line through:
75°N 73'30'W, 69°N 59'W, 61°N 59'W,
52°20'N 42'W, and
West of a line through:
52°20'N 42'W, 59°N 42'W,
59°N 44'W, Kap Farvel.

NORTHEASTERN

East of a line through:
20°N 18'W, 60°N 18'W, 68°N 3'E, 74°N 3'E,
and North of a line through:
74°N 3'E, 74°N 22'W.

SEI WHALE STOCKS**NOVA SCOTIA**

South and West of a line through:
47°N 54'W, 46°N 54'30'W, 46°N 42'W,
20°N 42'W.

ICELAND-DENMARK STRAIT

East of a line through:
Kap Farvel (South Greenland),
59°N 44'W, 59°N 42'W, 20°N 42'W,
and West of a line through:
20°N 18'W, 60°N 18'W, 68°N 3'E,
74°N 3'E, and South of 74°N.

EASTERN

East of a line through:
20°N 18'W, 60°N 18'W, 68°N 3'E, 74°N 3'E,
and North of a line through:
74°N 3'E, 74°N 22'W.

(d) Geographical boundaries in the North Pacific

The geographical boundaries for the sperm, Bryde's and minke whale stocks in the North Pacific are:

SPERM WHALE STOCKS**WESTERN DIVISION**

West of a line from the ice-edge south along the 180° meridian of longitude to 180°, 50°N, then east along the 50°N parallel of latitude to 160°W, 50°N, then south along the 160°W meridian of longitude to 160°W, 40°N, then east along the 40°N parallel of latitude to 150°W, 40°N, then south along the 150°W meridian of longitude to the Equator.

EASTERN DIVISION

East of the line described above.

BRYDE'S WHALE STOCKS**EAST CHINA SEA**

West of the Ryukyu Island chain.

EASTERN

East of 160°W (excluding the Peruvian stock area).

WESTERN

West of 160°W (excluding the East China Sea stock area).

MINKE WHALE STOCKS**SEA OF JAPAN-YELLOW SEA-EAST CHINA SEA**

West of a line through the Philippine Islands, Taiwan, Ryukyu Islands, Kyushu, Honshu, Hokkaido and Sakhalin Island, north of the Equator.

OKHOTSK SEA-WEST PACIFIC

East of the Sea of Japan-Yellow Sea-East China Sea stock and west of 180°, north of the Equator.

REMAINDER

East of the Okhotsk Sea-West Pacific stock, north of the Equator.

(e) Geographical boundaries for Bryde's whale stocks in the Southern Hemisphere**SOUTHERN INDIAN OCEAN**

20°E to 130°E,
South of the Equator.

SOLOMON ISLANDS

150°E to 170°E,
20°S to the Equator.

PERUVIAN

110°W to the South American coast,
10°S to 10°N.

EASTERN SOUTH PACIFIC

150°W to 70°W,
South of the Equator (excluding the Peruvian stock area).

WESTERN SOUTH PACIFIC

130°E to 150°W,
South of the Equator (excluding the Solomon Islands stock area).

SOUTH ATLANTIC

70°W to 20°E,
South of the Equator (excluding the South African inshore stock area).

SOUTH AFRICAN INSHORE

South African coast west of 27°E and out to the 200 metre isobath.

Classification of Stocks

10. All stocks of whales shall be classified in one of three categories according to the advice of the Scientific Committee as follows:

- (a) A Sustained Management Stock (SMS) is a stock which is not more than 10 per cent of Maximum Sustainable Yield (hereinafter referred to as MSY) stock level below MSY stock level, and not more than 20 per cent above that level; MSY being determined on the basis of the number of whales.

When a stock has remained at a stable level for a considerable period under a regime of approximately constant catches, it shall be classified as a Sustained Management Stock in the absence of any positive evidence that it should be otherwise classified.

Commercial whaling shall be permitted on Sustained Management Stocks according to the advice of the Scientific Committee. These stocks are listed in Tables 1, 2 and 3 of this Schedule.

For stocks at or above the MSY stock level, the permitted catch shall not exceed 90 per cent of the MSY. For stocks between the MSY stock level and 10 per cent below that level, the permitted catch shall not exceed the number of whales obtained by taking 90 per cent of the MSY and reducing that number by 10 per cent for every 1 per cent by which the stock falls short of the MSY stock level.

- (b) An Initial Management Stock (IMS) is a stock more than 20 per cent of MSY stock level above MSY stock level. Commercial whaling shall be permitted on Initial Management Stocks according to the advice of the Scientific Committee as to measures necessary to bring the stocks to the MSY stock level and then optimum level in an efficient manner and without risk of reducing them below

this level. The permitted catch for such stocks will not be more than 90 per cent of MSY as far as this is known, or, where it will be more appropriate, catching effort shall be limited to that which will take 90 per cent of MSY in a stock at MSY stock level.

In the absence of any positive evidence that a continuing higher percentage will not reduce the stock below the MSY stock level no more than 5 per cent of the estimated initial exploitable stock shall be taken in any one year. Exploitation should not commence until an estimate of stock size has been obtained which is satisfactory in the view of the Scientific Committee. Stocks classified as Initial Management Stock are listed in Tables 1, 2 and 3 of this Schedule.

- (c) A Protection Stock (PS) is a stock which is below 10 per cent of MSY stock level below MSY stock level.

There shall be no commercial whaling on Protection Stocks. Stocks so classified are listed in Tables 1, 2 and 3 of this Schedule.

- (d) Notwithstanding the other provisions of paragraph 10 there shall be a moratorium on the taking, killing or treating of whales, except minke whales, by factory ships or whale catchers attached to factory ships. This moratorium applies to sperm whales, killer whales and baleen whales, except minke whales.

- (e) Notwithstanding the other provisions of paragraph 10, catch limits for the killing for commercial purposes of whales from all stocks for the 1986 coastal and the 1985/86 pelagic seasons and thereafter shall be zero. This provision will be kept under review, based upon the best scientific advice, and by 1990 at the latest the Commission will undertake a comprehensive assessment of the effects of this decision on whale stocks and consider modification of this provision and the establishment of other catch limits.¹⁸*

¹⁸The Governments of Japan, Norway, Peru and the Union of Soviet Socialist Republics lodged objection to paragraph 10(e) within the prescribed period. For all other Contracting Governments this paragraph came into force on 3 February 1983. Peru withdrew its objection on 22 July 1983. The Government of Japan withdrew its objections with effect from 1 May 1987 with respect to commercial pelagic whaling, from 1 October 1987 with respect to commercial coastal whaling for minke and Bryde's whales, and from 1 April 1988 with respect to commercial coastal sperm whaling. The objections of Norway and the Russian Federation not having been withdrawn, the paragraph is not binding upon these Governments.

*Iceland's instrument of adherence to the International Convention for the Regulation of Whaling and the Protocol to the Convention deposited on 10 October 2002 states that Iceland "adheres to the aforesaid Convention and Protocol with a reservation with respect to paragraph 10(e) of the Schedule attached to the Convention". The instrument further states the following:

"Notwithstanding this, the Government of Iceland will not authorise whaling for commercial purposes by Icelandic vessels before 2006 and, thereafter, will not authorise such whaling while progress is being made in negotiations within the IWC on the RMS. This does not apply, however, in case of the so-called moratorium on whaling for commercial purposes, contained in paragraph 10(e) of the Schedule not being lifted within a reasonable time after the completion of the RMS. Under no circumstances will whaling for commercial purposes be authorised without a sound scientific basis and an effective management and enforcement scheme."

#The Governments of Argentina, Australia, Brazil, Chile, Finland, France, Germany, Italy, Mexico, Monaco, the Netherlands, New Zealand, Peru, San Marino, Spain, Sweden, UK and the USA have lodged objections to Iceland's reservation to paragraph 10(e).

Table 1
BALLEN WHALE STOCK CLASSIFICATIONS AND CATCH LIMITS* (excluding by-catch)

| Area | SEI | | MINKE | | FIN | | BLUE | | HUMPBACK | | PYGMY RIGHT | | GRAY | |
|--|---------------------|----------------|---------------------|----------------|---------------------|----------------|---------------------|----------------|---------------------|----------------|---------------------|----------------|---------------------|----------------|
| | Classi- fication | Catch limit | Classi- fication | Catch limit | Classi- fication | Catch limit | Classi- fication | Catch limit | Classi- fication | Catch limit | Classi- fication | Catch limit | Classi- fication | Catch limit |
| SOUTHERN HEMISPHERE 2010-2011 pelagic season and 2011 coastal season | | | | | | | | | | | | | | |
| I | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 |
| II | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 |
| III | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 |
| IV | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 |
| V | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 |
| VI | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 |
| Total catch not to exceed | | | | | | | | | | | | | | |
| NORTHERN HEMISPHERE 2011 season | | | | | | | | | | | | | | |
| ARCTIC | | | | | | | | | | | | | | |
| NORTH PACIFIC | | | | | | | | | | | | | | |
| Whole region | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 | PS | 0 |
| Okhotsk Sea-West Pacific Stock | | | | | | | | | | | | | | |
| Sea of Japan-Yellow Sea-East | | | | | | | | | | | | | | |
| China Sea Stock | | | PS | 0 | | | | | | | | | | |
| Remainder | | | BMS | 0 | | | | | | | | | SM5 | 0 |
| Eastern Stock | | | | | | | | | | | | | | |
| Western Stock | | | | | | | | | | | | | | |
| NORTH ATLANTIC | | | | | | | | | | | | | | |
| Whole region | | | PS | 0 | | | PS | 0 | | | PS | 0 | | |
| West Greenland Stock | | | PS | 0 | | | PS | 0 | | | PS | 0 | | |
| Newfoundland-atlantic Stock | | | | | | | | | | | | | | |
| Canadian East Coast Stock | | | | | | | | | | | | | | |
| Novo Scotia Stock | PS | 0 | | | | | | | | | | | | |
| Central Stock | | | | | | | | | | | | | | |
| East Greenland-Iceland Stock | | | | | | | | | | | | | | |
| Iceland-Denmark Strait Stock | | | | | | | | | | | | | | |
| Spain-Portugal-Irish Isles | | | | | | | | | | | | | | |
| Stock | | | | | | | | | | | | | | |
| North-eastern Stock | | | PS* | 0 | | | | | | | | | | |
| West Norway-Faroe Island Stock | | | | | | | | | | | | | | |
| North Norway Stock | | | | | | | | | | | | | | |
| Eastern Stock | | | | | | | | | | | | | | |
| NORTHERN INDIAN OCEAN | | | | | | | | | | | | | | |
| | | | BMS | 0 | | | PS | 0 | | | PS | 0 | | |

* Available to be taken by aborigines or a Contracting Government on behalf of aborigines pursuant to paragraph 13(d)(2).

† Available to be struck by aborigines pursuant to paragraph 13(d)(3). Catch limit for each of the years 2010, 2011 and 2012.

‡ In IWC 82, in August, Morocco, June 2010, Denmark and Greenland agreed to voluntarily reduce further the catch limit for the West Greenland stock of fin whales from 16 to 10 for each of the years 2010, 2011 and 2012.

§ The catch limits of zero introduced into Table 1 as editorial amendments as a result of the coming into effect of paragraph 10(c) are not binding upon the governments of the countries which lodged and have not withdrawn objections to the said paragraph.

¶ The Government of Norway presented objection to the classification of the Northeastern Atlantic stock of minke whales as a Protection Stock within the prescribed period. This classification came into force on 30 January 1986 but is not binding on the Government of Norway.

‡ The Government of the Czech Republic lodged an objection within the prescribed period to the amendments to the Schedule arising from the 62nd Annual Meeting of the Commission, i.e. changes to the dates of the pelagic and coastal whaling seasons given in paragraphs 11 and 12 and Tables 1, 2 and 3, and changes to the aboriginal subsistence whaling catch limits set out in paragraph 13 (d). For all other Contracting Governments, these provisions came into force on 11 January 2011. The Czech Republic lodged a similar objection to Schedule amendments arising from the 60th and 61st Annual Meetings of the Commission. These objections have not been withdrawn.

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Table 2
Bryde's whale stock classifications and catch limits.^a

| | Classification | Catch limit |
|---|----------------|-------------|
| SOUTHERN HEMISPHERE-2010/2011 pelagic season and 2011 coastal season ^a | | |
| South Atlantic Stock | - | 0 |
| Southern Indian Ocean Stock | IMS | 0 |
| South African Inshore Stock | - | 0 |
| Solomon Islands Stock | IMS | 0 |
| Western South Pacific Stock | IMS | 0 |
| Eastern South Pacific Stock | IMS | 0 |
| Peruvian Stock | - | 0 |
| NORTH PACIFIC-2011 season ^a | | |
| Eastern Stock | IMS | 0 |
| Western Stock | IMS | 0 |
| East China Sea Stock | PS | 0 |
| NORTH ATLANTIC-2011 season ^a | | |
| NORTHERN INDIAN OCEAN-2011 season ^a | | |
| | - | 0 |

^aThe catch limits of zero introduced in Table 2 as editorial amendments as a result of the coming into effect of paragraph 10(e) are not binding upon the governments of the countries which lodged and have not withdrawn objections to the said paragraph.

^aSee footnote to Table 1.

Table 3
Toothed whale stock classifications and catch limits.^a

| Division | Longitude | Classification | SPERM | Catch limit |
|--|-------------|----------------|-------|----------------|
| 1 | 60°W-30°W | - | - | 0 |
| 2 | 30°W-20°E | - | - | 0 |
| 3 | 20°E-60°E | - | - | 0 |
| 4 | 60°E-90°E | - | - | 0 |
| 5 | 90°E-130°E | - | - | 0 |
| 6 | 130°E-160°E | - | - | 0 |
| 7 | 160°E-170°W | - | - | 0 |
| 8 | 170°W-100°W | - | - | 0 |
| 9 | 100°W-60°W | - | - | 0 |
| NORTHERN HEMISPHERE-2011 season ^a | | | | |
| NORTH PACIFIC | | | | |
| Western Division | | PS | | 0 ^b |
| Eastern Division | | - | | 0 |
| NORTH ATLANTIC | | - | 0 | |
| NORTHERN INDIAN OCEAN | | - | 0 | |
| NORTH ATLANTIC | | | | |
| | | PS | | 0 |

^aNo whales may be taken from this stock until catch limits including any limitations on size and sex are established by the Commission.

^bThe catch limits of zero introduced in Table 3 as editorial amendments as a result of the coming into effect of paragraph 10(e) are not binding upon the governments of the countries which lodged and have not withdrawn objections to the said paragraph.

^aSee footnote to Table 1.

Baleen Whale Catch Limits

11. The number of baleen whales taken in the Southern Hemisphere in the **2010/2011** pelagic season and the **2011** coastal season shall not exceed the limits shown in Tables 1 and 2.⁴
12. The number of baleen whales taken in the North Pacific Ocean and dependent waters in **2011** and in the North Atlantic Ocean in **2011** shall not exceed the limits shown in Tables 1 and 2.⁴
13. (a) Notwithstanding the provisions of paragraph 10, catch limits for aboriginal subsistence whaling to satisfy aboriginal subsistence need for the 1984 whaling season and each whaling season thereafter shall be established in accordance with the following principles:
 - (1) For stocks at or above MSY level, aboriginal subsistence catches shall be permitted so long as total removals do not exceed 90 per cent of MSY.
 - (2) For stocks below the MSY level but above a certain minimum level, aboriginal subsistence catches shall be permitted so long as they are set at levels which will allow whale stocks to move to the MSY level.⁵
 - (3) The above provisions will be kept under review, based upon the best scientific advice, and by 1990 at the latest the Commission will undertake a comprehensive assessment of the effects of these provisions on whale stocks and consider modification.
 - (4) For aboriginal whaling conducted under subparagraphs (b)(1), (b)(2), and (b)(3) of this paragraph, it is forbidden to strike, take or kill calves or any whale accompanied by a calf. For aboriginal whaling conducted under subparagraphs (b)(4) of this paragraph, it is forbidden to strike, take or kill suckling calves or female whales accompanied by calves.
 - (5) All aboriginal whaling shall be conducted under national legislation that accords with this paragraph.
- (b) Catch limits for aboriginal subsistence whaling are as follows:
 - (1) The taking of bowhead whales from the Bering-Chukchi-Beaufort Seas stock by aborigines is permitted, but only when the meat and products of such whales are to be used exclusively for local consumption by the aborigines and further provided that:
 - (i) For the years 2008, 2009, 2010, 2011 and 2012, the number of bowhead whales landed shall not exceed 280. For each of these years the number of bowhead whales struck shall not exceed 67, except that any unused portion of a strike quota from any year (including 15 unused strikes from the 2003-2007 quota) shall be carried forward and added to the strike quotas of any subsequent years, provided that no more than 15 strikes shall be added to the strike quota for any one year.
 - (ii) This provision shall be reviewed annually by the Commission in light of the advice of the Scientific Committee.
 - (2) The taking of gray whales from the Eastern stock in the North Pacific is permitted, but only by aborigines or a Contracting Government on behalf of aborigines, and then only when the meat and products of such whales are to be used exclusively for local consumption by the aborigines.
 - (i) For the years 2008, 2009, 2010, 2011 and 2012, the number of gray whales taken in accordance with this sub-paragraph shall not exceed 620, provided that the number of gray whales taken in any one of the years 2008, 2009, 2010, 2011 and 2012 shall not exceed 140.
 - (ii) This provision shall be reviewed annually by the Commission in light of the advice of the Scientific Committee.
 - (3) The taking by aborigines of minke whales from the West Greenland and Central stocks and fin whales from the West Greenland stock and bowhead whales from the West Greenland feeding aggregation **and humpback whales from the West Greenland feeding aggregation** is permitted and then only when the meat and products are to be used exclusively for local consumption.⁶
 - (i) The number of fin whales struck from the West Greenland stock in accordance with this sub-paragraph shall not exceed 16 in each of the years // 2010, 2011 and 2012.⁶
 - (ii) The number of minke whales struck from the Central stock in accordance with this sub-paragraph shall not exceed 12 in each of the years 2008, 2009, 2010, 2011 and 2012, except that any unused portion of the quota for each year shall be carried forward from that year and added to the quota of any subsequent years, provided that no more than 3 shall be added to the quota for any one year.
 - (iii) The number of minke whales struck from the West Greenland stock shall not exceed 178 in each of the years // 2010, 2011 and 2012, except that any unused portion of the quota for each year shall be carried forward from that year and added to the strike quota of any of the subsequent years, provided

⁴See footnote to Table 1.

⁵The Commission, on advice of the Scientific Committee, shall establish as far as possible (a) a minimum stock level for each stock below which whales shall not be taken, and (b) a rate of increase towards the MSY level for each stock. The Scientific Committee shall advise on a minimum stock level and on a range of rates of increase towards the MSY level under different catch regimes.

⁶At IWC 62 in Agadir, Morocco, June 2010, Denmark and Greenland agreed to voluntarily reduce further the catch limit for the West Greenland stock of fin whales from 16 to 10 for each of the years 2010, 2011 and 2012.

that no more than 15 strikes shall be added to the strike quota for any one year. *This provision will be reviewed if new scientific data become available within the 5 year period and if necessary amended on basis of the advice of the Scientific Committee.*⁴

- (iv) The number of bowhead whales struck off West Greenland in accordance with this sub-paragraph shall not exceed 2 in each of the years 2008, 2009, 2010, 2011 and 2012, except that any unused portion of the quota for each year shall be carried forward from that year and added to the quota of any subsequent years, provided that no more than 2 shall be added to the quota for any one year. *This provision will be reviewed if new scientific data become available within the 5 year period and if necessary amended on basis of the advice of the Scientific Committee.*⁴

- (v) *The number of humpback whales struck off West Greenland in accordance with this sub-paragraph shall not exceed 9 in each of the years 2010, 2011 and 2012, except that any unused portion of the quota for each year shall be carried forward from that year and added to the strike quota of any of the subsequent years, provided that no more than 2 strikes shall be added to the strike quota for any one year. This provision will be reviewed if new scientific data become available within the remaining quota period and if necessary amended on the basis of the advice of the Scientific Committee.*⁴

- (4) For the seasons 2008-2012 the number of humpback whales to be taken by the Bequians of St. Vincent and The Grenadines shall not exceed 20. The meat and products of such whales are to be used exclusively for local consumption in St. Vincent and The Grenadines.

14. It is forbidden to take or kill suckling calves or female whales accompanied by calves.

Baleen Whale Size Limits

15. (a) It is forbidden to take or kill any sei or Bryde's whales below 40 feet (12.2 metres) in length except that sei and Bryde's whales of not less than 35 feet (10.7 metres) may be taken for delivery to land stations, provided that the meat of such whales is to be used for local consumption as human or animal food.
- (b) It is forbidden to take or kill any fin whales below 57 feet (17.4 metres) in length in the Southern Hemisphere, and it is forbidden to take or kill fin whales below 55 feet (16.8 metres) in the Northern Hemisphere; except that fin whales of not less than 55 feet (16.8 metres) may be taken in the Southern Hemisphere for delivery to land

stations and fin whales of not less than 50 feet (15.2 metres) may be taken in the Northern Hemisphere for delivery to land stations, provided that, in each case the meat of such whales is to be used for local consumption as human or animal food.

Sperm Whale Catch Limits

16. Catch limits for sperm whales of both sexes shall be set at zero in the Southern Hemisphere for the 1981/82 pelagic season and 1982 coastal seasons and following seasons, and at zero in the Northern Hemisphere for the 1982 and following coastal seasons; except that the catch limits for the 1982 coastal season and following seasons in the Western Division of the North Pacific shall remain undetermined and subject to decision by the Commission following special or annual meetings of the Scientific Committee. These limits shall remain in force until such time as the Commission, on the basis of the scientific information which will be reviewed annually, decides otherwise in accordance with the procedures followed at that time by the Commission.
17. It is forbidden to take or kill suckling calves or female whales accompanied by calves.

Sperm Whale Size Limits

18. (a) It is forbidden to take or kill any sperm whales below 30 feet (9.2 metres) in length except in the North Atlantic Ocean where it is forbidden to take or kill any sperm whales below 35 feet (10.7 metres).
- (b) It is forbidden to take or kill any sperm whale over 45 feet (13.7 metres) in length in the Southern Hemisphere north of 40° South Latitude during the months of October to January inclusive.
- (c) It is forbidden to take or kill any sperm whale over 45 feet (13.7 metres) in length in the North Pacific Ocean and dependent waters south of 40° North Latitude during the months of March to June inclusive.

IV. TREATMENT

19. (a) It is forbidden to use a factory ship or a land station for the purpose of treating any whales which are classified as Protection Stocks in paragraph 10 or are taken in contravention of paragraphs 2, 3, 4, 5, 6, 7, 8, 11, 12, 14, 16 and 17 of this Schedule, whether or not taken by whale catchers under the jurisdiction of a Contracting Government.
- (b) All other whales taken, except minke whales, shall be delivered to the factory ship or land station and all parts of such whales shall be processed by boiling or otherwise, except the internal organs, whale bone and flippers of all whales, the meat of sperm whales and parts of whales intended for human food or feeding animals. A Contracting Government may in less developed regions exceptionally permit treating of whales without use of land stations, provided that such whales are fully utilised in accordance with this paragraph.
- (c) Complete treatment of the carcasses of "dauhval" and of whales used as fenders will not be required in cases where the meat or bone of such whales is in bad condition.

⁴See footnote to Table 1.

20. (a) The taking of whales for treatment by a factory ship shall be so regulated or restricted by the master or person in charge of the factory ship that no whale carcase (except of a whale used as a fender, which shall be processed as soon as is reasonably practicable) shall remain in the sea for a longer period than thirty-three hours from the time of killing to the time when it is hauled up for treatment.
- (b) Whales taken by all whale catchers, whether for factory ships or land stations, shall be clearly marked so as to identify the catcher and to indicate the order of catching.

V. SUPERVISION AND CONTROL

21. (a) There shall be maintained on each factory ship at least two inspectors of whaling for the purpose of maintaining twenty-four hour inspection provided that at least one such inspector shall be maintained on each catcher functioning as a factory ship. These inspectors shall be appointed and paid by the Government having jurisdiction over the factory ship; provided that inspectors need not be appointed to ships which, apart from the storage of products, are used during the season solely for freezing or salting the meat and entrails of whales intended for human food or feeding animals.
- (b) Adequate inspection shall be maintained at each land station. The inspectors serving at each land station shall be appointed and paid by the Government having jurisdiction over the land station.
- (c) There shall be received such observers as the member countries may arrange to place on factory ships and land stations or groups of land stations of other member countries. The observers shall be appointed by the Commission acting through its Secretary and paid by the Government nominating them.
22. Gunners and crews of factory ships, land stations, and whale catchers, shall be engaged on such terms that their remuneration shall depend to a considerable extent upon such factors as the species, size and yield of whales and not merely upon the number of the whales taken. No bonus or other remuneration shall be paid to the gunners or crews of whale catchers in respect of the taking of lactating whales.
23. Whales must be measured when at rest on deck or platform after the hauling out wire and grasping device have been released, by means of a tape-measure made of a non-stretching material. The zero end of the tape-measure shall be attached to a spike or stable device to be positioned on the deck or platform abreast of one end of the whale. Alternatively the spike may be stuck into the tail fluke abreast of the apex of the notch. The tape-measure shall be held taut in a straight line parallel to the deck and the whale's body, and other than in exceptional circumstances along the whale's back, and read abreast of the other end of the whale. The ends of the whale for measurement purposes shall be the tip of the upper jaw, or in sperm whales the most forward part of the head, and the apex of the notch between the tail flukes.
- Measurements shall be logged to the nearest foot or 0.1 metre. That is to say, any whale between 75 feet 6 inches and 76 feet 6 inches shall be logged as 76 feet, and any whale between 76 feet 6 inches and 77 feet 6 inches shall be logged as 77 feet. Similarly, any whale between 10.15 metres and 10.25 metres shall be logged as 10.2 metres, and any whale between 10.25 metres and 10.35 metres shall be logged as 10.3 metres. The measurement of any whale which falls on an exact half foot or 0.05 metre shall be logged at the next half foot or 0.05 metre, e.g. 76 feet 6 inches precisely shall be logged as 77 feet and 10.25 metres precisely shall be logged as 10.3 metres.

VI. INFORMATION REQUIRED

24. (a) All whale catchers operating in conjunction with a factory ship shall report by radio to the factory ship:
- (1) the time when each whale is taken
 - (2) its species, and
 - (3) its marking effected pursuant to paragraph 20(b).
- (b) The information specified in sub-paragraph (a) of this paragraph shall be entered immediately by a factory ship in a permanent record which shall be available at all times for examination by the whaling inspectors; and in addition there shall be entered in such permanent record the following information as soon as it becomes available:
- (1) time of hauling up for treatment
 - (2) length, measured pursuant to paragraph 23
 - (3) sex
 - (4) if female, whether lactating
 - (5) length and sex of foetus, if present, and
 - (6) a full explanation of each infraction.
- (c) A record similar to that described in sub-paragraph (b) of this paragraph shall be maintained by land stations, and all of the information mentioned in the said sub-paragraph shall be entered therein as soon as available.
- (d) A record similar to that described in sub-paragraph (b) of this paragraph shall be maintained by "small-type whaling" operations conducted from shore or by pelagic fleets, and all of this information mentioned in the said sub-paragraph shall be entered therein as soon as available.
25. (a) All Contracting Governments shall report to the Commission for all whale catchers operating in conjunction with factory ships and land stations the following information:
- (1) methods used to kill each whale, other than a harpoon, and in particular compressed air;
 - (2) number of whales struck but lost.
- (b) A record similar to that described in sub-paragraph (a) of this paragraph shall be maintained by vessels engaged in "small-type whaling" operations and by native peoples taking species listed in paragraph 1, and all the information mentioned in the said sub-paragraph shall be entered therein as soon as available, and forwarded by Contracting Governments to the Commission.
26. (a) Notification shall be given in accordance with the provisions of Article VII of the Convention, within two days after the end of each calendar week, of data on the number of baleen whales

- by species taken in any waters south of 40° South Latitude by all factory ships or whale catchers attached thereto under the jurisdiction of each Contracting Government, provided that when the number of each of these species taken is deemed by the Secretary to the International Whaling Commission to have reached 85 per cent of whatever total catch limit is imposed by the Commission notification shall be given as aforesaid at the end of each day of data on the number of each of these species taken.
- (b) If it appears that the maximum catches of whales permitted by paragraph 11 may be reached before 7 April of any year, the Secretary to the International Whaling Commission shall determine, on the basis of the data provided, the date on which the maximum catch of each of these species shall be deemed to have been reached and shall notify the master of each factory ship and each Contracting Government of that date not less than four days in advance thereof. The taking or attempting to take baleen whales, so notified, by factory ships or whale catchers attached thereto shall be illegal in any waters south of 40° South Latitude after midnight of the date so determined.
- (c) Notification shall be given in accordance with the provisions of Article VII of the Convention of each factory ship intending to engage in whaling operations in any waters south of 40° South Latitude.
27. Notification shall be given in accordance with the provisions of Article VII of the Convention with regard to all factory ships and catcher ships of the following statistical information:
- (a) concerning the number of whales of each species taken, the number thereof lost, and the number treated at each factory ship or land station, and
- (b) as to the aggregate amounts of oil of each grade and quantities of meal, fertiliser (guano), and other products derived from them, together with
- (c) particulars with respect to each whale treated in the factory ship, land station or "small-type whaling" operations as to the date and approximate latitude and longitude of taking, the species and sex of the whale, its length and, if it contains a foetus, the length and sex, if ascertainable, of the foetus.
- The data referred to in (a) and (c) above shall be verified at the time of the tally and there shall also be notification to the Commission of any information which may be collected or obtained concerning the calving grounds and migration of whales.
28. (a) Notification shall be given in accordance with the provisions of Article VII of the Convention with regard to all factory ships and catcher ships of the following statistical information:
- (1) the name and gross tonnage of each factory ship,
- (2) for each catcher ship attached to a factory ship or land station:
- (i) the dates on which each is commissioned and ceases whaling for the season,
- (ii) the number of days on which each is at sea on the whaling grounds each season,
- (iii) the gross tonnage, horsepower, length and other characteristics of each, vessels used only as tow boats should be specified.
- (3) A list of the land stations which were in operation during the period concerned, and the number of miles searched per day by aircraft, if any.
- (b) The information required under paragraph (a)(2)(iii) should also be recorded together with the following information, in the log book format shown in Appendix A, and forwarded to the Commission:
- (1) where possible the time spent each day on different components of the catching operation,
- (2) any modifications of the measures in paragraphs (a)(2)(i)-(iii) or (b)(1) or data from other suitable indicators of fishing effort for "small-type whaling" operations.
29. (a) Where possible all factory ships and land stations shall collect from each whale taken and report on:
- (1) both ovaries or the combined weight of both testes,
- (2) at least one ear plug, or one tooth (preferably first mandibular).
- (b) Where possible similar collections to those described in sub-paragraph (a) of this paragraph shall be undertaken and reported by "small-type whaling" operations conducted from shore or by pelagic fleets.
- (c) All specimens collected under sub-paragraphs (a) and (b) shall be properly labelled with platform or other identification number of the whale and be appropriately preserved.
- (d) Contracting Governments shall arrange for the analysis as soon as possible of the tissue samples and specimens collected under sub-paragraphs (a) and (b) and report to the Commission on the results of such analyses.
30. A Contracting Government shall provide the Secretary to the International Whaling Commission with proposed scientific permits before they are issued and in sufficient time to allow the Scientific Committee to review and comment on them. The proposed permits should specify:
- (a) objectives of the research;
- (b) number, sex, size and stock of the animals to be taken;
- (c) opportunities for participation in the research by scientists of other nations; and
- (d) possible effect on conservation of stock.
- Proposed permits shall be reviewed and commented on by the Scientific Committee at Annual Meetings when possible. When permits would be granted prior to the next Annual Meeting, the Secretary shall send the proposed permits to members of the Scientific Committee by mail for their comment and review. Preliminary results of any research resulting from the permits should be made available at the next Annual Meeting of the Scientific Committee.
31. A Contracting Government shall transmit to the Commission copies of all its official laws and regulations relating to whales and whaling and changes in such laws and regulations.

INTERNATIONAL CONVENTION FOR THE REGULATION OF WHALING, 1946
SCHEDULE APPENDIX A

TITLE PAGE
(one logbook per catcher per season)

Catcher name..... Year built.....

Attached to expedition/land station

Season.....

Overall length..... Wooden/steel hull.....

Gross tonnage.....

Type of engine..... H.P.....

Maximum speed..... Average searching speed.....

Asdic set, make and model no.....

Date of installation.....

Make and size of cannon.....

Type of first harpoon used..... Explosive/electric/non-explosive

Type of killer harpoon used.....

Length and type of forerunner.....

Type of whaleline.....

Height of barrel above sea level.....

Speedboat used, Yes/No

Name of Captain.....

Number of years experience.....

Name of gunner.....

Number of years experience.....

Number of crew.....

INTERNATIONAL CONVENTION FOR THE REGULATION OF WHALING, 1946
DAILY RECORD SHEET

TABLE 1

Date Catcher name Sheet No.

Searching: Time started (or resumed)
 *Time whales seen or reported to catcher
 Whale species
 Number seen and no. of groups
 Position found
 Name of catcher that found whales
 Chasing: Time started chasing (or confirmed whales)
 Time whale shot or chasing discontinued
 Handling: Aulic used (Yes/No)
 Time whale flagged or alongside for towing
 Serial No. of catch
 Towing: Time started picking up
 Time finished picking up or started towing
 Date and time delivered to factory
 Resting: Time stopped (for drifting or resting)
 Time finished drifting/resting
 Time ceased operations

WEATHER CONDITIONS

| Time | Sea state | Wind force and direction | Visibility |
|-------|-----------|--------------------------|------------|
| | | | |
| | | | |
| | | | |

Whales Seen (No. and No. of schools)

Blue Bryde's
 Fin Minke
 Humpback
 Right
 Seal
 Signed
 Others (specify)

*Time whales reported to catcher means the time when the catcher is told of the position of a school and starts to move towards it to chase it.

SCHEDULE APPENDIX A
SCHOOLING REPORT

TABLE 2

To be completed by pelagic expedition or coastal station for each sperm whale school chased. A separate form to be used each day.

Name of expedition or coastal station

Date Name of factory ship

Time School Found

Total Number of Whales in School

Number of Takeable Whales in School

Number of Whales Caught from School by each Catcher

Name of Catcher

Name of Catcher

Name of Catcher

Name of Catcher

Name of Catcher

Total Number Caught from School

Remarks:

Explanatory Notes

- A. Fill in one column for each school chased with number of whales caught by each catcher taking part in the chase; if catchers chase the school but do not catch from it, enter 0; for catchers in fleet which do not chase that school enter X.
- B. A school on this form means a group of whales which are sufficiently close together that a catcher having completed handling one whale can start chasing another whale almost immediately without spending time searching. A solitary whale should be entered as a school of 1 whale.
- C. A takeable whale is a whale of a size or kind which the catchers would take if possible. It does not necessarily include all whales above legal size, e.g. if catchers are concentrating on large whales only these would be counted as takeable.
- D. Information about catchers from other expeditions or companies operating on the same school should be recorded under Remarks.

Annex 2: *Convention for the Regulation of Whaling*, Geneva, 24 September 1931,
155 LNTS 351 (entered into force 16 January 1935)

N° 3586.

UNION SUD-AFRICAINE,
ALBANIE, ALLEMAGNE,
ÉTATS-UNIS D'AMÉRIQUE,
AUSTRALIE, etc.

Convention pour la réglementation
de la chasse à la baleine. Signée
à Genève, le 24 septembre 1931.

UNION OF SOUTH AFRICA,
ALBANIA, GERMANY,
UNITED STATES OF AMERICA,
AUSTRALIA, etc.

Convention for the Regulation of
Whaling. Signed at Geneva, Sep-
tember 24th, 1931.

N^o 3586. — CONVENTION¹ POUR LA RÉGLEMENTATION DE LA CHASSE A LA BALEINE. SIGNÉE A GENEVE, LE 24 SEPTEMBRE 1931.

Textes officiels en français et en anglais. Cette convention a été enregistrée par le Secrétariat, conformément à son article 21, le 16 janvier 1935, date de son entrée en vigueur.

SA MAJESTÉ LE ROI DES ALBANAIS ; LE PRÉSIDENT DU REICH ALLEMAND ; LE PRÉSIDENT DES ETATS-UNIS D'AMÉRIQUE ; SA MAJESTÉ LE ROI DES BELGES ; SA MAJESTÉ LE ROI DE GRANDE-BRETAGNE ET D'IRLANDE ET DES DOMINIONS BRITANNIQUES AU DELA DES MERS, EMPEREUR DES INDES ; LE PRÉSIDENT DE LA RÉPUBLIQUE DE COLOMBIE ; SA MAJESTÉ LE ROI DE DANEMARK ET D'ISLANDE ; LE PRÉSIDENT DU GOUVERNEMENT DE LA RÉPUBLIQUE ESPAGNOLE ; LE PRÉSIDENT DE LA RÉPUBLIQUE DE FINLANDE ; LE PRÉSIDENT DE LA RÉPUBLIQUE FRANÇAISE ; LE PRÉSIDENT DE LA RÉPUBLIQUE HELLÉNIQUE ; SA MAJESTÉ LE ROI D'ITALIE ; LE PRÉSIDENT DES ETATS-UNIS DU MEXIQUE ; SA MAJESTÉ LE ROI DE NORVÈGE ; SA MAJESTÉ LA REINE DES PAYS-BAS ; LE PRÉSIDENT DE LA RÉPUBLIQUE DE POLOGNE ; SA MAJESTÉ LE ROI DE ROUMANIE ; LE CONSEIL FÉDÉRAL SUISSE ; LE PRÉSIDENT DE LA RÉPUBLIQUE TCHÉCOSLOVAQUE ; LE PRÉSIDENT DE LA RÉPUBLIQUE DE TURQUIE ; SA MAJESTÉ LE ROI DE YOUGOSLAVIE ont désigné pour leurs plénipotentiaires, savoir :

SA MAJESTÉ LE ROI DES ALBANAIS :

M. Lec KURTI, ministre résident, délégué permanent auprès de la Société des Nations.

¹ *Dépôt des ratifications à Genève :*

| | |
|--|------------------|
| ETATS-UNIS D'AMÉRIQUE | 7 juillet 1932. |
| NORVÈGE | 18 juillet 1932. |
| UNION SUD-AFRICAINE | 11 janvier 1933. |
| SUISSE | 16 février 1933. |
| MEXIQUE | 13 mars 1933. |
| PAYS-BAS (y compris les Indes néerlandaises, Surinam et Curaçao) | 30 mai 1933. |
| ITALIE | 12 juin 1933. |

Traduction. — L'adhésion du Gouvernement italien à cette convention ne pourra en aucun cas constituer un précédent pour les accords futurs prévoyant une limitation de la pêche dans les mers extraterritoriales.

| | |
|--|--------------------|
| ESPAGNE | 2 août 1933. |
| POLOGNE | 27 septembre 1933. |
| TCHÉCOSLOVAQUIE | 20 octobre 1933. |
| YOUGOSLAVIE | 16 janvier 1934. |
| TURQUIE | 28 mai 1934. |
| DANEMARK (y compris le Groenland) | 26 juin 1934. |
| GRANDE-BRETAGNE ET IRLANDE DU NORD | 18 octobre 1934. |

Traduction. — Sa Majesté n'assume aucune obligation en ce qui concerne l'un quelconque de ses colonies, protectorats et territoires d'outre-

No. 3586. — CONVENTION¹ FOR THE REGULATION OF WHALING.
SIGNED AT GENEVA, SEPTEMBER 24TH, 1931.

Official texts in French and English. This Convention was registered with the Secretariat, in accordance with its Article 21, on January 16th, 1935, the date of its entry into force.

HIS MAJESTY THE KING OF THE ALBANIANS; THE PRESIDENT OF THE GERMAN REICH; THE PRESIDENT OF THE UNITED STATES OF AMERICA; HIS MAJESTY THE KING OF THE BELGIANS; HIS MAJESTY THE KING OF GREAT BRITAIN, IRELAND AND THE BRITISH DOMINIONS BEYOND THE SEAS, EMPEROR OF INDIA; THE PRESIDENT OF THE REPUBLIC OF COLOMBIA; HIS MAJESTY THE KING OF DENMARK AND ICELAND; THE PRESIDENT OF THE GOVERNMENT OF THE SPANISH REPUBLIC; THE PRESIDENT OF THE REPUBLIC OF FINLAND; THE PRESIDENT OF THE FRENCH REPUBLIC; THE PRESIDENT OF THE HELLENIC REPUBLIC; HIS MAJESTY THE KING OF ITALY; THE PRESIDENT OF THE UNITED STATES OF MEXICO; HIS MAJESTY THE KING OF NORWAY; HER MAJESTY THE QUEEN OF THE NETHERLANDS; THE PRESIDENT OF THE POLISH REPUBLIC; HIS MAJESTY THE KING OF ROUMANIA; THE SWISS FEDERAL COUNCIL; THE PRESIDENT OF THE CZECHOSLOVAK REPUBLIC; THE PRESIDENT OF THE TURKISH REPUBLIC; HIS MAJESTY THE KING OF YUGOSLAVIA, have appointed as their Plenipotentiaries the following:

HIS MAJESTY THE KING OF THE ALBANIANS:

M. Lec KURTI, Resident Minister, Permanent Delegate accredited to the League of Nations.

¹ *Deposit of ratifications in Geneva:*

| | |
|--|----------------------|
| UNITED STATES OF AMERICA | July 7th, 1932. |
| NORWAY | July 18th, 1932. |
| UNION OF SOUTH AFRICA | January 11th, 1933. |
| SWITZERLAND | February 16th, 1933. |
| MEXICO | March 13th, 1933. |
| THE NETHERLANDS (including the Netherlands Indies, Surinam and Curaçao) | May 30th, 1933. |
| ITALY | June 12th, 1933. |

Translation. — The accession of the Italian Government to this Convention can in no way constitute a precedent for future agreements providing for the limitation of fishing in extra-territorial seas.

| | |
|--|-----------------------|
| SPAIN | August 2nd, 1933. |
| POLAND | September 27th, 1933. |
| CZECHOSLOVAKIA | October 20th, 1933. |
| YUGOSLAVIA | January 16th, 1934. |
| TURKEY | May 28th, 1934. |
| DENMARK (including Greenland) | June 26th, 1934. |
| GREAT BRITAIN AND NORTHERN IRELAND | October 18th, 1934. |

His Majesty does not assume any obligations in respect of any of His colonies, protectorates, overseas territories or territories

LE PRÉSIDENT DU REICH ALLEMAND :

M. Hans Hermann VÖLCKERS, consul général à Genève.

LE PRÉSIDENT DES ETATS-UNIS D'AMÉRIQUE :

M. Hugh R. WILSON, envoyé extraordinaire et ministre plénipotentiaire près le Conseil fédéral suisse.

SA MAJESTÉ LE ROI DES BELGES :

M. P. HYMANS, ministre des Affaires étrangères.

SA MAJESTÉ LE ROI DE GRANDE-BRETAGNE ET D'IRLANDE ET DES DOMINIONS BRITANNIQUES AU DELÀ DES MERS, EMPEREUR DES INDES :

POUR LA GRANDE-BRETAGNE ET L'IRLANDE DU NORD, ainsi que toutes parties de l'Empire britannique non membres séparés de la Société des Nations :

Le très honorable vicomte CECIL OF CHELWOOD, K.C.

POUR LE DOMINION DU CANADA :

L'honorable Hugh GUTHRIE, P.C., K.C., M.P., ministre de la Justice, procureur général.

POUR LE COMMONWEALTH D'AUSTRALIE :

Mr. James R. COLLINS, C.M.G., C.B.E., secrétaire officiel et conseiller financier au Bureau du haut commissaire à Londres.

POUR LE DOMINION DE LA NOUVELLE-ZÉLANDE :

Sir Thomas Mason WILFORD, K.C.M.G., K.C., haut commissaire à Londres.

POUR L'UNION SUD-AFRICAINE :

Mr. C. T. TE WATER, haut commissaire à Londres.

POUR L'INDE :

Sir Brojendra L. MITTER, Kt., membre juridique du Conseil exécutif du Vice-Roi.

LE PRÉSIDENT DE LA RÉPUBLIQUE DE COLOMBIE :

Le docteur A. J. RESTREPO, délégué permanent auprès de la Société des Nations.

SA MAJESTÉ LE ROI DE DANEMARK ET D'ISLANDE :

M. William BORBERG, délégué permanent auprès de la Société des Nations.

mer ou territoires placés sous la suzeraineté ou
le mandat du Gouvernement de Sa Majesté dans
le Royaume-Uni.

| | |
|------------------|-------------------|
| FRANCE | 16 mai 1935. |
| NOUVELLE-ZÉLANDE | 16 octobre 1935. |
| CANADA | 12 décembre 1935. |

Adhésions

| | |
|-----------|--------------------|
| SOUDAN | 13 avril 1932. |
| NICARAGUA | 30 avril 1932. |
| MONACO | 7 juin 1932. |
| BRESIL | 21 novembre 1932. |
| EGYPTE | 25 janvier 1933. |
| EQUATEUR | 13 avril 1935. |
| LETTONIE | 17 septembre 1935. |

- THE PRESIDENT OF THE GERMAN REICH :
M. Hans Hermann VÖLCKERS, Consul-General at Geneva.
- THE PRESIDENT OF THE UNITED STATES OF AMERICA :
Mr. Hugh R. WILSON, Envoy Extraordinary and Minister Plenipotentiary to the Swiss Federal Council.
- HIS MAJESTY THE KING OF THE BELGIANS :
M. P. HYMANS, Minister for Foreign Affairs.
- HIS MAJESTY THE KING OF GREAT BRITAIN, IRELAND AND THE BRITISH DOMINIONS BEYOND THE SEAS, EMPEROR OF INDIA :
FOR GREAT BRITAIN AND NORTHERN IRELAND and all parts of the British Empire which are not separate Members of the League of Nations :
The Right Honourable Viscount CECIL OF CHELWOOD, K.C.
FOR THE DOMINION OF CANADA :
The Honourable Hugh GUTHRIE, P.C., K.C., M.P., Minister of Justice and Attorney-General.
FOR THE COMMONWEALTH OF AUSTRALIA :
Mr. James R. COLLINS, C.M.G., C.B.E., Official Secretary and Financial Adviser in the Office of the High Commissioner in London.
FOR THE DOMINION OF NEW ZEALAND :
Sir Thomas Mason WILFORD, K.C.M.G., K.C., High Commissioner in London.
FOR THE UNION OF SOUTH AFRICA :
Mr. C. T. TE WATER, High Commissioner in London.
FOR INDIA :
Sir Brojendra L. MITTER, Kt., Law Member of the Viceroy's Executive Council.
- THE PRESIDENT OF THE REPUBLIC OF COLOMBIA :
Dr. A. J. RESTREPO, Permanent Delegate accredited to the League of Nations.
- HIS MAJESTY THE KING OF DENMARK AND ICELAND :
M. William BORBERG, Permanent Delegate accredited to the League of Nations.

under suzerainty or under mandate exercised by
His Majesty's Government in the United Kingdom.

| | |
|-----------------------|----------------------|
| FRANCE | May 16th, 1935. |
| NEW ZEALAND | October 16th, 1935. |
| CANADA | December 12th, 1935. |

Accessions :

| | |
|---------------------|-----------------------|
| SUDAN | April 13th, 1932. |
| NICARAGUA | April 30th, 1932. |
| MONACO | June 7th, 1932. |
| BRAZIL | November 21st, 1932. |
| EGYPT | January 25th, 1933. |
| ECUADOR | April 13th, 1935. |
| LATVIA | September 17th, 1935. |

LE PRÉSIDENT DU GOUVERNEMENT DE LA RÉPUBLIQUE ESPAGNOLE :

M. Alejandro LERROUX GARCÍA, ministre d'Etat.

LE PRÉSIDENT DE LA RÉPUBLIQUE DE FINLANDE :

M. Evald GYLLENBÖGEL, conseiller de légation, délégué permanent *a. i.* auprès de la Société des Nations.

LE PRÉSIDENT DE LA RÉPUBLIQUE FRANÇAISE :

M. Louis ROLLIN, député, ministre du Commerce et de l'Industrie.

LE PRÉSIDENT DE LA RÉPUBLIQUE HELLÉNIQUE :

M. R. RAPHAËL, délégué permanent auprès de la Société des Nations.

SA MAJESTÉ LE ROI D'ITALIE :

M. Augusto ROSSO, ministre plénipotentiaire, délégué adjoint au Conseil de la Société des Nations.

LE PRÉSIDENT DES ETATS-UNIS DU MEXIQUE :

M. Salvador MARTÍNEZ DE ALVA, directeur du Bureau permanent auprès de la Société des Nations.

SA MAJESTÉ LE ROI DE NORVÈGE :

M. Birger BRAADLAND, ministre des Affaires étrangères.

SA MAJESTÉ LA REINE DES PAYS-BAS :

Le Jonkheer F. BEELAERTS VAN BLOKLAND, ministre des Affaires étrangères.

LE PRÉSIDENT DE LA RÉPUBLIQUE DE POLOGNE :

M. Auguste ZALESKI, ministre des Affaires étrangères.

SA MAJESTÉ LE ROI DE ROUMANIE :

M. Constantin ANTONIADE, envoyé extraordinaire et ministre plénipotentiaire auprès de la Société des Nations.

LE CONSEIL FÉDÉRAL SUISSE :

M. Giuseppe MOTTA, président de la Confédération suisse, chef du Département politique fédéral.

LE PRÉSIDENT DE LA RÉPUBLIQUE TCHÉCOSLOVAQUE :

M. Zdeněk FIERLINGER, envoyé extraordinaire et ministre plénipotentiaire près le Conseil fédéral suisse, délégué permanent auprès de la Société des Nations.

LE PRÉSIDENT DE LA RÉPUBLIQUE DE TURQUIE :

Cemal HÜSNÜ bey, envoyé extraordinaire et ministre plénipotentiaire près le Conseil fédéral suisse.

SA MAJESTÉ LE ROI DE YOUGOSLAVIE :

M. Voislav MARINKOVITCH, ministre des Affaires étrangères.

Lesquels, après avoir communiqué leurs pleins pouvoirs, trouvés en bonne et due forme, sont convenus des dispositions suivantes :

- THE PRESIDENT OF THE GOVERNMENT OF THE SPANISH REPUBLIC :
M. Alejandro LERROUX GARCIA, Minister of State.
- THE PRESIDENT OF THE REPUBLIC OF FINLAND :
M. Evald GYLLENBÖGEL, Counsellor of Legation, Permanent Delegate a.i. accredited to the League of Nations.
- THE PRESIDENT OF THE FRENCH REPUBLIC :
M. Louis ROLLIN, Deputy, Minister of Commerce and Industry.
- THE PRESIDENT OF THE HELLENIC REPUBLIC :
M. R. RAPHAEL, Permanent Delegate accredited to the League of Nations.
- HIS MAJESTY THE KING OF ITALY :
M. Augusto ROSSO, Minister Plenipotentiary, Substitute Delegate to the Council of the League of Nations.
- THE PRESIDENT OF THE UNITED STATES OF MEXICO :
M. Salvador MARTÍNEZ DE ALVA, Head of the Permanent Office accredited to the League of Nations.
- HIS MAJESTY THE KING OF NORWAY :
M. Birger BRAADLAND, Minister for Foreign Affairs.
- HER MAJESTY THE QUEEN OF THE NETHERLANDS :
Jonkheer F. BEELAERTS VAN BLOKLAND, Minister for Foreign Affairs.
- THE PRESIDENT OF THE POLISH REPUBLIC :
M. Auguste ZALESKI, Minister for Foreign Affairs.
- HIS MAJESTY THE KING OF ROUMANIA :
M. Constantin ANTONIADE, Envoy Extraordinary and Minister Plenipotentiary accredited to the League of Nations.
- THE SWISS FEDERAL COUNCIL :
M. Giuseppe MOTTA, President of the Swiss Confederation, Head of the Federal Political Department.
- THE PRESIDENT OF THE CZECHOSLOVAK REPUBLIC :
M. Zdeněk FIERLINGER, Envoy Extraordinary and Minister Plenipotentiary to the Swiss Federal Council, Permanent Delegate accredited to the League of Nations.
- THE PRESIDENT OF THE TURKISH REPUBLIC :
Cemal HÜSNÜ Bey, Envoy Extraordinary and Minister Plenipotentiary to the Swiss Federal Council.
- HIS MAJESTY THE KING OF YUGOSLAVIA :
M. Voislav MARINKOVITCH, Minister for Foreign Affairs.

Who, having communicated their full powers, found in good and due form, have agreed on the following provisions :

No. 3586

Article premier.

Les Hautes Parties contractantes conviennent de prendre, dans les limites de leurs juridictions respectives, des mesures appropriées pour assurer l'application des dispositions de la présente convention et pour punir les infractions auxdites dispositions.

Article 2.

La présente convention est applicable seulement aux baleines à fanons.

Article 3.

La présente convention ne s'applique pas aux aborigènes habitant les côtes des territoires des Hautes Parties contractantes à la condition que :

- 1^o Ils fassent seulement usage de canots, de pirogues ou d'autres embarcations exclusivement indigènes et mues à la voile ou à rames ;
- 2^o Ils ne se servent pas d'armes à feu ;
- 3^o Ils ne soient pas au service de personnes non aborigènes ;
- 4^o Ils ne soient pas tenus de livrer à des tiers le produit de leur chasse.

Article 4.

Il est interdit de capturer ou de tuer les « right whales », qui seront considérées comme comprenant la baleine du cap Nord, la baleine du Groenland, la « right whale » australe, la « right whale » du Pacifique et la « right whale » pygmée australe.

Article 5.

Il est interdit de capturer ou de tuer les baleineaux ou jeunes baleines non sevrées, les baleines non adultes et les baleines femelles accompagnées de baleineaux (ou jeunes non sevrés).

Article 6.

Les carcasses de baleines capturées devront être utilisées aussi complètement que possible. En particulier :

- 1^o L'huile devra être extraite, par ébullition ou par tout autre procédé, de tout le blanc ainsi que de la tête et de la langue et, en outre, de la queue jusqu'à l'ouverture extérieure du gros intestin.
Les dispositions du présent paragraphe ne seront applicables qu'aux carcasses ou parties de carcasses non destinées à être utilisées comme comestibles.
- 2^o Toute usine, flottante ou non, servant à traiter les carcasses de baleine, devra être munie de l'outillage nécessaire pour extraire l'huile du blanc, de la chair et des os.
- 3^o Si des baleines sont amenées au rivage, des mesures appropriées devront être prises pour utiliser les résidus après l'extraction de l'huile.

Article 1.

The High Contracting Parties agree to take, within the limits of their respective jurisdictions, appropriate measures to ensure the application of the provisions of the present Convention and the punishment of infractions of the said provisions.

Article 2.

The present Convention applies only to baleens or whalebone whales.

Article 3.

The present Convention does not apply to aborigines dwelling on the coasts of the territories of the High Contracting Parties provided that :

- (1) They only use canoes, pirogues or other exclusively native craft propelled by oars or sails ;
- (2) They do not carry firearms ;
- (3) They are not in the employment of persons other than aborigines ;
- (4) They are not under contract to deliver the products of their whaling to any third person.

Article 4.

The taking or killing of right whales, which shall be deemed to include North-Cape whales, Greenland whales, southern right whales, Pacific right whales and southern pigmy right whales, is prohibited.

Article 5.

The taking or killing of calves or suckling whales, immature whales, and female whales which are accompanied by calves (or suckling whales) is prohibited.

Article 6.

The fullest possible use shall be made of the carcasses of whales taken. In particular :

- (1) There shall be extracted by boiling or otherwise the oil from all blubber and from the head and the tongue and, in addition, from the tail as far forward as the outer opening of the lower intestine.

The provisions of this sub-paragraph shall apply only to such carcasses or parts of carcasses as are not intended to be used for human food.

- (2) Every factory, whether on shore or afloat, used for treating the carcasses of whales shall be equipped with adequate apparatus for the extraction of oil from the blubber, flesh and bones.

- (3) In the case of whales brought on shore, adequate arrangements shall be made for utilising the residues after the oil has been extracted.

Article 7.

Les canoniers et les équipages des navires baleiniers devront être embauchés à des conditions qui feront, dans une grande mesure, dépendre leur rémunération de facteurs tels que la taille, l'espèce, la valeur des baleines capturées et la quantité d'huile extraite, et non pas seulement du nombre des baleines capturées, pour autant que cette rémunération dépende des résultats de la chasse.

Article 8.

Aucun navire des Hautes Parties contractantes ne pourra se livrer à la capture ou au traitement des baleines sans qu'une licence spéciale ait été concédée à ce navire par la Haute Partie contractante dont il porte le pavillon, ou sans que son propriétaire ou affrèteur ait notifié au gouvernement de cette Haute Partie contractante son intention d'utiliser ce navire pour la chasse à la baleine et qu'il ait reçu dudit gouvernement une attestation de cette notification.

Le présent article ne porte nullement atteinte au droit, pour l'une quelconque des Hautes Parties contractantes, d'exiger, en outre, une licence émanant de ses propres autorités, pour tout navire désireux d'utiliser son territoire ou ses eaux territoriales en vue de capturer, d'amener à terre ou de traiter des baleines. La délivrance de cette licence pourra être, soit refusée, soit subordonnée aux conditions que la Haute Partie contractante intéressée estimera nécessaires ou opportunes, quelle que soit la nationalité du navire.

Article 9.

La zone géographique d'application des articles de la présente convention s'étendra à toutes les eaux du monde entier, y compris à la fois la haute mer et les eaux territoriales et nationales.

Article 10.

1. Les Hautes Parties contractantes devront obtenir des navires baleiniers portant leur pavillon les renseignements les plus complets possibles au point de vue biologique sur chaque baleine capturée, et en tout cas en ce qui concerne les points suivants :

- a) Date de la capture ;
- b) Lieu de la capture ;
- c) Espèce ;
- d) Sexe ;
- e) Longueur, mesurée si l'animal est retiré de l'eau ; approximative si la baleine est découpée dans l'eau ;
- f) S'il y a un fœtus, longueur du fœtus et son sexe, s'il peut être déterminé ;
- g) Renseignements sur le contenu de l'estomac, lorsque cela est possible.

2. La longueur mentionnée aux paragraphes e) et f) du présent article sera celle de la ligne droite depuis l'extrémité du museau jusqu'à l'intersection des nageoires caudales.

Article 11.

Chacune des Hautes Parties contractantes se fera adresser par toutes les usines, flottantes ou établies sur la terre ferme, soumises à sa juridiction, des relevés indiquant le nombre des baleines

Article 7.

Gunners and crews of whaling vessels shall be engaged on terms such that their remuneration shall depend to a considerable extent upon such factors as the size, species, value and yield of oil of whales taken, and not merely upon the number of whales taken, in so far as payment is made dependent on results.

Article 8.

No vessel of any of the High Contracting Parties shall engage in taking or treating whales unless a licence authorising such vessel to engage therein shall have been granted in respect of such vessel by the High Contracting Party, whose flag she flies, or unless her owner or charterer has notified the Government of the said High Contracting Party of his intention to employ her in whaling and has received a certificate of notification from the said Government.

Nothing in this Article shall prejudice the right of any High Contracting Party to require that, in addition, a licence shall be required from his own authorities by every vessel desirous of using his territory or territorial waters for the purposes of taking, landing or treating whales, and such licence may be refused or may be made subject to such conditions as may be deemed by such High Contracting Party to be necessary or desirable, whatever the nationality of the vessel may be.

Article 9.

The geographical limits within which the Articles of this Convention are to be applied shall include all the waters of the world, including both the high seas and territorial and national waters.

Article 10.

1. The High Contracting Parties shall obtain, with regard to the vessels flying their flags and engaged in the taking of whales, the most complete biological information practicable with regard to each whale taken, and in any case on the following points :

- (a) Date of taking ;
- (b) Place of taking ;
- (c) Species ;
- (d) Sex ;
- (e) Length ; measured, when taken out of water ; estimated, if cut up in water ;
- (f) When fetus is present, length and sex if ascertainable ;
- (g) When practicable, information as to stomach contents.

2. The length referred to in sub-paragraphs (e) and (f) of this Article shall be the length of a straight line taken from the tip of the snout to the notch between the flukes of the tail.

Article 11.

Each High Contracting Party shall obtain from all factories, on land or afloat, under his jurisdiction, returns of the number of whales of each species treated at each factory and of the

de chaque espèce traitées dans chacune des usines et les quantités d'huile de chaque qualité, poudre, guano et autres sous-produits tirés de ces baleines.

Article 12.

Chacune des Hautes Parties contractantes communiquera les renseignements statistiques relatifs aux opérations, concernant les baleines, qui ont eu lieu dans le ressort de leur juridiction, au Bureau international de statistiques baleinières, à Oslo. Les renseignements fournis devront comprendre au moins les détails mentionnés à l'article 10 et : 1^o le nom et le tonnage de chaque usine flottante ; 2^o le nombre et le tonnage global des navires baleiniers ; 3^o une liste des stations terrestres ayant fonctionné au cours de la période envisagée. Ces renseignements seront fournis à des intervalles appropriés ne dépassant pas une année.

Article 13.

L'obligation, pour l'une quelconque des Hautes Parties contractantes, de prendre des mesures en vue d'assurer l'observation des dispositions de la présente convention dans ses territoires et dans ses eaux territoriales et par ses navires, sera limitée à ceux de ses territoires auxquels s'applique la convention et aux eaux territoriales contiguës, ainsi qu'aux navires immatriculés dans ces territoires.

Article 14.

La présente convention, dont les textes français et anglais feront également foi, pourra être signée, jusqu'au trente et un mars 1932, au nom de tout Membre de la Société des Nations ou de tout Etat non membre.

Article 15.

La présente convention sera ratifiée. Les instruments de ratification seront déposés auprès du Secrétaire général de la Société des Nations, qui en notifiera le dépôt à tous les Membres de la Société des Nations et aux Etats non membres, en indiquant les dates auxquelles ces dépôts ont été effectués.

Article 16.

A partir du premier avril 1932, tout Membre de la Société des Nations et tout Etat non membre au nom duquel la convention n'a pas été signée à cette date, pourra y adhérer.

Les instruments d'adhésion seront déposés auprès du Secrétaire général de la Société des Nations, qui notifiera le dépôt et la date de ce dernier à tous les Membres de la Société des Nations et aux Etats non membres.

Article 17.

La présente convention entrera en vigueur quatre-vingt-dix jours après que le Secrétaire général de la Société des Nations aura reçu des ratifications ou des adhésions au nom d'au moins huit Membres de la Société des Nations ou Etats non membres. Dans ce nombre doivent être compris le Royaume de Norvège et le Royaume-Uni de Grande-Bretagne et d'Irlande du Nord.

amounts of oil of each grade and the quantities of meal, guano and other products derived from them.

Article 12.

Each of the High Contracting Parties shall communicate statistical information regarding all whaling operations under their jurisdiction to the International Bureau for Whaling Statistics at Oslo. The information given shall comprise at least the particulars mentioned in Article 10 and : (1) the name and tonnage of each floating factory ; (2) the number and aggregate tonnage of the whale catchers ; (3) a list of the land stations which were in operation during the period concerned. Such information shall be given at convenient intervals not longer than one year.

Article 13.

The obligation of a High Contracting Party to take measures to ensure the observance of the conditions of the present Convention in his own territories and territorial waters, and by his vessels, shall not apply to those of his territories to which the Convention does not apply, and the territorial waters adjacent thereto, or to vessels registered in such territories.

Article 14.

The present Convention, the French and English texts of which shall both be authoritative, shall remain open until the thirty-first of March 1932 for signature on behalf of any Member of the League of Nations or of any non-member State.

Article 15.

The present Convention shall be ratified. The instruments of ratification shall be deposited with the Secretary-General of the League of Nations, who shall notify their receipt to all Members of the League of Nations and non-member States indicating the dates of their deposit.

Article 16.

As from the first of April 1932, any Member of the League of Nations and any non-member State, on whose behalf the Convention has not been signed before that date, may accede thereto.

The instruments of accession shall be deposited with the Secretary-General of the League of Nations, who shall notify all the Members of the League of Nations and non-member States of their deposit and the date thereof.

Article 17.

The present Convention shall enter into force on the ninetieth day following the receipt by the Secretary-General of the League of Nations of ratifications or accessions on behalf of not less than eight Members of the League or non-member States, including the Kingdom of Norway and the United Kingdom of Great Britain and Northern Ireland.

A l'égard de chacun des Membres ou Etats non membres au nom desquels un instrument de ratification ou d'adhésion sera ultérieurement déposé, la convention entrera en vigueur le quatre-vingt-dixième jour après la date du dépôt de cet instrument.

Article 18.

Si, après l'entrée en vigueur de la présente convention et à la demande de deux Membres de la Société, ou deux Etats non membres, à l'égard desquels la présente convention sera à ce moment en vigueur, le Conseil de la Société des Nations convoque une conférence pour la révision de la convention, les Hautes Parties contractantes s'engagent à s'y faire représenter.

Article 19.

1. La présente convention pourra être dénoncée à l'expiration d'une période de trois années à partir de la date à laquelle elle sera entrée en vigueur.

2. La dénonciation de la convention s'effectuera par une notification écrite, adressée au Secrétaire général de la Société des Nations, qui informera tous les Membres de la Société et les Etats non membres de chaque notification, ainsi que de la date de la réception.

3. La dénonciation prendra effet six mois après la réception de la notification.

Article 20.

1. Chacune des Hautes Parties contractantes peut déclarer, au moment de la signature, de la ratification ou de l'adhésion, que par son acceptation de la présente convention, elle n'entend assumer aucune obligation en ce qui concerne l'ensemble ou toute partie de ses colonies, protectorats, territoires d'outre-mer ou territoires placés sous sa suzeraineté ou son mandat ; dans ce cas, la présente convention ne sera pas applicable aux territoires faisant l'objet d'une telle déclaration.

2. Chacune des Hautes Parties contractantes pourra ultérieurement notifier au Secrétaire général de la Société des Nations qu'elle entend rendre la présente convention applicable à l'ensemble ou à toute partie de ses territoires ayant fait l'objet de la déclaration prévue au paragraphe précédent. Dans ce cas, la convention s'appliquera à tous les territoires visés dans la notification quatre-vingt-dix jours après la réception de cette notification par le Secrétaire général de la Société des Nations.

3. Chacune des Hautes Parties contractantes peut, à tout moment après l'expiration de la période de trois ans prévue à l'article 19, déclarer qu'elle entend voir cesser l'application de la présente convention à l'ensemble ou à toute partie de ses colonies, protectorats, territoires d'outre-mer ou territoires placés sous sa suzeraineté ou son mandat ; dans ce cas, la convention cessera d'être applicable aux territoires faisant l'objet d'une telle déclaration six mois après la réception de cette déclaration par le Secrétaire général de la Société des Nations.

4. Le Secrétaire général de la Société des Nations communiquera à tous les Membres de la Société des Nations et aux Etats non membres les déclarations et notifications reçues en vertu du présent article, ainsi que les dates de leur réception.

Article 21.

La présente convention sera enregistrée par le Secrétaire général de la Société des Nations dès qu'elle sera entrée en vigueur.

As regards any Member of the League or non-member State on whose behalf an instrument of ratification or accession is subsequently deposited, the Convention shall enter into force on the ninetieth day after the date of the deposit of such instrument.

Article 18.

If after the coming into force of the present Convention the Council of the League of Nations, at the request of any two Members of the League or non-member States with regard to which the Convention is then in force, shall convene a Conference for the revision of the Convention, the High Contracting Parties agree to be represented at any Conference so convened.

Article 19.

1. The present Convention may be denounced after the expiration of three years from the date of its coming into force.
2. Denunciation shall be effected by a written notification addressed to the Secretary-General of the League of Nations, who shall inform all the Members of the League and the non-member States of each notification received and of the date of its receipt.
3. Each denunciation shall take effect six months after the receipt of its notification.

Article 20.

1. Any High Contracting Party may, at the time of signature, ratification or accession, declare that, in accepting the present Convention, he does not assume any obligations in respect of all or any of his colonies, protectorates, overseas territories or territories under suzerainty or mandate; and the present Convention shall not apply to any territories named in such declaration.
2. Any High Contracting Party may give notice to the Secretary-General of the League of Nations at any time subsequently that he desires that the Convention shall apply to all or any of his territories which have been made the subject of a declaration under the preceding paragraph, and the Convention shall apply to all the territories named in such notice ninety days after its receipt by the Secretary-General of the League of Nations.
3. Any High Contracting Party may, at any time after the expiration of the period of three years mentioned in Article 19, declare that he desires that the present Convention shall cease to apply to all or any of his colonies, protectorates, overseas territories or territories under suzerainty or mandate and the Convention shall cease to apply to the territories named in such declaration six months after its receipt by the Secretary-General of the League of Nations.
4. The Secretary-General of the League of Nations shall communicate to all the Members of the League of Nations and the non-member States all declarations and notices received in virtue of this Article and the dates of their receipt.

Article 21.

The present Convention shall be registered by the Secretary-General of the League of Nations as soon as it has entered into force.

En foi de quoi les plénipotentiaires sus-mentionnés ont signé la présente convention.

Fait à Genève, le vingt-quatre septembre mil neuf cent trente et un, en un seul exemplaire qui sera conservé dans les archives du Secrétariat de la Société des Nations et dont copie certifiée conforme sera remise à tous les Membres de la Société et aux Etats non membres.

In faith whereof the above-mentioned Plenipotentiaries have signed the present Convention.

Done at Geneva, on the twenty-fourth day of September one thousand nine hundred and thirty-one, in a single copy which shall be kept in the archives of the Secretariat of the League of Nations and of which certified true copies shall be delivered to all the Members of the League of Nations and to the non-member States.

| | | |
|--|---|---|
| ALBANIE | | ALBANIA |
| | Loc KURL. | |
| ALLEMAGNE | | GERMANY |
| | Dr. Hans Hermann VÖLCKERS. | |
| ÉTATS-UNIS D'AMÉRIQUE | | UNITED STATES OF AMERICA |
| | Hugh R. WILSON. | |
| BELGIQUE | | BELGIUM |
| | HYMANS. | |
| GRANDE-BRETAGNE ET IRLANDE DU NORD, ainsi que toutes parties de l'Empire britannique non membres séparés de la Société des Nations. | | GREAT BRITAIN AND NORTHERN IRELAND, and all parts of the British Empire which are not separate Members of the League of the Nations. |
| | CECIL. | |
| CANADA | | CANADA |
| | H. GUTHRIE. | |
| COMMONWEALTH D'AUSTRALIE | | COMMONWEALTH OF AUSTRALIA |
| | James R. COLLINS. | |
| NOUVELLE-ZÉLANDE | | NEW ZEALAND |
| | Thomas M. WILFORD. | |
| UNION SUD-AFRICAINE | | UNION OF SOUTH AFRICA |
| | C. T. TE WATER. | |
| INDE | | INDIA |
| | B. L. MITTER. | |
| COLOMBIE | | COLOMBIA |
| | A. J. RESTREPO. | |
| DANEMARK | | DENMARK |
| | Avec réserve, jusqu'à nouvel ordre, pour ce qui concerne le Groenland. ¹ William BORBERG. | |

¹ Translation :

With reservation, until further notice, as regards Greenland.

| 1935 | <i>League of Nations — Treaty Series.</i> | 365 |
|-----------------|--|----------------|
| ESPAGNE | A. LERROUX. | SPAIN |
| FINLANDE | Evald GYLLENBÖGEL. | FINLAND |
| FRANCE | Louis ROLLIN. | FRANCE |
| GRÈCE | R. RAPHAËL. | GREECE |
| ITALIE | Augusto Rosso. | ITALY |
| MEXIQUE | S. Martínez DE ALVA. | MEXICO |
| NORVÈGE | Birger BRAADLAND. | NORWAY |
| PAYS-BAS | THE NETHERLANDS Pour le Royaume en Europe et les Indes néerlandaises. ¹ BEELAERTS VAN BLOKLAND. | |
| POLOGNE | Auguste ZALESKI. | POLAND |
| ROUMANIE | C. ANTONIADE. | ROUMANIA |
| SUISSE | MOITA | SWITZERLAND |
| TCHÉCOSLOVAQUIE | Zd. FIEBLINGER. | CZECHOSLOVAKIA |
| TURQUIE | Cemal HÜSNÜ. | TURKEY |
| YUGOSLAVIE | D ^r V. MARINKOVITCH. | YUGOSLAVIA |

¹ *Translation :*

For the Kingdom in Europe and the Netherlands Indies.

No. 3596

Annex 3: *International Agreement for the Regulation of Whaling*, London,
8 June 1937, 190 LNTS 79 (entered into force 27 July 1938)

N° 4406.

UNION SUD-AFRICAINE, ALLEMAGNE,
ÉTATS-UNIS D'AMÉRIQUE,
RÉPUBLIQUE ARGENTINE,
COMMONWEALTH D'AUSTRALIE, etc.

Accord international pour la réglementation de la chasse à la baleine, signé à Londres, le 8 juin 1937, et déclaration du principal secrétaire d'Etat aux Affaires étrangères de Sa Majesté le Roi de Grande-Bretagne, d'Irlande et des Territoires britanniques au delà des mers, Empereur des Indes, relative à la prorogation dudit accord, signée à Londres, le 29 juin 1938.

UNION OF SOUTH AFRICA, GERMANY,
UNITED STATES OF AMERICA,
ARGENTINE REPUBLIC,
COMMONWEALTH OF AUSTRALIA, etc.

International Agreement for the Regulation of Whaling, signed at London, June 8th, 1937, and Declaration by the Principal Secretary of State for Foreign Affairs of His Majesty the King of Great Britain, Ireland and the British Dominions beyond the Seas, Emperor of India, relating to the Prolongation of the said Agreement, signed at London, June 29th, 1938.

No. 4406. — INTERNATIONAL AGREEMENT¹ FOR THE REGULATION OF WHALING. SIGNED AT LONDON, JUNE 8TH, 1937.

English official text communicated by His Majesty's Secretary of State for Foreign Affairs in Great Britain. The registration of this Agreement took place July 27th, 1938.

THE GOVERNMENTS OF THE UNION OF SOUTH AFRICA, THE UNITED STATES OF AMERICA, THE ARGENTINE REPUBLIC, THE COMMONWEALTH OF AUSTRALIA, GERMANY, THE UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND, THE IRISH FREE STATE, NEW ZEALAND AND NORWAY, desiring to secure the prosperity of the whaling industry and, for that purpose, to maintain the stock of whales, have agreed as follows :

Article 1.

The contracting Governments will take appropriate measures to ensure the application of the provisions of the present Agreement and the punishment of infractions against the said provisions, and, in particular, will maintain at least one inspector of whaling on each factory ship under their jurisdiction. The inspectors shall be appointed and paid by Governments.

Article 2.

The present Agreement applies to factory ships and whale catchers and to land stations as defined in Article 18 under the jurisdiction of the contracting Governments, and to all waters in which whaling is prosecuted by such factory ships and/or whale catchers.

¹ *Ratifications deposited in London :*

| | |
|--|----------------------|
| UNITED STATES OF AMERICA | September 3rd, 1937. |
| GREAT BRITAIN AND NORTHERN IRELAND | October 25th, 1937. |
| NORWAY | October 29th, 1937. |
| GERMANY | November 5th, 1937. |
| IRELAND | May 7th, 1938. |
| NEW ZEALAND: | June 24th, 1938. |

Accessions :

| | |
|------------------|------------------|
| MEXICO | May 7th, 1938. |
| CANADA | June 14th, 1938. |

Came into force May 7th, 1938.

¹ TRADUCTION. — TRANSLATION.

N^o 4406. — ACCORD ² INTERNATIONAL POUR LA RÉGLEMENTATION DE LA CHASSE A LA BALEINE. SIGNÉ A LONDRES, LE 8 JUIN 1937.

Texte officiel anglais communiqué par le secrétaire d'Etat aux Affaires étrangères de Sa Majesté en Grande-Bretagne. L'enregistrement de cet accord a eu lieu le 27 juillet 1938.

LES GOUVERNEMENTS DE L'UNION SUD-AFRICAINE, DES ETATS-UNIS D'AMÉRIQUE, DE LA RÉPUBLIQUE ARGENTINE, DU COMMONWEALTH D'AUSTRALIE, DE L'ALLEMAGNE, DU ROYAUME-UNI DE GRANDE-BRETAGNE ET D'IRLANDE DU NORD, DE L'ETAT LIBRE D'IRLANDE, DE LA NOUVELLE-ZÉLANDE et DE LA NORVÈGE, désireux d'assurer la prospérité de l'industrie baleinière et, à cette fin, de protéger l'espèce baleinière, sont convenus de ce qui suit :

Article premier.

Les gouvernements contractants prendront toutes mesures utiles en vue d'assurer l'application des dispositions du présent accord et de punir les infractions auxdites dispositions ; ils maintiendront, notamment, au moins un inspecteur de la chasse à la baleine à bord de chaque usine flottante soumise à leur juridiction. Les inspecteurs seront nommés et rétribués par les gouvernements.

Article 2.

Le présent accord s'applique aux usines flottantes et aux navires baleiniers, ainsi qu'aux stations terrestres, tels qu'ils sont définis à l'article 18 et pour autant qu'ils sont soumis à la juridiction des gouvernements contractants, de même qu'à toutes les eaux dans lesquelles la chasse à la baleine est pratiquée par lesdites usines flottantes et/ou par lesdits navires baleiniers.

¹ Traduit par le Secrétariat de la Société des Nations, à titre d'information.

² Translated by the Secretariat of the League of Nations, for information.

³ Ratifications déposées à Londres :

| | |
|--|-------------------|
| ETATS-UNIS D'AMÉRIQUE | 3 septembre 1937. |
| GRANDE-BRETAGNE ET IRLANDE DU NORD | 25 octobre 1937. |
| NORVÈGE | 29 octobre 1937. |
| ALLEMAGNE | 5 novembre 1937. |
| IRLANDE | 7 mai 1938. |
| NOUVELLE-ZÉLANDE | 24 juin 1938. |

Adhésions :

| | |
|-------------------|---------------|
| MEXIQUE | 7 mai 1938. |
| CANADA | 24 juin 1938. |

Entré en vigueur le 7 mai 1938.

Article 3.

Prosecutions for infractions against or contraventions of the present Agreement and the regulations made thereunder shall be instituted by the Government or a Department of the Government.

Article 4.

It is forbidden to take or kill Grey Whales and/or Right Whales.

Article 5.

It is forbidden to take or kill any Blue, Fin, Humpback or Sperm whales below the following lengths, viz. :

| | |
|-------------------------------|----------|
| (a) Blue whales | 70 feet, |
| (b) Fin whales | 55 feet, |
| (c) Humpback whales | 35 feet, |
| (d) Sperm whales | 35 feet. |

Article 6.

It is forbidden to take or kill calves, or suckling whales or female whales which are accompanied by calves or suckling whales.

Article 7.

It is forbidden to use a factory ship or a whale catcher attached thereto for the purpose of taking or treating baleen whales in any waters south of 40° South Latitude, except during the period from the 8th day of December to the 7th day of March following, both days inclusive, provided that in the whaling season 1937-38 the period shall extend to the 15th day of March, 1938, inclusive.

Article 8.

It is forbidden to use a land station or a whale catcher attached thereto for the purpose of taking or treating whales in any area or in any waters for more than six months in any period of twelve months, such period of six months to be continuous.

Article 9.

It is forbidden to use a factory ship or a whale catcher attached thereto for the purpose of taking or treating baleen whales in any of the following areas, viz. :

- (a) In the Atlantic Ocean north of 40° South Latitude and in the Davis Strait, Baffin Bay and Greenland Sea ;
- (b) In the Pacific Ocean east of 150° West Longitude between 40° South Latitude and 35° North Latitude ;
- (c) In the Pacific Ocean west of 150° West Longitude between 40° South Latitude and 20° North Latitude ;
- (d) In the Indian Ocean north of 40° South Latitude.

Article 10.

Notwithstanding anything contained in this Agreement, any contracting Government may grant to any of its nationals a special permit authorising that national to kill, take and treat whales

Article 3.

En cas d'infraction ou de contravention aux dispositions du présent accord et des règlements édictés en vertu de ce dernier, les poursuites seront intentées par le gouvernement ou par un service gouvernemental.

Article 4.

Il est interdit de capturer ou de tuer les baleines grises (*grey whales*) et /ou les « right whales ».

Article 5.

Il est interdit de capturer ou de tuer les baleines bleues (*blue whales*), les baleines à nageoires (*fin whales*), les baleines à bosse (*humpback whales*) ou les cachalots (*sperm whales*) qui n'atteignent pas les longueurs suivantes :

| | |
|-----------------------------------|-----------|
| a) Baleines bleues | 70 pieds. |
| b) Baleines à nageoires | 55 pieds. |
| c) Baleines à bosse | 35 pieds. |
| d) Cachalots | 35 pieds. |

Article 6.

Il est interdit de capturer ou de tuer les baleineaux, ou les jeunes baleines non sevrées, ou les baleines femelles accompagnées de baleineaux ou de jeunes baleines non sevrées.

Article 7.

Il est interdit de faire usage d'une usine flottante ou d'un navire baleinier rattaché à celle-ci en vue de capturer ou de traiter des baleines à fanons dans toutes les eaux au sud du 40° de latitude sud, sauf pendant la période comprise entre le 8 décembre et le 7 mars suivant, l'une et l'autre date incluse ; toutefois, il est entendu que pour la campagne 1937/38, la période en question s'étendra jusqu'au 15 mars 1938 inclusivement.

Article 8.

Il est interdit de faire usage d'une station terrestre ou d'un navire baleinier rattaché à celle-ci en vue de capturer ou de traiter des baleines dans des zones ou des eaux quelconques pendant plus de six mois par période de douze mois, étant entendu que ladite période de six mois devra être continue.

Article 9.

Il est interdit de faire usage d'une usine flottante ou d'un navire baleinier rattaché à celle-ci en vue de capturer ou de traiter des baleines à fanons dans les zones ci-après :

- a) Dans l'océan Atlantique, au nord du 40° de latitude sud et dans le détroit de Davis, la baie de Baffin et la mer du Groenland ;
- b) Dans l'océan Pacifique, à l'est du 150° de longitude ouest, entre le 40° de latitude sud et le 35° de latitude nord ;
- c) Dans l'océan Pacifique, à l'ouest du 150° de longitude ouest, entre le 40° de latitude sud et le 20° de latitude nord ;
- d) Dans l'océan Indien, au nord du 40° de latitude sud.

Article 10.

Nonobstant toute disposition contraire du présent accord, chaque gouvernement contractant pourra accorder à ses ressortissants un permis spécial autorisant l'intéressé à tuer, capturer et

for purposes of scientific research subject to such restrictions as to number and subject to such other conditions as the contracting Government thinks fit, and the killing, taking and treating of whales in accordance with the terms in force under this Article shall be exempt from the operation of this Agreement.

Any contracting Government may at any time revoke a permit granted by it under this Article.

Article 11.

The fullest possible use shall be made of all whales taken. Except in the case of whales or parts of whales intended for human food or for feeding animals, the oil shall be extracted by boiling or otherwise from all blubber, meat (except the meat of sperm whales) and bones other than the internal organs, whale bone and flippers, of all whales delivered to the factory ship or land station.

Article 12.

There shall not at any time be taken for delivery to any factory ship or land station a greater number of whales than can be treated efficiently and in accordance with Article 11 of the present Agreement by the plant and personnel therein within a period of thirty-six hours from the time of the killing of each whale.

Article 13.

Gunners and crews of factory ships, land stations and whale catchers shall be engaged on terms such that their remuneration shall depend to a considerable extent upon such factors as the species, size and yield of whales taken, and not merely upon the number of the whales taken, and no bonus or other remuneration, calculated by reference to the results of their work, shall be paid to the gunners and crews of whale catchers in respect of any whales the taking of which is forbidden by this Agreement.

Article 14.

With a view to the enforcement of the preceding Article, each contracting Government shall obtain, in respect of every whale catcher under its jurisdiction, an account showing the total emolument of each gunner and member of the crew and the manner in which the emolument of each of them is calculated.

Article 15.

Articles 5, 9, 13 and 14 of the present Agreement, in so far as they impose obligations not already in force, shall not until the 1st day of December, 1937, apply to factory ships, land stations or catchers attached thereto which are at present operating or which have already taken practical measures with a view to whaling operations during the period before the said date. In respect of such factory ships, land stations and whale catchers, the Agreement shall in any event come into force on the said date.

Article 16.

The contracting Governments shall obtain with regard to all factory ships and land stations under their jurisdiction records of the number of whales of each species treated at each factory

traiter des baleines en vue de recherches scientifiques, ladite autorisation pouvant être subordonnée à telles restrictions, en ce qui concerne le nombre, et à telles autres conditions que le gouvernement contractant jugera opportun de prescrire ; dans ce cas, les baleines pourront être tuées, capturées ou traitées sans qu'il y ait lieu de se conformer aux dispositions du présent accord.

Tout gouvernement contractant pourra, à n'importe quel moment, annuler un permis qu'il aura accordé en vertu du présent article.

Article 11.

Toutes les baleines capturées devront être utilisées aussi complètement que possible. Sauf s'il s'agit de baleines ou de parties de baleines destinées à la consommation humaine ou à la nourriture du bétail, l'huile sera extraite par ébullition ou par tout autre procédé de tout le blanc, de toute la chair (à l'exception de la chair des cachalots) et de tous les os, autres que les organes internes, fanons et nageoires, de toutes les baleines livrées à l'usine flottante ou à la station terrestre.

Article 12.

À aucun moment il ne devra être livré à une usine flottante ou une station terrestre plus de baleines que leur outillage et leur personnel n'en permettent de traiter efficacement et conformément à l'article 11 du présent accord dans un délai de trente-six heures à compter de l'heure à laquelle chaque baleine aura été tuée.

Article 13.

Les canonnières et les équipages des usines flottantes, des stations terrestres et des navires baleiniers devront être engagés à des conditions qui feront, dans une large mesure, dépendre leur rémunération de facteurs tels que l'espèce, la taille et le rendement des baleines capturées, et non pas seulement de leur nombre ; aucune prime ni autre rémunération calculée sur la base des résultats de leur travail ne sera versée aux canonnières et aux équipages des navires baleiniers pour toute baleine dont la capture est interdite par le présent accord.

Article 14.

En vue d'assurer l'application de l'article précédent, chaque gouvernement contractant exigera, pour tout navire baleinier soumis à sa juridiction, la production d'un compte indiquant le total des émoluments de chaque canonnier et membre de l'équipage, ainsi que les modalités selon lesquelles les émoluments de chacun des intéressés sont calculés.

Article 15.

Les articles 5, 9, 13 et 14 du présent accord, pour autant qu'ils établissent des obligations non encore existantes, ne s'appliqueront pas avant le 1^{er} décembre 1937 aux usines flottantes, aux stations terrestres ou aux navires baleiniers rattachés à celles-ci qui sont actuellement en exploitation ou qui ont déjà pris des mesures effectives en vue de se livrer à leurs opérations pendant la période antérieure à la date susindiquée. En ce qui concerne ces usines flottantes, stations terrestres et navires baleiniers, l'accord entrera, en tout cas, en vigueur à la date en question.

Article 16.

Les gouvernements contractants exigeront de toutes les usines flottantes et stations terrestres soumises à leur juridiction des relevés indiquant le nombre de baleines de chaque espèce traitées

ship or land station and as to the aggregate amounts of oil of each grade and quantities of meal, guano and other products derived from them, together with particulars with respect to each whale treated in the factory ship or land station as to the date and place of taking, the species and sex of the whale, its length and, if it contains a fetus, the length and sex, if ascertainable, of the fetus.

Article 17.

The contracting Governments shall, with regard to all whaling operations under their jurisdiction, communicate to the International Bureau for Whaling Statistics at Sandefjord in Norway the statistical information specified in Article 16 of the present Agreement together with any information which may be collected or obtained by them in regard to the calving grounds and migration routes of whales.

In communicating this information the Governments shall specify :

- (a) The name and tonnage of each factory ship ;
- (b) The number and aggregate tonnage of the whale catchers ;
- (c) A list of the land stations which were in operation during the period concerned.

Article 18.

In the present Agreement the following expressions have the meanings respectively assigned to them, that is to say :

" Factory ship " means a ship in which or on which whales are treated whether wholly or in part ;

" Whale catcher " means a ship used for the purpose of hunting, taking, towing, holding on to, or scouting for whales ;

" Land station " means a factory on the land, or in the territorial waters adjacent thereto, in which or at which whales are treated whether wholly or in part ;

" Baleen whale " means any whale other than a toothed whale ;

" Blue whale " means any whale known by the name of blue whale, Sibbald's rorqual or sulphur bottom ;

" Fin whale " means any whale known by the name of common finback, common finner, common rorqual, finback, fin whale, herring whale, razorback, or true fin whale ;

" Grey whale " means any whale known by the name of grey whale, California grey, devil fish, hard head, mussel digger, grey back, rip sack ;

" Humpback whale " means any whale known by the name of bunch, humpback, humpback whale, humpbacked whale, hump whale or hunchbacked whale ;

" Right whale " means any whale known by the name of Atlantic right whale, Arctic right whale, Biscayan right whale, bowhead, great polar whale, Greenland right whale, Greenland whale, Nordkaper, North Atlantic right whale, North Cape whale, Pacific right whale, pigmy right whale, Southern pigmy right whale or Southern right whale ;

" Sperm whale " means any whale known by the name of sperm whale, spermacet whale, cachalot or pot whale ;

par chaque usine flottante ou station terrestre, ainsi que les quantités totales d'huile de chaque qualité et les quantités de poudre, de guano et autres sous-produits tirés des baleines, de même que, pour chaque baleine traitée dans l'usine flottante ou la station terrestre, des renseignements sur la date et le lieu de la capture, l'espèce et le sexe de la baleine, sa longueur et, s'il y a un foetus, la longueur de ce dernier et son sexe, s'il peut être déterminé.

Article 17.

Pour toutes les opérations concernant les baleines et relevant de leur juridiction, les gouvernements contractants communiqueront au Bureau international des Statistiques baleinières, à Sandefjord, en Norvège, les renseignements statistiques prévus à l'article 16 du présent accord, ainsi que tous renseignements qu'ils pourront recueillir ou obtenir sur les lieux de reproduction et les voies de migration des baleines.

En transmettant ces renseignements, les gouvernements spécifieront :

- a) Le nom et le tonnage de chaque usine flottante ;
- b) Le nombre et le tonnage global des navires baleiniers ;
- c) Une liste des stations terrestres ayant fonctionné au cours de la période envisagée.

Article 18.

Dans le présent accord, les expressions ci-après ont respectivement le sens énoncé :

Par « usine flottante », on entend un navire à bord duquel des baleines sont traitées en tout ou en partie.

Par « navire baleinier », on entend un navire utilisé pour chasser, capturer, tuer, poursuivre ou repérer des baleines.

Par « station terrestre », on entend une usine sur la terre ferme ou dans les eaux territoriales limitrophes, dans ou par laquelle des baleines sont traitées en tout ou en partie.

Par « baleine à fanons » (*baleen whale*), on entend toute baleine autre que la baleine denticète.

Par « baleine bleue » (*blue whale*), on entend toute baleine connue sous le nom de baleine bleue, de rorqual de Sibbald ou de « sulphur bottom ».

Par « baleine à nageoires » (*fin whale*), on entend toute baleine connue sous le nom de baleine à nageoires commune, de physale commun, de rorqual commun, de baleine à nageoires (*finback, fin whale*), de « herring whale », de gibbar ou de baleine à nageoires véritable.

Par « baleine grise », on entend toute baleine connue sous le nom de baleine grise, de grise de Californie, de « devil fish », de « hard head », de « mussel digger », de « grey back », de « rip sack ».

Par « baleine à bosse », on entend toute baleine connue sous le nom de jubarte, de « humpback », de « humpback whale », de « humpbacked whale », de « hump whale » ou de « hunchbacked whale ».

Par « right whale », on entend toute baleine connue sous le nom de « right whale » de l'Atlantique, de « right whale » arctique, de « right whale » de Biscaye, de « bowhead », de grande baleine polaire, de « right whale » du Groenland, de baleine du Groenland, de « Nordkaper », de « right whale » de l'Atlantique nord, de baleine du cap Nord, de « right whale » du Pacifique, de « right whale » pygmée, de « right whale pygmée » australe ou de « right whale » australe.

Par « cachalot » (*sperm whale*), on entend toute baleine connue sous le nom de baleine à spermaceti, de « cachalot » ou de « pot whale ».

" Length " in relation to any whale means the distance measured on the level in a straight line between the tip of the upper jaw and the notch between the flukes of the tail.

Article 19.

The present Agreement shall be ratified and the instruments of ratification shall be deposited with the Government of the United Kingdom of Great Britain and Northern Ireland as soon as possible. It shall come into force upon the deposit of instruments of ratification by a majority of the signatory Governments, which shall include the Governments of the United Kingdom, Germany and Norway; and for any other Government not included in such majority on the date of the deposit of its instrument of ratification.

The Government of the United Kingdom will inform the other Governments of the date on which the Agreement thus comes into force and the date of any ratification received subsequently.

Article 20.

The present Agreement shall come into force provisionally on the 1st day of July, 1937, to the extent to which the signatory Governments are respectively able to enforce it; provided that if any Government within two months of the signature of the Agreement informs the Government of the United Kingdom that it is unwilling to ratify it the provisional application of the Agreement in respect of that Government shall thereupon cease.

The Government of the United Kingdom will communicate the name of any Government which has signified that it is unwilling to ratify the Agreement to the other Governments, any of whom may within one month of such communication withdraw its ratification or accession or signify its unwillingness to ratify as the case may be, and the provisional application of the Agreement in respect of that Government shall thereupon cease. Any such withdrawal or communication shall be notified to the Government of the United Kingdom, by whom it will be transmitted to the other Governments.

Article 21.

The present Agreement shall, subject to the preceding Article, remain in force until the 30th day of June, 1938, and thereafter if, before that date, a majority of the contracting Governments, which shall include the Governments of the United Kingdom, Germany and Norway, shall have agreed to extend its duration. In the event of such extension it shall remain in force until the contracting Governments agree to modify it, provided that any contracting Government may, at any time after the 30th day of June, 1938, by giving notice on or before the 1st day of January in any year to the Government of the United Kingdom (who on receipt of such notice shall at once communicate it to the other contracting Governments) withdraw from the Agreement, so that it shall cease to be in force in respect of that Government after the 30th day of June following, and that any other contracting Government may, by giving notice in the like manner within one month of the receipt of such communication, withdraw also from the Agreement, so that it shall cease to be in force respecting it after the same date.

Article 22.

Any Government which has not signed the present Agreement may accede thereto at any time after it has come into force. Accession shall be effected by means of a notification in writing addressed to the Government of the United Kingdom and shall take effect immediately after the date of its receipt.

The Government of the United Kingdom will inform all the Governments which have signed or acceded to the present Agreement of all accessions received and the date of their receipt.

Par « longueur », en ce qui concerne la baleine, on entend la distance mesurée, sur le même plan, par une ligne droite entre l'extrémité de la mâchoire supérieure et l'intersection des nageoires caudales.

Article 19.

Le présent accord sera ratifié, et les instruments de ratification seront déposés, aussitôt que possible, auprès du Gouvernement du Royaume-Uni de Grande-Bretagne et d'Irlande du Nord. Il entrera en vigueur lorsque les instruments de ratification auront été déposés par une majorité des gouvernements signataires, comprenant les Gouvernements du Royaume-Uni, de l'Allemagne et de la Norvège, et, en ce qui concerne tout autre gouvernement non compris dans cette majorité, à la date du dépôt de son instrument de ratification.

Le Gouvernement du Royaume-Uni fera connaître aux autres gouvernements la date à laquelle l'accord entrera ainsi en vigueur et la date de toute ratification reçue ultérieurement.

Article 20.

Le présent accord entrera en vigueur à titre provisoire le 1^{er} juillet 1937, dans la mesure où les gouvernements signataires pourront respectivement l'appliquer, étant entendu, toutefois, que, si un gouvernement quelconque fait savoir au Gouvernement du Royaume-Uni, dans les deux mois qui suivront la signature de l'accord, qu'il n'est pas disposé à ratifier ce dernier, l'application provisoire de l'accord cessera pour ce qui concerne ce gouvernement.

Le nom de tout gouvernement qui a fait savoir qu'il n'était pas disposé à ratifier l'accord sera notifié par le Gouvernement du Royaume-Uni aux autres gouvernements. Chacun de ces derniers pourra, dans le délai d'un mois à dater de cette communication, retirer sa ratification ou adhésion ou faire savoir qu'il n'est pas disposé à ratifier l'accord; de ce fait, l'application provisoire de l'accord cessera à l'égard de ce gouvernement. Tout retrait ou toute communication de ce genre seront notifiés au Gouvernement du Royaume-Uni, qui les transmettra aux autres gouvernements.

Article 21.

Sous réserve des dispositions de l'article précédent, le présent accord demeurera en vigueur jusqu'au 30 juin 1938, et ultérieurement si, avant la date indiquée, la majorité des gouvernements contractants, comprenant les Gouvernements du Royaume-Uni, de l'Allemagne et de la Norvège, conviennent de le proroger. En cas de prorogation, l'accord demeurera en vigueur jusqu'à ce que les gouvernements contractants conviennent de le modifier, étant entendu, toutefois, que tout gouvernement contractant pourra, à n'importe quel moment après le 30 juin 1938, par un avis donné le 1^{er} janvier de n'importe quelle année, ou auparavant, au Gouvernement du Royaume-Uni (qui, dès réception de cet avis, le communiquera aux autres gouvernements contractants), se retirer de l'accord, de telle sorte que celui-ci cessera d'être applicable à l'égard de ce gouvernement après le 30 juin suivant. Il est également entendu que tout autre gouvernement contractant pourra, par un avis analogue, donné dans le mois qui suivra la réception de cette communication, se retirer également de l'accord, de sorte que celui-ci cessera, à la même date, d'être applicable à son égard.

Article 22.

Tout gouvernement non signataire du présent accord pourra adhérer à celui-ci à n'importe quel moment après son entrée en vigueur. L'adhésion s'effectuera au moyen d'une notification écrite, adressée au Gouvernement du Royaume-Uni, et prendra effet immédiatement après la date de sa réception.

Le Gouvernement du Royaume-Uni portera à la connaissance de tous les gouvernements qui auront signé le présent accord ou y auront adhéré, toute adhésion reçue ainsi que la date de sa réception.

In faith whereof the undersigned, being duly authorised, have signed the present Agreement.

Done in London the 8th day of June, 1937, in a single copy, which shall remain deposited in the archives of the Government of the United Kingdom of Great Britain and Northern Ireland, by whom certified copies will be transmitted to all the other contracting Governments.

For the Government of the Union of South Africa :

F. J. DU TOIT.

For the Government of the United States of America :

Herschel V. JOHNSON.
Remington KELLOGG.

For the Government of the Argentine Republic :

Manuel E. MALBRÁN.
M. FINCATI.
T. L. MARINI.

For the Government of the Commonwealth of Australia :

S. M. BRUCE.

For the Government of Germany :

WOHLTHAT.

For the Government of the United Kingdom of Great Britain
and Northern Ireland :

Henry G. MAURICE.
Geo. HOGARTH.

For the Government of the Irish Free State :

Sean O'Faolain O'DULCHAONTIGH.

For the Government of New Zealand :

G. McNAMARA.

For the Government of Norway :

Birger BERGERSEN.

En foi de quoi, les soussignés, dûment autorisés, ont signé le présent accord.

Fait à Londres, le 8 juin 1937, en un exemplaire unique ; celui-ci restera déposé dans les archives du Gouvernement du Royaume-Uni de Grande-Bretagne et d'Irlande du Nord, qui en transmettra des copies certifiées conformes à tous les autres gouvernements contractants.

Pour le Gouvernement de l'Union Sud-africaine :

F. J. DU TOIT.

Pour le Gouvernement des Etats-Unis d'Amérique :

Herschel V. JOHNSON.

Remington KELLOGG.

Pour le Gouvernement de la République Argentine :

MANUEL E. MALBRÁN.

M. FINCATI.

T. L. MARINI.

Pour le Gouvernement du Commonwealth d'Australie :

S. M. BRUCE.

Pour le Gouvernement de l'Allemagne :

WOHLTHAT.

Pour le Gouvernement du Royaume-Uni de Grande-Bretagne
et d'Irlande du Nord :

Henry G. MAURICE.

Geo. HOGARTH.

Pour le Gouvernement de l'Etat libre d'Irlande :

Sean O'Faolain O'DULCHAONTIGH.

Pour le Gouvernement de la Nouvelle-Zélande :

G. McNAMARA.

Pour le Gouvernement de la Norvège :

Birger BERGERSEN.

DECLARATION

BY THE PRINCIPAL SECRETARY OF STATE FOR FOREIGN AFFAIRS OF HIS MAJESTY THE KING OF GREAT BRITAIN, IRELAND AND THE BRITISH DOMINIONS BEYOND THE SEAS, EMPEROR OF INDIA, REGARDING THE PROLONGATION OF THE INTERNATIONAL AGREEMENT OF JUNE 8TH, 1937, FOR THE REGULATION OF WHALING. SIGNED AT LONDON, JUNE 29TH, 1938.

Registered on November 2nd, 1938, at the request of His Majesty's Secretary of State for Foreign Affairs, in Great Britain.

Whereas the International Agreement for the Regulation of Whaling, signed in London on the 8th June, 1937, has been ratified by the Governments of the United States of America, Germany, the United Kingdom of Great Britain and Northern Ireland, Eire, New Zealand and Norway, and came into force in accordance with the provisions of Article 19 on the 7th day of May, 1938; and

Whereas the Governments of the United States of Mexico and Canada have acceded, with effect from the 7th May, 1938, and the 14th June, 1938, respectively, to the said Agreement in accordance with Article 22 thereof; and

Whereas in consequence the Governments of the United States of America, Germany, the United Kingdom of Great Britain and Northern Ireland, Eire, New Zealand, Norway, the United States of Mexico and Canada are contracting Governments; and

Whereas, according to the provisions of Article 21, the said Agreement remains in force until the 30th June, 1938, and thereafter if, before that date, a majority of the contracting Governments, which shall include the Governments of the United Kingdom, Germany and Norway, shall have agreed to extend its duration;

The undersigned, Principal Secretary of State for Foreign Affairs of His Majesty the King of Great Britain, Ireland and the British Dominions beyond the Seas, Emperor of India, hereby certifies that the Governments of the United States of America, Canada, Germany, the United Kingdom of Great Britain and Northern Ireland, Eire, the United States of Mexico, New Zealand and Norway have agreed to extend the duration of the said Agreement, and that the Agreement will accordingly, under the provisions of Article 21, continue in force after the 30th June, 1938.

Witness my hand this 29th day of June, 1938.

Given at the Foreign Office, London

HALIFAX.

Certified a true copy:

Stephen Gaselee,
*Librarian and Keeper
of the Papers at the Foreign Office.*

London, 11th Oct., 1938.

DÉCLARATION

DU PRINCIPAL SECRÉTAIRE D'ÉTAT AUX AFFAIRES ÉTRANGÈRES DE SA MAJESTÉ LE ROI DE GRANDE-BRETAGNE, D'IRLANDE ET DES TERRITOIRES BRITANNIQUES AU DELÀ DES MERS, EMPEREUR DES INDES, RELATIVE À LA PROROGATION DE L'ACCORD INTERNATIONAL DU 8 JUIN 1937 POUR LA RÉGLEMENTATION DE LA CHASSE À LA BALEINE. SIGNÉE À LONDRES, LE 30 JUIN 1938.

Enregistrée le 2 novembre 1938 à la demande du secrétaire d'Etat aux Affaires étrangères de Sa Majesté en Grande-Bretagne.

Attendu que l'Accord international concernant la réglementation de la chasse à la baleine, signé à Londres, le 8 juin 1937, a été ratifié par les Gouvernements des Etats-Unis d'Amérique, de l'Allemagne, du Royaume-Uni de Grande-Bretagne et d'Irlande du Nord, de l'Eire, de la Nouvelle-Zélande et de la Norvège, et est entré en vigueur, conformément aux dispositions de l'article 19, le 7 mai 1938 ; et

Attendu que les Gouvernements des Etats-Unis du Mexique et du Canada ont adhéré, avec effet à partir du 7 mai 1938 et du 14 juin 1938, respectivement, audit accord, conformément à l'article 22 de ce dernier ; et

Attendu qu'en conséquence les Gouvernements des Etats-Unis d'Amérique, de l'Allemagne, du Royaume-Uni de Grande-Bretagne et d'Irlande du Nord, de l'Eire, de la Nouvelle-Zélande, de la Norvège, des Etats-Unis du Mexique et du Canada, sont des gouvernements contractants ; et

Attendu que, conformément aux dispositions de l'article 21, ledit accord reste en vigueur jusqu'au 30 juin 1938, et ultérieurement si, avant la date indiquée, la majorité des gouvernements contractants, comprenant les Gouvernements du Royaume-Uni, de l'Allemagne et de la Norvège, conviennent de le proroger ;

Le soussigné, principal secrétaire d'Etat aux Affaires étrangères de Sa Majesté le Roi de Grande-Bretagne, d'Irlande et des Territoires britanniques au delà des mers, Empereur des Indes, certifie par la présente que les Gouvernements des Etats-Unis d'Amérique, du Canada, de l'Allemagne, du Royaume-Uni de Grande-Bretagne et d'Irlande du Nord, de l'Eire, des Etats-Unis du Mexique, de la Nouvelle-Zélande et de la Norvège ont convenu de proroger ledit accord et que, par conséquent, celui-ci, conformément aux dispositions de l'article 21, demeurera en vigueur après le 30 juin 1938.

En foi de quoi j'ai signé les présentes, ce vingt-neuvième jour du mois de juin 1938.

Fait au Foreign Office, Londres.

HALIFAX.

- Annex 4:** *Protocol amending the International Agreement on the Regulation of Whaling*, London, 24 June 1938, 196 LNTS 131 (entered into force 30 December 1938)

N° 4575.

UNION SUD-AFRICAINE,
ALLEMAGNE,
ÉTATS-UNIS D'AMÉRIQUE,
RÉPUBLIQUE ARGENTINE,
COMMONWEALTH D'AUSTRALIE, etc.

Protocole modifiant l'Accord international du
8 juin 1937 pour la réglementation de la
chasse à la baleine. Signé à Londres, le
24 juin 1938.

*Texte officiel anglais communiqué par le secrétaire d'Etat aux Affaires étrangères
de Sa Majesté en Grande-Bretagne. L'enregistrement a eu lieu le
31 mai 1939.*

UNION OF SOUTH AFRICA,
GERMANY,
UNITED STATES OF AMERICA,
ARGENTINE REPUBLIC,
COMMONWEALTH OF AUSTRALIA, etc.

Protocol amending the International Agree-
ment of June 8th, 1937, for the Regula-
tion of Whaling. Signed at London, June
24th, 1938.

*English official text communicated by His Majesty's Secretary of State for Foreign
Affairs in Great Britain. The registration took place May 31st, 1939.*

TRANSDUCTION. — TRANSLATION.

No. 4575 — PROTOCOL¹ AMENDING THE INTERNATIONAL AGREEMENT OF JUNE 8TH, 1937, FOR THE REGULATION OF WHALING. SIGNED AT LONDON, JUNE 24TH, 1938.

N° 4575. — PROTOCOLE¹ MODIFIANT L'ACCORD INTERNATIONAL DU 8 JUIN 1937 POUR LA RÉGLEMENTATION DE LA CHASSE À LA BALEINE. SIGNÉ À LONDRES, LE 24 JUIN 1938.

THE GOVERNMENTS OF THE UNION OF SOUTH AFRICA, THE UNITED STATES OF AMERICA, THE ARGENTINE REPUBLIC, THE COMMONWEALTH OF AUSTRALIA, CANADA, EIRE, GERMANY, THE UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND, NEW ZEALAND AND NORWAY, desiring to introduce certain amendments into the International Agreement² for the Regulation of Whaling, signed in London on the 8th June, 1937 (hereinafter referred to as the Principal Agreement) in accordance with the provisions of Article 21 thereof, have agreed as follows:

Article 1.

With reference to the provisions of Articles 5 and 7 of the Principal Agreement, it is forbidden to use a factory ship or a whale catcher attached thereto for the purpose of taking or treating humpback whales in any waters south of 40° South Latitude during the period from the 1st October, 1938, to the 30th September, 1939.

Article 2.

Notwithstanding the provisions of Article 7 of the Principal Agreement, it is forbidden to use a factory ship or a whale catcher attached thereto for the purpose of taking or treating baleen whales in the waters south of 40° South Latitude from 70° West Longitude westwards

¹ Ratifications deposited in London:

| | |
|------------------------------------|----------------------|
| GERMANY | October 31st, 1938. |
| UNITED KINGDOM | December 7th, 1938. |
| NORWAY | December 30th, 1938. |
| UNITED STATES OF AMERICA | March 30th, 1939. |

Came definitively into force on December 30th 1938.

² Vol. CXC, page 79, of this Series.

LES GOUVERNEMENTS DE L'UNION SUD-AFRICAINE, DES ÉTATS-UNIS D'AMÉRIQUE, DE LA RÉPUBLIQUE ARGENTINE, DU COMMONWEALTH D'AustralIE, DU CANADA, DE L'ÉIRE, DE L'ALLEMAGNE, DU ROYAUME-UNI DE GRANDE-BRETAGNE ET D'IRLANDE DU NORD, DE LA NOUVELLE-ZÉLANDE ET DE LA NORVÈGE, désireux d'apporter certains amendements à l'Accord² international pour la réglementation de la chasse à la baleine, signé à Londres le 8 juin 1937 (ci-dessous mentionné sous le nom d'Accord principal), conformément aux dispositions de l'article 21 dudit accord, sont convenus de ce qui suit:

Article premier.

En ce qui concerne les dispositions des articles 5 et 7 de l'Accord principal, il est interdit d'utiliser une usine flottante ou un navire baleinier rattaché à celle-ci, en vue de capturer ou de traiter des baleines à bosse (*humpback whales*) dans toutes les eaux au sud du 40° de latitude sud pendant la période comprise entre le 1^{er} octobre 1938 et le 30 septembre 1939.

Article 2.

Nonobstant les dispositions de l'article 7 de l'Accord principal, il est interdit de faire usage d'une usine flottante ou d'un navire baleinier rattaché à celle-ci en vue de capturer ou de traiter des baleines à fanons dans les eaux au sud du 40° de latitude sud et à l'ouest entre le

¹ Ratifications déposées à Londres:

| | |
|---------------------------------|-------------------|
| ALLEMAGNE | 31 octobre 1938. |
| ROYAUME-UNI | 7 décembre 1938. |
| NORVÈGE | 30 décembre 1938. |
| ÉTATS-UNIS D'AMÉRIQUE | 30 mars 1939. |

Entré définitivement en vigueur le 30 décembre 1938.

² Vol. CXC, page 79, de ce recueil.

as far as 160° West Longitude for a period of two years from the 8th day of December, 1938.

Article 3.

1. No factory ship which has been used for the purpose of treating baleen whales south of 40° South Latitude shall be used for that purpose elsewhere within a period of twelve months from the end of the open season prescribed in Article 7 of the Principal Agreement.

2. Only such factory ships as have operated during the year 1937 within the territorial waters of any signatory Government shall, after the signature of this Protocol, so operate, and any such ships so operating shall be treated as land stations and remain moored in territorial waters in one position during the season and shall operate for not more than six months in any period of twelve months, such period of six months to be continuous.

Article 4.

To Article 5 of the Principal Agreement there shall be added the following :

" Except that blue whales of not less than 65 feet, fin whales of not less than 50 feet and sperm whales of not less than 30 feet in length may be taken for delivery to land stations provided that the meat of such whales is to be used for local consumption as human or animal food."

Article 5.

To Article 7 of the Principal Agreement there shall be added the following :

" Notwithstanding the above prohibition of treatment during a close season, the treatment of whales which have been taken during the open season may be completed after the end of the open season."

Article 6.

In Article 8 of the Principal Agreement the word " baleen " shall be inserted after the word " treating "

No 4573

70° de longitude ouest et le 160° de longitude ouest, pendant une période de deux années à dater du 8 décembre 1938.

Article 3.

1. Aucune usine flottante qui aura été utilisée en vue de traiter des baleines à fanons au sud du 40° de latitude sud ne sera utilisée ailleurs à cette fin, au cours d'une période de douze mois à dater de la fin de la saison autorisée, mentionnée à l'article 7 de l'Accord principal.

2. Seules les usines flottantes qui auront été utilisées au cours de l'année 1937 dans les eaux territoriales d'un des gouvernements signataires pourront être ainsi employées après la signature du présent protocole, et tous les bateaux ainsi utilisés seront considérés comme stations terrestres et resteront à l'ancre dans les eaux territoriales, à un poste fixe, au cours de la saison ; ils ne fonctionneront que pendant six mois au plus au cours de toute période de douze mois, étant entendu que ladite période de six mois devra être continue.

Article 4.

L'article 5 de l'Accord principal comportera les dispositions additionnelles suivantes :

" Toutefois, les baleines bleues (*blue whales*) d'au moins 65 pieds, les baleines à nageoires (*fin whales*) d'au moins 50 pieds et les cachalots (*sperm whales*) d'au moins 30 pieds de longueur pourront être capturés et livrés aux stations terrestres, pourvu que la chair en soit utilisée en vue de la consommation locale comme nourriture pour l'homme ou les animaux."

Article 5.

L'article 7 de l'Accord principal comportera les dispositions additionnelles suivantes :

" Nonobstant l'interdiction ci-dessus de traiter des baleines au cours d'une saison interdite, le traitement des baleines qui auront été capturées au cours de la saison autorisée pourra être achevé après la fin de ladite saison."

Article 6.

À l'article 8 de l'Accord principal, le mot « à fanons » sera inséré après le mot « baleine ».

Article 7.

For the areas specified in (a), (b), (c) and (d) of Article 9 of the Principal Agreement there shall be substituted the following areas, viz. :

(a) In the waters north of 66° North Latitude ; except that from 150° East Longitude eastwards as far as 140° West Longitude the taking or killing of whales by such ship or catcher shall be permitted between 66° North Latitude and 72° North Latitude ;

(b) In the Atlantic Ocean and its dependent waters north of 40° South Latitude ;

(c) In the Pacific Ocean and its dependent waters east of 150° West Longitude between 40° South Latitude and 35° North Latitude ;

(d) In the Pacific Ocean and its dependent waters west of 150° West Longitude between 40° South Latitude and 20° North Latitude ;

(e) In the Indian Ocean and its dependent waters north of 40° South Latitude.

Article 8.

For Article 12 of the Principal Agreement there shall be substituted the following, viz. :

The taking of whales for delivery to a factory ship shall be so regulated or restricted by the master or person in charge of the factory ship that no whale carcass shall remain in the sea for a longer period than 33 hours from the time of killing to the time when it is taken up on to the deck of the factory ship for treatment.

Article 9.

The present Protocol shall come into force provisionally on the first day of July, 1938, to the extent to which the signatory Governments are respectively able to enforce it.

Article 10.

(i) The present Protocol shall be ratified and the instruments of ratification shall be deposited with the Government of the United Kingdom of Great Britain and Northern Ireland as soon as possible.

(ii) It shall come into force definitively upon the deposit of the instruments of ratification

Article 7.

Les zones spécifiées aux paragraphes a), b), c) et d) de l'article 9 de l'Accord principal seront remplacées par les zones suivantes :

a) Dans les eaux au nord du 66° de latitude nord ; toutefois, à l'est du 150° de longitude est jusqu'au 140° de longitude ouest, il sera permis d'utiliser une usine flottante ou un navire baleinier en vue de capturer ou de tuer des baleines entre le 66° et le 72° de latitude nord ;

b) Dans l'océan Atlantique et les eaux qui en dépendent, au nord du 40° de latitude sud ;

c) Dans l'océan Pacifique et les eaux qui en dépendent, à l'est du 150° de longitude ouest, entre le 40° de latitude sud et le 35° de latitude nord ;

d) Dans l'océan Pacifique et les eaux qui en dépendent, à l'ouest du 150° de longitude ouest, entre le 40° de latitude sud et le 20° de latitude nord ;

e) Dans l'océan Indien et les eaux qui en dépendent, au nord du 40° de latitude sud.

Article 8.

L'article 12 de l'Accord principal sera remplacé par le texte suivant :

La capture des baleines à livrer à une usine flottante sera réglementée ou restreinte par le capitaine ou la personne responsable de l'usine flottante, de manière qu'aucune baleine morte ne reste en mer plus de 33 heures entre le moment où elle aura été tuée et le moment où elle aura été livrée sur le pont de l'usine flottante, en vue d'y être traitée.

Article 9.

Le présent protocole entrera en vigueur, à titre provisoire, le 1^{er} juillet 1938, dans la mesure où les gouvernements signataires pourront respectivement l'appliquer.

Article 10.

i) Le présent protocole sera ratifié et les instruments de ratification seront déposés aussitôt que possible auprès du Gouvernement du Royaume-Uni de Grande-Bretagne et d'Irlande du Nord.

ii) Il entrera définitivement en vigueur lorsque les instruments de ratification auront été

by the Governments of the United Kingdom, Germany and Norway.

(iii) For any other Government which is a Party to the Principal Agreement, the present Protocol shall come into force on the date of the deposit of its instrument of ratification or notification of accession.

(iv) The Government of the United Kingdom will inform the other Governments of the date on which the Protocol comes into force and the date of any ratification or accession received subsequently.

Article 11.

(i) The present Protocol shall be open to accession by any Government which has not signed it and which accedes to the Principal Agreement before the definitive entry into force of the Protocol.

(ii) Accession shall be effected by means of a notification in writing addressed to the Government of the United Kingdom and shall take effect immediately after the date of its receipt.

(iii) The Government of the United Kingdom will inform all the Governments which have signed or acceded to the present Protocol of all accessions received and the date of their receipt.

Article 12.

Any ratification of or accession to the Principal Agreement which may be deposited or notified after the date of definitive coming into force of the present Protocol shall be deemed to relate to the Principal Agreement as amended by the present Protocol.

In witness whereof the undersigned, duly authorised thereto, have signed the present Protocol.

Done in London the twenty-fourth day of June, 1938, in a single copy, which shall be deposited in the archives of the Government of the United Kingdom of Great Britain and Northern Ireland, by whom certified copies shall be communicated to all the signatory Governments.

For the Government of the Union of South Africa :

C. T. TE WATER,
F. J. DU TOIT.

No. 4575

déposés par les Gouvernements du Royaume-Uni, de l'Allemagne et de la Norvège.

iii) Pour tout autre gouvernement partie à l'Accord principal, le présent protocole entrera en vigueur à la date du dépôt de l'instrument de ratification ou de la notification d'adhésion.

iv) Le Gouvernement du Royaume-Uni fera connaître aux autres gouvernements la date à laquelle le protocole entrera en vigueur et la date de toute ratification ou adhésion reçue ultérieurement.

Article 11.

i) Le présent protocole sera ouvert à l'adhésion de tout gouvernement qui ne l'aura pas signé et qui aura adhéré à l'Accord principal avant l'entrée en vigueur définitive du protocole.

ii) L'adhésion sera effectuée par voie de notification écrite, adressée au Gouvernement du Royaume-Uni, et prendra effet immédiatement après la date de réception.

iii) Le Gouvernement du Royaume-Uni portera à la connaissance de tous les gouvernements qui auront signé le présent protocole ou qui y auront adhéré toute adhésion reçue ainsi que la date de sa réception.

Article 12.

Toute ratification de l'Accord principal ou adhésion audit accord qui aura été déposée ou notifiée après la date de l'entrée en vigueur définitive du présent protocole, sera considérée comme s'appliquant à l'Accord principal, amendé par le présent protocole.

En foi de quoi, les soussignés, dûment autorisés, ont signé le présent protocole.

Fait à Londres, le 24 juin 1938, en un exemplaire unique qui sera déposé dans les archives du Gouvernement du Royaume-Uni de Grande-Bretagne et d'Irlande du Nord, qui en transmettra des copies certifiées conformes à tous les gouvernements contractants.

Pour le Gouvernement de l'Union Sud-Africaine :

C. T. TE WATER,
F. J. DU TOIT.

| | |
|--|---|
| For the Government of the United States of America : | Pour le Gouvernement des Etats-Unis d'Amérique : |
| Herschel V. JOHNSON. | Herschel V. JOHNSON. |
| Remington KELLOGG. | Remington KELLOGG. |
| Wilfrid N. DERBY. | Wilfrid N. DERBY. |
| For the Government of the Argentine Republic : | Pour le Gouvernement de la République Argentine : |
| Manuel E. MALBRÁN. | Manuel E. MALBRÁN. |
| M. FINCATI. | M. FINCATI. |
| For the Government of the Commonwealth of Australia : | Pour le Gouvernement du Commonwealth d'Australie : |
| Robert G. MENZIES. | Robert G. MENZIES. |
| For the Government of Canada : | Pour le Gouvernement du Canada : |
| Vincent MASSEY. | Vincent MASSEY. |
| For the Government of Eire : | Pour le Gouvernement de l'Eire : |
| Sean O'FAOLAIN O'DULCHAONTIGH. | Sean O'FAOLAIN O'DULCHAONTIGH. |
| J. D. RUSH. | J. D. RUSH. |
| For the Government of Germany : | Pour le Gouvernement de l'Allemagne : |
| Helmuth WOHLTAT. | Helmuth WOHLTAT. |
| For the Government of the United Kingdom of Great Britain and Northern Ireland : | Pour le Gouvernement du Royaume-Uni de Grande-Bretagne et d'Irlande du Nord : |
| Henry G. MAURICE. | Henry G. MAURICE. |
| Geo. HOGARTH. | Geo. HOGARTH. |
| For the Government of New Zealand : | Pour le Gouvernement de la Nouvelle-Zélande : |
| W. J. JORDAN. | W. J. JORDAN. |
| For the Government of Norway : | Pour le Gouvernement de la Norvège : |
| Birger BERGERSEN. | Birger BERGERSEN. |

Annex 5: *Protocol amending the International Agreement for the Regulation of Whaling*, London, 7 February 1944, UKTS 1946 No. 61 (Cmd. 6990) (entered into force 5 October 1945)

WHALING.1069



Treaty Series No. 61 (1946)

PROTOCOL
ON THE INTERNATIONAL
REGULATION OF WHALING

London, 7th February, 1944

*Presented by the Secretary of State for Foreign Affairs
to Parliament by Command of His Majesty*

LONDON
HIS MAJESTY'S STATIONERY OFFICE
ONE PENNY NET

Cmd. 6990

PROTOCOL ON THE INTERNATIONAL REGULATION OF WHALING

London, 7th February, 1944

THE Governments of the Union of South Africa, the United States of America, the Commonwealth of Australia, the United Kingdom of Great Britain and Northern Ireland, Canada, Eire, New Zealand and Norway,

Being parties or signatories to the International Agreement for the Regulation of Whaling signed at London on the 8th June, 1937⁽¹⁾ (hereinafter referred to as the Agreement of 1937), and to the Protocol signed at London on the 24th June, 1938,⁽²⁾ introducing certain amendments into the Agreement of 1937 (hereinafter referred to as the Protocol of 1938); and

Desiring, in view of the fact that pelagic whaling operations in the area to which Article 7 of the 1937 Agreement applies have been interrupted for a considerable period by the existence of hostilities and in order to meet the present emergency without prejudicing the conservation of stocks of whales, to put into force by agreement such provisions as may be necessary with regard to pelagic whaling in this area when whaling operations are resumed there:

Have agreed as follows:—

ARTICLE 1

(i) The period fixed by Article 7 of the Agreement of 1937, during which factory ships or a whale catcher attached thereto may be used for the purpose of taking or treating baleen whales, shall be extended for the first season in which whaling operations are resumed in the area referred to in the said Article 7, so as to cover the period from the 24th November to the 24th March, both dates inclusive.

(ii) Each Government party to the present Protocol shall give notice to the Government of the United Kingdom when whale factory ships registered under the law of any territory under its authority or otherwise under its jurisdiction engage in whaling operations in the area defined in Article 7 of the Agreement of 1937. The Government of the United Kingdom will inform the other Governments party to the present Protocol of all notices received under this paragraph and shall itself similarly give notice to the other contracting Governments if whale factory ships registered under the law of any territory under its authority or otherwise under its jurisdiction engage in whaling operations in the said area.

(iii) For the purposes of paragraph (i) of this article the first season in respect of which any notice has been given under paragraph (ii) above, shall be deemed to be the first season in which whaling operations are resumed. This season is hereinafter referred to as "the first season."

ARTICLE 2

The provisions of Article 1 of the Protocol of 1938 relating to the taking of humpback whales in any waters south of 40 degrees south latitude shall apply during the first season.

⁽¹⁾ "Treaty Series No. 37 (1938)," Cmd. 5757.

⁽²⁾ "Treaty Series No. 18 (1939)," Cmd. 5993.

ARTICLE 3

(i) During the first season, the number of baleen whales caught in the area referred to in Article 7 of the 1937 Agreement shall not exceed 16,000 blue whale units.

(ii) For the purposes of paragraph (i) of this article, blue whale units shall be calculated on the basis that one blue whale equals—

- (a) 2 fin whales, or
- (b) $2\frac{1}{2}$ humpback whales, or
- (c) 6 sei whales.

(iii) The Government of the United Kingdom shall consult all the Governments who have given notice under Article 1 (ii) of this agreement in order to arrange by co-operation and agreement the measures necessary to ensure that the total number of baleen whales caught during the first season does not exceed the number specified in paragraph (i) of this article.

ARTICLE 4

In the absence of agreement to the contrary none of the provisions of the present Protocol shall operate except in the first season.

ARTICLE 5

The present Protocol shall be ratified and the instruments of ratification deposited as soon as possible with the Government of the United Kingdom.

ARTICLE 6

(i) The present Protocol shall be open to accession on behalf of any Government which was a party to the 1937 Agreement and has not signed the present Protocol.

(ii) Accession shall be effected by means of a notification addressed to the Government of the United Kingdom.

ARTICLE 7

(i) The Government of the United Kingdom shall inform the Governments of the United States of America, Canada, Eire, Mexico, New Zealand and Norway of all ratifications of this Protocol or accessions thereto.

* (ii) The present Protocol shall come into force as soon as ratifications or accessions have been deposited on behalf of all Governments referred to in paragraph (i) of this article and of the Government of the United Kingdom.

(iii) The ratification of or accession to the present Protocol by a Government which is a signatory but not a party to the Agreement of 1937 shall not become effective until such Government becomes a party to that agreement by ratification.

In witness whereof the undersigned plenipotentiaries, being duly authorised to this effect by their respective Governments, have signed the present Protocol and affixed thereto their seals.

Done at London this 7th day of February, 1944, in a single copy which shall remain deposited in the archives of the Government of the United

* See "Treaty Series No. 44 (1946)," Cmd. 6941.

Kingdom by whom certified copies will be transmitted to all the Governments referred to in Article 7 (i).

For the Government of the Union of South Africa:

(L.S.) DENEYS REITZ.
(L.S.) A. P. VAN DER POST.

For the Government of the United States of America:

(L.S.) LOYD V. STEERE.

For the Government of the Commonwealth of Australia:

(L.S.) S. M. BRUCE.

For the Government of the United Kingdom of Great Britain and Northern Ireland:

(L.S.) A. T. A. DOBSON.
(L.S.) J. E. DE WATTEVILLE.

For the Government of Canada:

(L.S.) VINCENT MASSEY.

For the Government of Eire:

For the Government of New Zealand:

(L.S.) W. J. JORDAN.

For the Government of Norway:

(L.S.) BIRGER BERGERSEN.

| <i>Signatory States.</i> | <i>Date of Deposit of Ratification.</i> |
|-------------------------------|---|
| United Kingdom | 28th June, 1944. |
| Canada | 24th August, 1944. |
| Australia | |
| New Zealand | 8th March, 1945. |
| South Africa, Union of | 18th March, 1946. |
| Norway | 31st March, 1944. |
| United States | 10th July, 1944. |
| <i>Acceding States.</i> | |
| Argentine Republic | 18th June, 1946. |
| Denmark | 10th November, 1945. |
| Mexico | 29th June, 1944. |

Annex 6: *Protocol amending the International Agreement for the Regulation of Whaling of 8 June 1937 and the Protocol for the Regulation of Whaling of 24 June 1938, London, 26 November 1945, 11 UNTS 43 (entered into force 3 March 1947)*

No. 148

UNION OF SOUTH AFRICA,
AUSTRALIA, CANADA,
DENMARK, FRANCE, etc.

Protocol amending the International Agreement of 8 June 1937, and the Protocol of 24 June 1938, for the regulation of whaling, signed at London, on 26 November 1945, and Supplementary Protocol regarding the entry into force of the Protocol of 26 November 1945, signed at London, on 3 March 1947

English official text communicated by the Permanent United Kingdom Representative to the United Nations. The registration took place on 26 November 1947.

UNION SUD-AFRICAINE,
AUSTRALIE, CANADA,
DANEMARK, FRANCE, etc.

Protocole modifiant l'Accord international du 8 juin 1937 et le Protocole du 24 juin 1938 pour la réglementation de la chasse à la baleine, signé à Londres, le 26 novembre 1945, et Protocole additionnel concernant l'entrée en vigueur du Protocole du 26 novembre 1945, signé à Londres le 3 mars 1947

Texte officiel anglais communiqué par le représentant permanent du Royaume-Uni auprès de l'Organisation des Nations Unies. L'enregistrement a eu lieu le 26 novembre 1947.

No. 148. PROTOCOL¹ AMENDING THE INTERNATIONAL AGREEMENT OF 8 JUNE 1937, AND THE PROTOCOL OF 24 JUNE 1938, FOR THE REGULATION OF WHALING, SIGNED AT LONDON, ON 26 NOVEMBER 1945

PROTOCOL

The Governments of the Union of South Africa, the Commonwealth of Australia, Canada, Denmark, France, Mexico, the Netherlands, New Zealand, Norway, the United Kingdom of Great Britain and Northern Ireland and the United States of America;

Desiring, in view of the fact that pelagic whaling operations in the area defined by Article 7 of the International Agreement for the Regulation of Whaling, signed at London on the 8th June, 1937² (hereinafter referred to as the Principal Agreement), as amended by the Protocol signed at London on the 24th June, 1938³ (hereinafter referred to as the Protocol of 1938), have been interrupted for a considerable period by the war, and in order to meet the emergency produced by post-war conditions without prejudice to the conservation of stocks of whales, to put into force by agreement such provisions as may be necessary in regard to pelagic whaling for the season 1946/47;

Have agreed as follows:—

Article 1

Subject to the provisions of Article 3 of the present Protocol, the period fixed by Article 7 of the Principal Agreement, during which factory ships or whalecatchers attached thereto may be used for the purpose of taking or treating baleen whales, shall be extended for the season 1946/47 so as to cover the period from the 8th December to the 7th April inclusive.

Article 2

Each contracting Government shall give notice to the Government of the United Kingdom when factory ships registered under the law of any territory

¹ Came into force on 3 March 1947, by signature of the Supplementary Protocol (see page 52 of this volume).

² League of Nations, *Treaty Series*, Volume CXC, page 79.

³ League of Nations, *Treaty Series*, Volume CXCVI, page 131.

TRADUCTION — TRANSLATION

N° 148. PROTOCOLE¹ MODIFIANT L'ACCORD INTERNATIONAL DU 8 JUIN 1937, ET LE PROTOCOLE DU 24 JUIN 1938 POUR LA RÉGLEMENTATION DE LA CHASSE À LA BALEINE. SIGNÉ À LONDRES, LE 26 NOVEMBRE 1945

PROTOCOLE

Les Gouvernements de l'Union Sud-Africaine, du Commonwealth d'Australie, du Canada, du Danemark, de la France, du Mexique, des Pays-Bas, de la Nouvelle-Zélande, de la Norvège, du Royaume-Uni de Grande-Bretagne et d'Irlande du Nord et des États-Unis d'Amérique;

Désireux, en raison de la très longue interruption subie par les opérations de chasse à la baleine en haute mer dans la zone définie à l'article 7 de l'Accord international pour la réglementation de la chasse à la baleine signé à Londres le 8 juin 1937² (ci-après mentionné sous le nom d'Accord principal) modifié par le Protocole signé à Londres le 24 juin 1938³ (ci-après mentionné sous le nom de Protocole de 1938) du fait de la guerre, et afin de faire face aux difficultés résultant de la situation d'après-guerre, sans porter préjudice à la conservation des espèces de baleines, de mettre en vigueur par voie d'accord toutes dispositions nécessaires relatives à la chasse à la baleine en haute mer durant la campagne 1946/47;

Sont convenus de ce qui suit:

Article premier

Sous réserve des dispositions de l'article 3 du présent protocole, la période fixée par l'article 7 de l'Accord principal et durant laquelle l'usage d'usines flottantes ou de navires baleiniers rattachés à celles-ci est autorisé en vue de capturer ou de traiter des baleines à fanons sera prolongée durant la campagne 1946/47 de manière à s'étendre du 8 décembre au 7 avril inclus.

Article 2

Chacune des Parties contractantes avisera le Gouvernement du Royaume-Uni lorsque des usines flottantes immatriculées conformément à la législation

¹ Entré en vigueur le 3 mars 1947, par signature du Protocole additionnel (voir page 53 de ce volume).

² Société des Nations, *Recueil des Traités*, volume CXC, page 79.

³ Société des Nations, *Recueil des Traités*, volume CXCVI, page 131.

under its authority or otherwise under its jurisdiction engage in whaling operations in the area defined by Article 7 of the Principal Agreement. The Government of the United Kingdom will inform the other contracting Governments of all notices received under this paragraph and shall itself similarly give notice to the other contracting Governments if factory ships registered under the law of any territory under its authority or otherwise under its jurisdiction engage in whaling operations in the said area.

Article 3

The prohibition contained in Article 1 of the Protocol of 1938 relating to the taking of hump back whales in any waters south of 40° south latitude shall apply during the season of 1946/47.

Article 4

(1) During the season of 1946/47 the number of baleen whales caught in the area defined by Article 7 of the Principal Agreement shall not exceed 16,000 blue whale units.

(2) For the purposes of paragraph 1 of this Article blue whale units shall be calculated on the basis that one blue whale equals—

- (a) Two fin whales or
- (b) Two and a half hump back whales or
- (c) Six sei whales.

(3) Each contracting Government undertakes to ensure that the International Bureau for Whaling Statistics shall be provided, within two days after the end of each calendar week, with data on the number of blue whale units caught by each factory ship under the jurisdiction of the said Government in the area defined by Article 7 of the Principal Agreement. The Government of the United Kingdom shall consult from time to time with the International Bureau for Whaling Statistics and it should appear that the annual quota provided by paragraph (1) of this Article may be reached before the 7th April, the International Bureau for Whaling Statistics shall be requested to determine, on the basis of the data provided, the date on which the annual quota of blue whale units shall be deemed to have been reached and to notify each contracting Government of that date not less than two weeks in advance thereof. The taking of baleen whales shall be illegal after the date so determined.

d'un territoire quel qu'il soit, soumis à son autorité ou relevant à un autre titre de sa juridiction, se livreront à des opérations de chasse à la baleine dans la zone définie à l'article 7 de l'Accord principal. Le Gouvernement du Royaume-Uni communiquera aux autres Parties contractantes toutes les notifications qu'il recevra en vertu des dispositions du présent paragraphe et il avisera de même les autres Parties contractantes si des usines flottantes immatriculées conformément à la législation d'un territoire quel qu'il soit, soumis à son autorité ou relevant à un autre titre de sa juridiction, se livrent à des opérations de chasse à la baleine dans ladite zone.

Article 3

L'interdiction relative à la capture de baleines à bosse (*hump back whales*) dans toutes les eaux au sud du 40° degré de latitude sud, qui fait l'objet de l'article premier du protocole de 1938, s'appliquera durant la campagne 1946/47.

Article 4

1) Au cours de la campagne 1946/47, le nombre de baleines à fanons capturées dans la zone définie à l'article 7 de l'Accord principal ne devra pas dépasser 16.000 unités de baleines bleues.

2) Aux fins du paragraphe 1 du présent article, le nombre d'unités-baleines bleues sera calculé sur la base d'une équivalence d'une baleine bleue et de:

- a) Deux baleines à nageoires (*fin whales*), ou
- b) Deux baleines et demie à bosse (*hump back whales*), ou
- c) Six rorquals de Rudolf (*sei whales*).

3) Chacune des Parties Contractantes s'engage à faire en sorte que soient fournies au Bureau international des statistiques baleinières, dans un délai de deux jours après la fin de chaque semaine, des indications sur le nombre d'unités-baleines bleues capturées par chacune des usines flottantes relevant de sa juridiction, dans la zone définie à l'article 7 de l'Accord principal. Le Gouvernement du Royaume-Uni se concertera périodiquement avec le Bureau international des statistiques baleinières et, s'il apparaissait que le contingent annuel prévu au paragraphe 1 du présent article puisse être atteint avant le 7 avril, le Bureau international des statistiques baleinières sera invité à fixer, sur la base des indications qui lui auront été fournies, la date à laquelle le contingent annuel exprimé en unités-baleines bleues sera considéré comme atteint et de faire connaître cette date à chacune des Parties contractantes deux semaines au moins avant ladite date. La capture de baleines à fanons sera illicite après la date ainsi fixée.

Article 5

The provisions of Article 3, paragraph (2), of the Protocol of 1938, regarding the operation of factory ships as land stations in the territorial waters of any contracting Government, shall not apply during the period from 1st May, 1947, to 31st October, 1947, inclusive.

Article 6

(1) In the present Protocol the following expressions shall have the meanings assigned to them in Article 18 of the Principal Agreement: "factory ship," "whalecatcher," "land station," "balcen whale," "blue whale," "hump back whale," "fin whale."

(2) Sei whale means, for the purposes of this Protocol, any whale known by the name of *balaenoptera borealis*, sei whale, Rudolphi's rorqual, pollack whale, or coalfish whale, and shall be taken to include *Balaenoptera brydei*, Bryde's whale.

(3) The expression "land station" shall, for the purposes of Article 5 of the present Protocol, include a factory ship the movements and anchorage of which are confined to the territorial waters of any contracting Government.

Article 7

(1) The present Protocol shall be ratified and the instruments of ratification deposited as soon as possible with the Government of the United Kingdom; and it shall be open to accession on behalf of any Government which is a party to the Principal Agreement and the Protocol of 1938 and has not signed the present Protocol.

(2) Accession shall be effected by notification addressed to the Government of the United Kingdom.

(3) The Government of the United Kingdom shall inform the Governments which are parties or signatories to the present Protocol of all ratifications of this Protocol or accessions thereto.

Article 8

(1) The present Protocol shall come into force in its entirety when all the Governments referred to in the Preamble hereof shall have deposited their instruments of ratification or given notification of accession.

Article 5

Les dispositions du paragraphe 2 de l'article 3 du protocole de 1938 concernant l'utilisation des usines flottantes comme stations terrestres dans les eaux territoriales de l'un quelconque des Etats contractants ne seront pas applicables durant la période allant du 1er mai 1947 au 31 octobre 1947 inclus.

Article 6

1) Dans le présent protocole, les expressions suivantes auront le sens qui leur est donné à l'article 1B de l'Accord principal: "usine flottante", "navire balénier", "station terrestre", "baléine à fanons", "baléine bleue", "baléine à bosse", "baléine à nageoires".

2) On entend par rorqual de Rudolf (*sei whale*), aux fins du présent protocole, toute baléine connue sous le nom de *balaenoptera borealis*, de *sei whale*, de *Rudolph's rorqual*, de *pollack whale*, ou de *coalfish whale*, y compris la baléine connue sous le nom de baléine de Bryde, *balaenoptera brydei*.

3) Aux fins de l'article 5 du présent protocole, l'expression "station terrestre" s'appliquera également à une usine flottante dont les déplacements et le mouillage sont limités aux eaux territoriales de l'une quelconque des Parties contractantes.

Article 7

1) Le présent protocole sera ratifié et les instruments de ratification seront déposés aussitôt que possible auprès du Gouvernement du Royaume-Uni; il sera ouvert à l'adhésion de tout Etat partie à l'Accord principal et au protocole de 1938 qui n'a pas signé le présent protocole.

2) L'adhésion sera effectuée par voie de notification adressée au Gouvernement du Royaume-Uni.

3) Le Gouvernement du Royaume-Uni portera à la connaissance des Gouvernements qui sont parties au présent protocole ou qui l'ont signé, toutes les ratifications ou adhésions dont il aura fait l'objet.

Article 8

1) Le présent protocole entrera en vigueur dans toutes ses dispositions lorsque tous les Gouvernements mentionnés dans son préambule auront déposé leurs instruments de ratification ou notifié leur adhésion.

(2) The provisions of this Article and Articles 2, 3, 4, 5 (1), 5 (2) and 7 of the present Protocol shall, when instruments of ratification have been deposited by at least three signatory Governments, becoming binding on those Governments and shall become binding on each other Government which subsequently ratifies or accedes, on the date of the deposit of its instrument of ratification or notification of its accession.¹

(3) The ratification of or accession to the present Protocol by a Government which is not a party to the Principal Agreement and the Protocol of 1938 shall not become effective until such Government becomes a party to that Agreement and the Protocol of 1938.

Article 9

The present Protocol shall bear the date on which it is opened for signature and shall remain open for signature for a period of 14 days thereafter.

IN WITNESS WHEREOF the undersigned plenipotentiaries being duly authorised to this end by their respective Governments have signed the present Protocol.

DONE at London this 26th day of November, 1945, in a single copy which shall remain deposited in the archives of the Government of the United Kingdom, by whom certified copies will be transmitted to all the Governments referred to in the preamble.

For the Government of the Union of South Africa:
A. P. VAN DER POST

For the Government of the Commonwealth of
Australia:
J. S. DUNCAN

¹The following Governments have deposited their instruments of ratification or accession:

| <i>Signatory States</i> | <i>Date of deposit of instrument of ratification</i> |
|-----------------------------|--|
| United Kingdom | 29 March 1946 |
| Australia | 23 July 1946 |
| New Zealand | 7 March 1946 |
| Union of South Africa | 11 December 1946 |
| Denmark | 10 April 1946 |
| France | 24 October 1946 |
| Norway | 4 April 1946 |
| United States | 30 August 1946 |
| <i>Acceding State</i> | <i>accession</i> |
| USSR | 25 November 1946 |

2) Les dispositions du présent article et des articles 2, 3, 4, 6 (1), 6 (2) et 7 du présent protocole seront, lorsque les instruments de ratification auront été déposés par trois Etats signataires au moins, obligatoires pour ces Etats et elles deviendront obligatoires pour chacun des autres Etats qui, par la suite, ratifieront ledit protocole ou y adhéreront, à la date du dépôt de leurs instruments de ratification ou de la notification de leur adhésion¹.

3) La ratification du présent protocole ou l'adhésion audit protocole par un Etat qui n'est pas partie à l'Accord principal et au protocole de 1938 ne produira ses effets que lorsque cet Etat deviendra partie audit Accord et audit protocole de 1938.

Article 9

Le présent protocole portera la date à laquelle il est ouvert à la signature et il restera ouvert à cet effet pendant un délai de quatorze jours après cette date.

EN FOI DE QUOI, les plénipotentiaires soussignés, dûment autorisés à cet effet par leurs Gouvernements respectifs, ont signé le présent protocole.

FAIT à Londres, le 26 novembre 1945, en un exemplaire unique, lequel restera déposé dans les archives du Gouvernement du Royaume-Uni qui en communiquera des copies certifiées conformes à tous les Gouvernements mentionnés dans le préambule.

Pour le Gouvernement de l'Union Sud-Africaine:
A. P. VAN DER POST

Pour le Gouvernement du Commonwealth d'Australie:
J. S. DUNCAN

¹ Les Gouvernements suivants ont déposé leurs instruments de ratification ou notifié leur adhésion:

| <i>Etats signataires</i> | <i>Date du dépôt des instruments de ratification</i> |
|-----------------------------|--|
| Royaume-Uni | 29 mars 1946 |
| Australie | 23 juillet 1946 |
| Nouvelle-Zélande | 7 mars 1946 |
| Union Sud-Africaine | 11 décembre 1946 |
| Danemark | 10 avril 1946 |
| France | 24 octobre 1946 |
| Norvège | 4 avril 1946 |
| Etats-Unis d'Amérique | 30 août 1946 |
| | <i>adhésion</i> |
| URSS | 25 novembre 1946 |

- For the Government of Canada:
VINCENT MASSEY
- For the Government of Denmark:
P. F. ERICHSEN
- For the Provisional Government of the French
Republic:
NOËL HENRY
- For the Government of the United Mexican States:
ALFONSO DE ROSENZWEIG DIAZ
- For the Government of the Netherlands:
E. TEIXEIRA DE MATTOS
- For the Government of New Zealand:
R. M. CAMPBELL
- For the Government of Norway:
BIRGER BERGERSEN
- For the Government of the United Kingdom of
Great Britain and Northern Ireland:
A. T. A. DOBSON
J. E. DE WATTEVILLE
- For the Government of the United States of America:
REMINGTON KELLOGG
IRZ N. GARRIBSON

SUPPLEMENTARY PROTOCOL SIGNED AT LONDON, ON 3 MARCH
1947, REGARDING THE ENTRY INTO FORCE OF THE
WHALING PROTOCOL OF 26 NOVEMBER 1945

The Governments of the Union of South Africa, the Commonwealth of
Australia, Canada, Denmark, France, New Zealand, Norway, the United
Kingdom, the United States of America and the Union of Soviet Socialist
Republics,

No. 108

- Pour le Gouvernement du Canada:
Vincent MASSEY
- Pour le Gouvernement du Danemark:
P. F. ERICHSEN
- Pour le Gouvernement provisoire de la République
française:
Noël HENRY
- Pour le Gouvernement des Etats-Unis du Mexique:
Alfonso DE ROSENZWEIG DIAZ
- Pour le Gouvernement des Pays-Bas:
E. TEIXEIRA DE MATTOS
- Pour le Gouvernement de la Nouvelle-Zélande:
R. M. CAMPBELL
- Pour le Gouvernement de la Norvège:
Birger BERGERSEN
- Pour le Gouvernement du Royaume-Uni de Grande-
Bretagne et d'Irlande du Nord:
A. T. A. DOBSON
J. E. DE WATTEVILLE
- Pour le Gouvernement des Etats-Unis d'Amérique:
Remington KELLOGG
Ira N. GABRIELSON

PROTOCOLE ADDITIONNEL SIGNE A LONDRES, LE 3 MARS 1947,
CONCERNANT L'ENTREE EN VIGUEUR DU PROTOCOLE
RELATIF A LA CHASSE A LA BALEINE DU 26 NOVEMBRE 1945

Les Gouvernements de l'Union Sud-Africaine, du Commonwealth d'Australie, du Canada, du Danemark, de la France, de la Nouvelle-Zélande, de la Norvège, du Royaume-Uni, des Etats-Unis d'Amérique et de l'Union des Républiques socialistes soviétiques,

Having ratified or acceded to the Protocol signed in London on 26th November, 1945¹ (hereinafter called "The Protocol"), amending the International Agreement for the Regulation of Whaling signed in London on 8th June, 1937,² as amended by the Protocols of 24th June, 1938,³ and 7th February, 1944⁴;

Considering that it is provided under paragraph (i) of Article VIII of the Protocol that the Protocol shall come into force in its entirety when all the Governments referred to in the preamble of the Protocol shall have deposited their instruments of ratification or given notification of accession;

Considering further that ratifications or accessions have been deposited on behalf of all the Governments referred to in the preamble of the Protocol with the exception of the Governments of Mexico and the Netherlands; and

Desiring that the Protocol should be brought into force in its entirety without awaiting ratification by the Governments of Mexico and the Netherlands;

Have decided to conclude a Supplementary Protocol for this purpose and have agreed as follows:—

Article I

Notwithstanding the provisions of paragraph (i) of Article VIII of the Protocol, the Protocol shall, on the signature of the present Supplementary Protocol, come into force with respect to Governments signing the present Supplementary Protocol immediately upon signature by them.

Article II

The present Supplementary Protocol shall bear the date on which it is opened for signature and shall remain open for signature for a period of 14 days thereafter.

IN WITNESS WHEREOF the Undersigned, duly authorised by their respective Governments, have signed the present Supplementary Protocol, done in London this 3rd day of March, 1947, in a single copy, which shall be deposited in the archives of the Government of the United Kingdom and of which certified copies shall be transmitted to all the signatory Governments.

¹ See page 44 of this volume.

² League of Nations, *Treaty Series*, Volume CXC, page 79.

³ League of Nations, *Treaty Series*, Volume CXCVI, page 131.

⁴ Great Britain, *Treaty Series*: No. 61 (1946), Cmd. 6950.

Ayant ratifié le protocole signé à Londres le 26 octobre 1945¹ (ci-après mentionné sous le nom de "protocole") modifiant l'accord international pour la réglementation de la Chasse à la baleine, signé à Londres le 8 juin 1937², modifié par les protocoles du 24 juin 1938³ et du 7 février 1944⁴, ou ayant adhéré audit protocole.

Considérant qu'il est prévu au paragraphe i) de l'article VIII dudit protocole qu'il entrera en vigueur dans toutes ses dispositions lorsque tous les Gouvernements mentionnés dans le préambule dudit protocole auront déposé leurs instruments de ratification ou notifié leur adhésion;

Considérant en outre que des ratifications ou des adhésions ont été déposées au nom de tous les Gouvernements mentionnés dans le préambule dudit protocole à l'exception des Gouvernements du Mexique et des Pays-Bas; et

Désireux de mettre en vigueur ledit protocole dans toutes ses dispositions sans en attendre la ratification par les Gouvernements du Mexique et des Pays-Bas;

Ont décidé d'établir à cet effet un protocole additionnel et sont convenus de ce qui suit:

Article premier

Nonobstant les dispositions du paragraphe i) de l'article VIII du protocole, ledit protocole entrera en vigueur au moment de la signature du présent protocole additionnel, à l'égard des Gouvernements ayant signé ledit protocole additionnel, et au moment même de leur signature.

Article 2

Le présent protocole additionnel portera la date à laquelle il est ouvert à la signature et il restera ouvert à cet effet pendant un délai de quatorze jours après cette date.

EN FOI DE QUOI, les soussignés, dûment autorisés par leurs Gouvernements respectifs, ont signé le présent protocole additionnel, fait à Londres, le 3 mars 1947, en un exemplaire unique, lequel sera déposé dans les archives du Gouvernement du Royaume-Uni et des copies certifiées conformes seront communiquées à tous les Gouvernements signataires.

¹ Voir page 45 de ce volume.

² Société des Nations, *Recueil des Traités*, volume CXC, page 79.

³ Société des Nations, *Recueil des Traités*, volume GXCVI, page 131.

⁴ Great Britain, "Treaty Series" n° 61 (1946), Cmd. 6990.

For the Government of the Union of South Africa:
Eugene K. SCALLAN

For the Government of the Commonwealth of
Australia:

John A. BEASLEY
Subject to approval

For the Government of Canada:
N. A. ROBERTSON

For the Government of Denmark:
E. REVENTLOW

For the Government of France:
Jean LE ROY

For the Government of New Zealand:
W. J. JORDAN

For the Government of Norway:
P. PREBENSEN

For the Government of the United Kingdom:
O. G. SARGENT

For the Government of the United States of America:
W. J. GALLMAN
Subject to ratification

For the Government of the Union of Soviet Socialist
Republics:
G. ZARUBIN

Pour le Gouvernement de l'Union Sud-Africaine:
Eugène K. SCALLAN

Pour le Gouvernement du Commonwealth d'Australie:

John A. BRASLEY
Sous réserve d'approbation

Pour le Gouvernement du Canada:
N. A. ROBERTSON

Pour le Gouvernement du Danemark:
E. REVENTLOW

Pour le Gouvernement de la France:
Jean LE ROY

Pour le Gouvernement de la Nouvelle-Zélande:
W. J. JORDAN

Pour le Gouvernement de la Norvège:
P. PREBENSEN

Pour le Gouvernement du Royaume-Uni:
O. G. SARGENT

Pour le Gouvernement des Etats-Unis d'Amérique:
W. J. GALLMAN
Sous réserve de ratification

Pour le Gouvernement de l'Union des Républiques
socialistes soviétiques:
G. ZAROUBIN

Annex 7: Resolution on Scientific Permits, Appendix 2, Chairman's Report of the Thirty-Seventh Annual Meeting, *Rep. int. Whal. Commn* 36, 1986, 26

**1985-Appendix 2
Resolution on Scientific Permits**

WHEREAS, article VIII of the International Convention for the Regulation of Whaling, 1946, exempts from the operation of the Convention the killing, taking and treating of whales in accordance with special permits issued by Contracting Governments, for the purposes of scientific research; and

WHEREAS Paragraph 30 of the Schedule provides for all proposed permits to be reviewed by the Scientific Committee:

THE COMMISSION:

1. NOTES the draft resolution proposed by Sweden and seconded by Switzerland on the subject of scientific permits and recalls the discussion thereon;
2. DECIDES to set up a working group to study this proposal and any relevant matters with a view to taking a decision at the next session of the Commission;
3. URGES any Contracting Government proposing the issue of scientific permits in the intervening period to take account of the serious concerns expressed in the Commission at the possibility of whaling for scientific purposes in the period referred to in Schedule paragraph 10(e) assuming the characteristics of commercial whaling; and
4. INVITES Contracting Governments to ensure that any whaling under such permits is conducted strictly in accordance with scientific requirements, and in particular to take account of *the* advice and guidelines of the Scientific Committee.

**1985-Appendix 3
Resolution on Humane Killing in Aboriginal Subsistence Whaling**

WHEREAS the Technical Committee Working Group on Humane Killing recommended in 1979 that Governments act to reduce waste and inhumane methods of killing,

and WHEREAS, in some cases cruel and inefficient methods continue to be employed, and remain little changed from those in use six years ago,

The Commission URGES the prompt adoption of more efficient methods of killing whales, that reduce cruelty and inhumanity, in areas where aboriginal and subsistence whaling is practiced.

Annex 8: Resolution on Republic of Korea's Proposal for Special Permits, Appendix 2, Chairman's Report of the Thirty-Ninth Annual Meeting, *Rep. int. Whal. Commn* 38, 1988, 28

1987-Appendix 2
Resolution on Republic of Korea's Proposal for Special Permits

WHEREAS the International Whaling Commission adopted in 1986 a Resolution on Special Permits for Scientific Research (IWC/38/28);

WHEREAS the Commission has considered the Report of the Scientific Committee (IWC/39/4) concerning the research programmes to be conducted under special permits;

WHEREAS the Commission takes cognizance of Article VIII of the International Convention for the Regulation of Whaling, under which the granting by any Contracting Government to its nationals of a special permit authorising the killing, taking or treatment of whales for purposes of scientific research remains the responsibility of each Contracting Government, exercising its sovereign rights in respect of maritime areas under its jurisdiction and the freedom of the high seas;

Now, THEREFORE, the Commission

ADOPTS the view that the proposed take of Sea of Japan-Yellow Sea-East China Sea stock of minke whales under scientific permit by the Government of the Republic of Korea, as described in SC/39/O.5, does not satisfy the criteria set forth in the 1986 Resolution on Special Permits for Scientific Research in that it has not contributed information which will answer any significant management questions and the proposed take will not materially facilitate the conduct of the Comprehensive Assessment;

REQUESTS the Secretary to so notify the Government of the Republic of Korea; and

RECOMMENDS to the Government of the Republic of Korea that it refrain from issuing, or revoke, special permits to its nationals for the conduct of the research programme described in SC/39/O.5

Annex 9: Resolution on Icelandic Proposal for Scientific Catches, Appendix 3,
Chairman's Report of the Thirty-Ninth Annual Meeting, *Rep. int. Whal.*
Commn 38, 1988, 28

1987-Appendix 3
Resolution on the Icelandic Proposal For Scientific Catches

WHEREAS the International Whaling Commission adopted in 1986 a Resolution on Special Permits for Scientific Research (IWC/38/28);

WHEREAS the Commission has considered the Report of the Scientific Committee (IWC/39/4) concerning the research programs to be conducted under special permits; and it is recognised that the sighting survey element of the Icelandic research program is acceptable and commendable.

WHEREAS the Commission takes cognizance of Article VIII of the International Convention for the Regulation of Whaling, under which the granting by any Contracting Government to its nationals of a special permit authorizing the killing, taking or treatment of whales for purposes of scientific research remains the responsibility of each Contracting Government, exercising its sovereign rights in respect of maritime areas under its jurisdiction and freedom of the high seas;

Now, THEREFORE, the Commission

ADOPTS the view that the proposed take of fin, sei, and minke whales under special permit as described in SC/37/O20 and as modified in SC/38/Prog. Rep. Iceland does not fully satisfy the criteria set forth in the 1986 Resolution on Special Permits for Scientific Research.

RECOMMENDS that the Government of Iceland revoke and refrain from issuing special permits to its nationals for the conduct of the research program described in SC/37/O20 and as modified in SC/38/Prog. Rep. Iceland until the uncertainties identified in the Scientific Committee Report (IWC/39/4) have been resolved to the satisfaction of the Scientific Committee.

REQUESTS the Secretary to notify the Government of Iceland accordingly.

Annex 10: Resolution on Japanese Proposal for Special Permits, Appendix 4,
Chairman's Report of the Thirty-Ninth Annual Meeting,
Rep. int. Whal. Commn 38, 1988, 29

1987-Appendix 4
Resolution on Japanese Proposal for Special Permits

WHEREAS the International Whaling Commission adopted in 1986 a Resolution on Special Permits for Scientific Research (IWC/38/28);

WHEREAS the Commission has considered the Report of the Scientific Committee (IWC/39/4) concerning the research programs to be conducted under special permits;

WHEREAS the Commission takes cognizance of Article VIII of the International Convention for the Regulation of Whaling, under which the granting by any Contracting Government to its nationals of a special permit authorizing the killing, taking or treatment of whales for purposes of scientific research remains the responsibility of each Contracting Government, exercising its Sovereign rights in respect of maritime areas under its jurisdiction and freedom of the high seas;

Now, THEREFORE the Commission

ADOPTS THE VIEW that the proposed take of Southern Hemisphere Minke Whales and Sperm Whales under the proposed research program as described in SC/39/O 4 does not satisfy the criteria set out in the 1986 Resolution on Special Permits for Scientific Research in that the proposed research does not appear, on present information, to be structured so as to contribute information essential for rational management of the stock and that the proposed take will not, at least at this stage, materially facilitate the Comprehensive Assessment; and

REQUESTS the Secretary so to notify the Government of Japan; and

RECOMMENDS the Government of Japan to refrain from issuing special permits to its nationals for the taking of such whales under the research program described in SC/39/O 4 until such time as the Scientific Committee is able to resolve the serious uncertainties identified in its discussion as to the capability of the research methods proposed to contribute sufficiently reliable results needed for the Comprehensive Assessment or for other critically important research needs.

**Annex 11: Resolution on Norwegian Proposal for Special Permits, Appendix 1,
Chairman's Report of the Fortieth Annual Meeting, *Rep. int. Whal.
Commn 39*, 1989, 30**

**1988-Appendix 1
Resolution on Norwegian Proposal for Special Permits**

WHEREAS the International Whaling Commission adopted in 1986 a Resolution on Special Permits for Scientific Research (*IWC/38/128*) and in 1987 a Resolution on Scientific Research Programmes (*Rep. in Whal. Commn 38: 27*);

WHEREAS the Commission has considered the Report of the Scientific Committee (*IWC/40/4*) concerning the research programmes to be conducted under special permits, and recognises that the continuation of sighting surveys of the Norwegian Research Programme would continue to make an important contribution to knowledge of the distribution and abundance of whales in the Northeast Atlantic, and further encourages the implementation of the projects dealing with natural marking studies and the development of passive acoustic methods;

WHEREAS the Commission takes cognizance of Article VIII of the International Convention for the Regulation of Whaling, under which the granting by any Contracting Government to its nationals of a special permit authorising the killing, taking or treatment of whales for purposes of scientific research remains the responsibility of each Contracting Government, exercising its sovereign rights in respect of maritime areas under its jurisdiction and freedom of the high seas;

Now, THEREFORE, the Commission

CONSIDERS, taking into account the comments of the Scientific Committee; that the proposed kill of minke whales in the North Atlantic under the research programme described in *SC/40/Mi7* does not satisfy each of the criteria specified in both the 1986 Resolution on Special Permits for Scientific Research and the 1987 Resolution on Scientific Research Programmes in that the proposed research is not structured so as to contribute information essential for rational management of the stock and that the proposed kill will not materially facilitate the Comprehensive Assessment, and further that it has not been established that the proposed research addresses critically important research needs;

REQUESTS the Secretary to inform the Government of Norway accordingly.

**Annex 12: Resolution on the Icelandic Proposal for Scientific Catches,
Appendix 2, Chairman's Report of the Fortieth Annual Meeting,
Rep. int. Whal. Commn 39, 1989, 30-31**

**1988-Appendix 2
Resolution on the Icelandic Proposal for Scientific Catches**

WHEREAS the International Whaling Commission adopted in 1986 a Resolution on Special Permits for Scientific Research (IWC/38/28) and in 1987 a Resolution on Scientific Research Programmes (*Rep. in Whal. Commn* 38: 27);

WHEREAS the Commission has considered the Report of the Scientific Committee (IWC/40/4) concerning the research programmes to be conducted under special permits, and it is recognised that the sighting survey of the Icelandic Research Programme has made an important contribution to knowledge of the distribution and abundance of whales in the North Atlantic;

WHEREAS the Commission takes cognizance of Article VIII of the International Convention for the Regulation of Whaling, under which the granting by any Contracting Government to its nationals of a special permit authorising the killing, taking or treatment of whales for purposes of scientific research remains the responsibility of each Contracting Government, exercising its sovereign rights in respect of maritime areas under its jurisdiction and freedom of the high seas;

WHEREAS at the 1987 meeting the Commission adopted the view that the proposed take of fin, sei and minke whales under special permit did not fully satisfy the criteria set forth in the 1986 Resolution on Special Permits for Scientific Research and recommended that the Government of Iceland revoke and refrain from issuing special permits to its nationals until the uncertainties identified in the Scientific Committee Report (IWC/39/4) had been resolved to the satisfaction of the Scientific Committee;

WHEREAS the Government of Iceland has announced its intention not to issue special permits to take minke whales as described in SC/37/O 20 and as modified in SC/38/ProgRep Iceland;

Now, THEREFORE, the Commission

CONSIDERS; taking into account the comments of the Scientific Committee in 1987, and 1988; that the proposed take of fin and sei whales under special permit as described in SC/37/O 20 and as modified in SC/38/ProgRep Iceland does not satisfy each of the criteria specified in both the 1986 Resolution on Special Permits for Scientific Research and the 1987 Resolution on Scientific Research Programmes;

REQUESTS the Secretary to inform the Government of Iceland accordingly;

INVITES the Government of Iceland to report in writing to the Commission in time for consideration by the Commission at its 41st Annual Meeting.

Annex 13: Resolution on the Issuance of Special Permits for the Purposes of Scientific Research, Appendix 3, Chairman's Report of the Fortieth Annual Meeting, *Rep. int. Whal. Commn* 39, 1989, 31

**1988-Appendix 3
Resolution on the Issuance of Special Permits
for the Purposes of Scientific Research**

WHEREAS it is desirable to operate within the annual calendar of the International Whaling Commission and of its Scientific Committee and that in normal circumstances the procedure for consideration of special permits for the purposes of scientific research is for them to be considered by the Scientific Committee and with its report by the Commission and that intersessional meetings should normally be avoided and called only in exceptional circumstances;

WHEREAS there is no clear procedure for the consideration of reports of the Scientific Committee on the results of intersessional meetings called to consider special permits for the purposes of scientific research and FURTHERMORE it is not the general practice of the IWC to convene intersessional meetings of Commissioners;

WHEREAS it is a responsibility for all Commissioners to have due opportunity to consider and discuss with one another the outcome of the deliberations of the Scientific Committee on all matters, and in particular on any proposals for special permits for the purposes of scientific research;

Now THEREFORE the Commission

RECOMMENDS that following consideration of any special permit(s) for the purposes of scientific research at any intersessional meeting of the Scientific Committee, the Contracting Government(s) responsible for the proposed special permit(s) refrain from issuing any special permit until the expiry of sixty days from the date of circulation of the report of the meeting, to give the Chairman of the Commission sufficient time to consult with the Contracting Governments in order to reach a decision as to how the Commission proceeds.

Annex 14: Resolution on the Icelandic Proposal for Scientific Catches,
Appendix 1, Chairman's Report of the Forty-First Annual Meeting,
Rep. int. Whal. Commn 40, 1990, 35

1989-Appendix 1
Resolution on the Icelandic Proposal for Scientific Catches

WHEREAS at the 1987 Commission meeting, the Commission adopted the view that the proposed take of fin, sei and minke whales under Special Permit did not fully satisfy the criteria set forth in the 1986 Resolution on Special Permits for Scientific Research and recommended that the Government of Iceland revoke and refrain from issuing Special Permits to its nationals until the uncertainties identified by the Scientific Committee report (IWC/39/4) had been resolved to the satisfaction of the Scientific Committee;

WHEREAS at the 1988 meeting the Commission considered that the proposed take of fin and sei whales under special permit did not satisfy each of the criteria specified in both the 1986 Resolution on Special Permits for Scientific Research and in the 1987 Resolution on Scientific Research Programmes, and invited the Government of Iceland to report in writing to the Commission in time for consideration by the Commission at its 41st Annual Meeting;

WHEREAS the Government of Iceland in 1988 reduced its take of fin whales from 80 to 68 and its take of sei whales from 20 to 10, and modified its programme to improve the component involving the sampling of krill, and to implement the five specific recommendations of the Scientific Committee related to non-lethal aspects as contained in IWC/40/4;

WHEREAS the Government of Iceland has submitted its report (IWC/41/24) as invited by the Commission, and this has been considered;

WHEREAS the Commission has considered the Report of the Scientific Committee (IWC/41/4) concerning the research programmes to be conducted under Special Permits;

WHEREAS, as noted by the Scientific Committee, the Icelandic sightings programme, which is independent of the programme which requires Special Permits, has made an important contribution to the Comprehensive Assessment in terms of knowledge of the distribution and abundance of fin, sei and minke whales in the North Atlantic, and will continue to do so through the 1989 North Atlantic sightings survey;

WHEREAS the Commission recognises that Iceland has undertaken its research programme in a detailed manner;

WHEREAS the Government of Iceland has conveyed its intention not to issue special permits to take minke whales as described in SC/37/0 23 and as modified in SC/38/ProgRep Iceland, and has determined that, in light of the progress of the research conducted to date, the further taking of sei whales in 1989 is not necessary;

WHEREAS the Government of Iceland has also announced in IWC/4 1/OS Iceland that its research programme has progressed to a stage where Iceland will not take whales for scientific purposes in 1990 nor does it have plans to do so in the years following, and that the Government of Iceland intends to continue only non-lethal aspects of its programme, involving activities which the Scientific Committee and the Commission had encouraged in the past;

Now THEREFORE the Commission:

INVITES the Government of Iceland to reconsider the proposed take of fin whales in 1989 under Special Permit, in the light of the criteria specified in the 1986 Resolution on Special Permits for Scientific Research and the 1987 Resolution on Scientific Research Programmes and the comments of the Scientific Committee.

**Annex 15: Resolution on Norwegian Proposal for Special Permits, Appendix 2,
Chairman's Report of the Forty-First Annual Meeting, *Rep. int.*
Whal. Commn 40, 1990, 36**

**1989-Appendix 2
Resolution on Norwegian Proposal for Special Permits**

WHEREAS the International Whaling Commission adopted in 1988 a Resolution on Norwegian Proposal for Special Permits (*Rep. in Whal. Commn* 39: 30);

WHEREAS the Commission has considered the Report of the Scientific Committee (IWC/41/4) concerning the research programmes to be conducted under Special Permits;

WHEREAS the Commission appreciates the effort by Norway in research on whales and investigation of their habitat which do not involve the taking of whales; and also the contribution to the Comprehensive Assessment through sightings surveys which have provided and will continue to provide important information on the distribution and abundance of minke and other whales in the North Atlantic;

WHEREAS the Commission takes cognizance of Article VIII of the International Convention for the Regulation of Whaling, under which the granting by any Contracting Government to its nationals of a Special Permit authorising the killing, taking, or treatment of whales for purposes of scientific research remains the responsibility of each Contracting Government, exercising its sovereign rights in respect of maritime areas under its jurisdiction and freedom of the high seas;

Now, THEREFORE the Commission

RECOGNISING that the scientific view is not unanimous; but

TAKING INTO ACCOUNT the comments of the Scientific Committee (IWC/41/4);

CONSIDERS that the proposed take of minke whales in the North Atlantic under the research programme described in SC/41/NHM/12 does not satisfy all the criteria specified in both the 1986 Resolution on Special Permits for Scientific Research and the 1987 Resolution on Scientific Research Programmes, particularly in that the proposed research is not adequately structured so as to contribute to or materially facilitate the Comprehensive Assessment; neither has it been established that the proposed research addresses critically important research needs;

and accordingly INVITES the Government of Norway to reconsider the proposed take of minke whales in 1989 under Special Permit.

Annex 16: Resolution on the Proposed Take by Japan of Whales in the Southern Hemisphere under Special Permit, Appendix 3, Chairman's Report of the Forty-First Annual Meeting, *Rep. int. Whal. Commn* 40, 1990, 36

1989-Appendix 3
Resolution on the Proposed take by Japan of Whales in
the Southern Hemisphere under Special Permit

WHEREAS the Commission in 1987 adopted a resolution recommending that the Government of Japan refrain from issuing special permits for the taking of whales under the programme until such time as the serious uncertainties identified in the Report of the Scientific Committee (IWC/39/4 and Report of the Special Meeting Cambridge 1987) were resolved;

WHEREAS the Commission has considered the reports of the Scientific Committee (IWC/39/4, Report of Special Meeting Cambridge 1987, IWC/40/4 and IWC/41/4) concerning the research described in SC/39/O 4, including the improvements specified in SC/41/SHM113, to be conducted under Special Permits;

WHEREAS the Commission recognises the important contribution of the Government of Japan to the development of non-lethal whale population assessment methods especially through sightings surveys conducted under the IWC/IDCR programme of Southern Hemisphere Minke Whale Assessment Cruises during the last decade;

WHEREAS the Commission takes cognizance of Article VIII of the International Convention for the Regulation of Whaling, under which the granting by any Contracting Government to its nationals of a Special Permit authorising the killing, taking, or treatment of whales for purposes of scientific research remains the responsibility of each Contracting Government, exercising its sovereign rights in respect of maritime areas under its jurisdiction and freedom of the high seas;

Now, THEREFORE the Commission

ACCEPTING that the Scientific Committee was not unanimous in its view of the research programme described in SC/39/O 4, including the improvements described in SC/41/SHM113 (IWC/41/4);

CONSIDERS that the programme does not fully satisfy the criteria specified in both the 1986 Resolution on Special Permits for Scientific Research and the 1987 Resolution on Scientific Research Programmes, more particularly in that the proposed research is not structured to provide or demonstrate that any existing methodology can solve the problems or satisfy the objectives which have been set, and therefore the proposed research does not contribute information essential for rational management of the stock, neither will the proposed take of minke whales in the Southern Hemisphere in 1989/90 under Special Permit materially facilitate the Comprehensive Assessment, nor has it been established that the proposed research addresses critically important research needs;

INVITES the Government of Japan to reconsider its research programme in light of the criticisms based on the above-mentioned criteria.

**Annex 17: Resolution on Norwegian Proposal for Special Permits, Appendix 1,
Chairman's Report of the Forty-Second Meeting, *Rep. int.*
Whal. Commn 41, 1991, 47**

**1990-Appendix 1
Resolution on Norwegian Proposal for Special Permits**

WHEREAS the International Whaling Commission adopted in 1988 and 1989 Resolutions on the Norwegian Proposals for Special Permits (*Rep. int. Whal. Commn* 39, 30 and 40: 36),

WHEREAS the Commission has considered the Report of the Scientific Committee (IWC/42/4) concerning the research programmes to be conducted under Special Permits; and notes that the Scientific Committee this year confined its comments to new points raised, while referring the Commission to its detailed discussion on the Norwegian Special Permit proposal at its 41st Annual Meeting;

WHEREAS the Commission appreciates the effort by Norway in research on whales and investigation of their habitat which do not involve the taking of whales; and particularly appreciates the essential contribution to the Comprehensive Assessment provided by the sightings surveys conducted by Norway in 1989;

WHEREAS the Commission takes cognizance of Article VIII of the International Convention for the Regulation of Whaling, under which the granting by any Contracting Government to its nationals of a Special Permit authorising the killing, taking, or treatment of whales for purposes of scientific research remains the responsibility of each Contracting Government, exercising its sovereign rights in respect of maritime areas under its jurisdiction and freedom of the high seas;

WHEREAS the proposed take in 1990 described in SC/42/NHMi20 is to be limited to five whales, and, according to the Report of the Scientific Committee, is planned mainly to complete studies conducted in 1988-89;

Now, THEREFORE the Commission

CONSIDERS; taking into account the comments of the Scientific Committee (IWC/41/4 and IWC/42/4); that the proposed take of minke whales in the North Atlantic under the research programme described in SC/41/NHMi12 and SC/42/NHMi20 does not satisfy all the criteria specified in both the 1986 Resolution on Special Permits for Scientific Research and the 1987 Resolution on Scientific Research Programmes, particularly in that the proposed research is not adequately structured so as to contribute to or materially facilitate the completion of the Comprehensive Assessment; neither has it been established that the proposed research addresses critically important research needs.

INVITES the Government of Norway to reconsider the proposed take of minke whales in 1990 under special permit, in the light of the above conclusions.

Annex 18: Resolution on Special Permit Catches by Japan in the Southern Hemisphere, Appendix 2, Chairman's Report of the Forty-Second Meeting, *Rep. int. Whal. Commn* 41, 1991, 47-48

1990-Appendix 2
Resolution on Special Permit Catches by Japan in the Southern Hemisphere

WHEREAS the Commission has considered the Report of the Scientific Committee IWC/42/4 concerning the results of the Japanese catches of minke whales in the Southern Hemisphere described in SC/42/SHM/28, the proposed catch in 1990/91 described in SC/42/SHM/9, and the responses in SC/42/SHM/9 of the Government of Japan to earlier criticisms of the research program arising in the Scientific Committee's reports (IWC/39/4, Report of Special Meeting Cambridge 1987, IWC/40/4 and IWC/41/4);

WHEREAS the Commission recognises the important contribution of the Government of Japan to the development of non-lethal whale population assessment methods especially through sightings surveys conducted under the IWC/IDCR programme of Southern Hemisphere Minke Whale Assessment Cruises; and that the Government of Japan, through its various modifications to the original research programme, including those outlined in SC/42/SHM/9, has attempted to address the concerns expressed by the Scientific Committee in its reports;

NOTING that the Scientific Committee was not unanimous, it indicated in its report it could not identify changes in the programme which negate criticisms arising from the previous reports of the Scientific Committee;

WHEREAS the Commission takes cognisance of Article VIII of the International Convention for the Regulation of Whaling, under which the granting by any Contracting Government to its nationals of a special permit authorising the killing, taking or treatment of whales for purposes of scientific research remains the responsibility of each Contracting Government, exercising its sovereign rights in respect of maritime areas under its jurisdiction and freedom of the high seas;

Now, THEREFORE, the Commission

CONSIDERS, taking into account the comments of the Scientific Committee; that the proposed take of minke whales in the Southern Hemisphere described in SC/42/SHM/9 does not fully satisfy the criteria specified in both the 1986 Resolution on Special Permits for Scientific Research and the 1987 Resolution on Scientific Research Programmes in that the proposed research is not structured so as to contribute information essential to the rational management of these stocks, though the research addresses some of the general research needs;

INVITES the Government of Japan to reconsider the proposed research under special permit in 1990/91 in the light of the above.

Annex 19: Resolution on Special Permit Catches by Japan in the Southern Hemisphere, Appendix 2, Chairman's Report of the Forty-Third Meeting, *Rep. int. Whal. Commn* 42, 1992, 46

**1991-Appendix 2
Resolution on Special Permit Catches by Japan
in the Southern Hemisphere**

WHEREAS the Commission has considered the Report of the Scientific Committee IWC/43/4 concerning the results of the Japanese catches of minke whales in the Southern Hemisphere described in SC/43/Mi11, the proposed catch in 1991/92 described in SC/43/Mi19, and the responses in SC/42/SHMi9 and SC/43/Mi19 of the Government of Japan to earlier criticisms of the research programme arising in the Scientific Committee's reports (IWC/39/4, Report of Special Meeting Cambridge 1987, IWC/40/4, IWC/41/4, IWC/42/4);

WHEREAS the Commission has encouraged Contracting Governments to base their research programmes to the maximum extent possible on non-lethal methods (*Rep. int. Whal. Commn* 42: 70) and the Government of Japan has made important contributions to the development of non-lethal whale population assessment methods especially through sightings surveys conducted under the IWC/IDCR programme of Southern Hemisphere Minke Whale Assessment Cruises;

WHEREAS the Government of Japan, through its various modifications to the original research programme, including those outlined in SC/43/Mi19, has attempted to address the concerns expressed by the Scientific Committee in its earlier reports;

WHEREAS the Commission takes cognizance of Article VIII of the International Convention for the Regulation of Whaling, under which the granting by any Contracting Government to its nationals of a Special Permit authorising the killing, taking, or treatment of whales for purposes of scientific research remains the responsibility of each Contracting Government, exercising its sovereign rights in respect of maritime areas under its jurisdiction and freedom of the high seas;

Now, THEREFORE, the Commission

CONSIDERS; taking into account the comments of the Scientific Committee; that the proposed take of minke whales in the Southern Hemisphere described in SC/43/Mi19 does not fully satisfy the criteria specified in both the 1986 Resolution on Special Permits for Scientific Research and the 1987 Resolution on Scientific Research Programmes in that the proposed research is not structured so as to contribute information presently required for the management of these stocks, though it addresses general research needs;

INVITES the Government of Japan to reconsider the proposed research under special permit in 1991/92 in the light of the above.

Annex 20: Resolution on USSR Proposal for Special Permit Catches in the North Pacific, Appendix 3, Chairman's Report of the Forty-Third Meeting, *Rep. int. Whal. Commn* 42, 1992, 47

**1991-Appendix 3
Resolution on USSR Proposal for Special Permit
Catches in the North Pacific**

WHEREAS the International Whaling Commission adopted in 1986 a Resolution on Special Permits for Scientific Research (*Rep. int. Whal. Commn* 37: 25) and in 1987 a Resolution on Scientific Research Programmes (*Rep. int. Whal. Commn* 38: 27),

WHEREAS the Commission takes cognizance of Article VIII of the International Convention for the Regulation of Whaling, under which the granting by any Contracting Government to its nationals of a special permit authorising the killing, taking or treatment of whales for purposes of scientific research remains the responsibility of each Contracting Government, exercising its sovereign rights in respect of maritime areas under its jurisdiction and freedom of the high seas;

WHEREAS an assessment of the Western North Pacific stock of minke whales under the Comprehensive Assessment has been undertaken at the 1991 meeting of the Scientific Committee which showed that whales from a Protected Stock, the Sea of Japan, Yellow Sea, East China Sea minke whale stock, might be taken in the Okhotsk sea;

WHEREAS Article VIII of the Convention requires *inter alia* a Contracting Government to report at once to the Commission authorisations of special permits it has granted;

Now, THEREFORE, the Commission

CONSIDERS, taking into account the comments of the Scientific Committee, that the proposed kill of minke whales in the North Pacific described in SC/43/O11 does not satisfy the criteria specified in both the 1986 Resolution on Special Permits for Scientific Research and the 1987 Resolution on Scientific Research Programmes in that the proposed research is not structured so as to contribute information essential to the rational management of these stocks and that it has not been established that the research addresses important research needs;

REQUESTS the Government of the Union of Soviet Socialist Republics to refrain from proceeding with the proposed kill of minke whales until the proposed research programme is revised in accordance with the criteria specified in the 1986 and 1987 resolutions and the Scientific Committee and Commission have concluded a review of the programme as revised.

Annex 21: Resolution on Special Permit Catches by Japan in the Southern Hemisphere, Appendix 7, Chairman's Report of the Forty-Fifth Annual Meeting, *Rep. int. Whal. Commn* 44, 1994, 33

1993-Appendix 7

Resolution on Special Permit Catches by Japan in the Southern Hemisphere

WHEREAS the Commission has considered the Report of the Scientific Committee IWC/44/4 concerning the results of the Japanese catches on minke whales in the Southern Hemisphere described in SC/45/SHBa11, 12, 13, 14 and 15, the proposed catch in 1992/93 described in SC/44/SHB14, and the responses of the Government of Japan to earlier criticisms of the research programme arising in the Scientific Committee's reports (IWC/39/4; Report of Special Meeting, Cambridge 1987, IWC/40/4, IWC/41/4, IWC/42/4, IWC/43/4 and IWC/44/4);

WHEREAS the Commission has encouraged Contracting Governments to base their research programmes to the maximum extent possible on non-lethal methods (*Rep. int. Whal. Commn* 40; 70) and the Government of Japan has made important contributions to the development of non-lethal whale population assessment methods especially through sightings surveys conducted under the IWC/IDCR programme of Southern Hemisphere Minke Whale Assessment Cruises;

WHEREAS the Government of Japan, through its various modifications to the original research programme, including those outlined in SC/45/SHBa10 has attempted to address the concerns expressed by the Scientific Committee in its earlier reports;

WHEREAS the Commission takes cognizance of Article VIII of the International Convention for the Regulation of Whaling, under which the granting by any Contracting Government to its nationals of a Special Permit authorising the killing, taking, or treatment of whales for purposes of scientific research remains the responsibility of each Contracting Government, exercising its sovereign rights in respect of maritime areas under its jurisdiction and freedom of the high seas;

Now, THEREFORE, the Commission

CONSIDERS: taking into account the comments of the Scientific Committee: that the proposed take of minke whales in the Southern Hemisphere described in SC/44/SHB14 does not fully satisfy the criteria specified in both the 1986 Resolution on Special Permits for Scientific Research and the 1987 Resolution on Scientific Research Programmes in that the proposed research is not structured so as to contribute information presently required for the management of whaling in these areas on this species, though it addresses certain research needs;

INVITES the Government of Japan to reconsider the proposed research under special permit in 1993/94 in the light of the above.

Annex 22: Resolution on Norwegian Proposal for Special Permits, Appendix 8,
Chairman's Report of the Forty-Fifth Annual Meeting, *Rep. int.*
Whal. Commn 44, 1994, 33

1993-Appendix 8
Resolution on Norwegian Proposal for Special Permits

WHEREAS the Commission takes cognizance of Article VIII of the International Convention for the Regulation of Whaling, under which the granting by any Contracting Government to its nationals of a Special Permit authorising the killing, taking, or treatment of whales for purposes of scientific research remains the responsibility of each Contracting Government, exercising its sovereign rights in respect of maritime areas under its jurisdiction and freedom of the high seas;

WHEREAS the Commission notes the past efforts by Norway in research on whales and investigation of their habitat which do not involve the taking of whales;

Now, THEREFORE, the Commission

CONSIDERS, taking into account the comments of the Scientific Committee (IWC/45/4) that the proposed take of 382 minke whales in the North Atlantic in 1992-94 under the research programme described in SC/44/NHB18 and SC/45/NA5 does not satisfy all the criteria specified in both the 1986 Resolution on Special Permits for Scientific Research and the 1987 Resolution on Scientific Research Programmes, particularly in that the proposed research is not adequately structured so as to contribute to or materially facilitate the completion of the Comprehensive Assessment; neither has it been established that the proposed research addresses critically important research needs.

INVITES the Government of Norway to reconsider the proposed take of minke whales in 1993 and 1994 under special permit, in the light of the above conclusions.

Annex 23: Resolution on Scientific Permits, Resolution 1994-8, Appendix 15,
Chairman's Report of the Forty-Sixth Annual Meeting, *Rep. int.*
Whal. Commn 45, 1995, 46-47

IWC Resolution 1994-8
Resolution on Scientific Permits

RECALLING that the Scientific Committee is charged with the task of reviewing the performance of scientific research programmes;

NOTING that the research programme to clarify the stock structure of minke whales in the northwestern Pacific (SC/46/NP1) has been reviewed by the Scientific Committee;

NOTING FURTHER that the full Scientific Committee agreed that all relevant guidelines concerning the proposal, its objectives and research cooperation have been met and that some questions were raised whether the methodology of the programmes was in accordance with the relevant guidelines (IWC/46/4);

NOW THEREFORE,

The Commission ENDORSES the review of the Scientific Committee of the research programme to clarify the stock structure of minke whales in the northwestern Pacific.

Annex 24: Resolution on Special Permit Catches by Japan in the North Pacific, Resolution 1994-9, Appendix 15, Chairman's Report of the Forty-Sixth Annual Meeting, *Rep. int. Whal. Commn* 45, 1995, 47

**IWC Resolution 1994-9
Resolution on Special Permit Catches by Japan
in the North Pacific**

WHEREAS the Commission has encouraged Contracting Governments to base their research programmes to the maximum extent possible on non-lethal methods (*Rep. Int. Whal. Commn* 40:70);

WHEREAS the Commission recognises the past efforts by Japan in research on whales in the North Pacific, which do not involve the taking of whales;

WHEREAS the Commission has considered the Report of the Scientific Committee IWC/46/4 concerning the proposed catch of minke whales described in SC/46/NP1;

WHEREAS the Commission acknowledges that the Scientific Committee has agreed that the objectives of the research proposal directly address questions of scientific interest; and at the same time the Commission notes that these questions could also be addressed by non-lethal methods using biopsy sampling and DNA-analyses;

WHEREAS the Commission takes cognizance of Article VIII of the International Convention for the Regulation of Whaling, under which the granting by any Contracting Government to its nationals of a Special Permit authorising the killing, taking or treatment of whales for purposes of scientific research remains the responsibility of each Contracting Government, exercising its sovereign rights in respect of maritime areas under its jurisdiction and freedom of the high seas;

Now, THEREFORE, the Commission

CONSIDERS, taking into account the comments in the Report of the Scientific Committee (IWC/46/4), that the proposed kill of minke whales in the North Pacific described in SC/46/NP1 does not fully satisfy the criteria specified in both the 1986 Resolution on Special Permits for Scientific Research and the 1987 Resolution on Scientific Research Programmes;

RECOMMENDS the Government of Japan to restructure its research programme concerning minke whales in the North Pacific in such a manner that the research interests are adequately addressed with non-lethal methods;

INVITES the Government of JAPAN to reconsider the proposed research take of minke whales in the North Pacific under special permit in 1994 in the light of the above;

Annex 25: Resolution on Special Permit Catches by Japan in the Southern Hemisphere, Resolution 1994-10, Appendix 15, Chairman's Report of the Forty-Sixth Annual Meeting, *Rep. int. Whal. Commn* 45, 1995, 47

**IWC Resolution 1994-10
Resolution on Special Permit Catches by Japan
in the Southern Hemisphere**

WHEREAS the Commission has considered the Report of the Scientific Committee IWC/46/4 concerning the results of the Japanese catches of minke whales in the Southern Hemisphere described in SC/46/SH11, 12, 13, 14, 15, 20 and O24, the proposed catch in 1994/95 described in SC/42/SH16, and the responses of the Government of Japan to earlier criticisms of the research programme arising in the Scientific Committee's reports (IWC/39/4; Report of Special Meeting Cambridge 1987, IWC/40/4 and IWC/41/4, IWC/42/4, IWC/43/4 and IWC/44/4);

WHEREAS the Commission has encouraged Contracting Governments to base their research programmes to the maximum extent possible on non-lethal methods (*Rep. int. Whal. Commn* 40:70) and the Government of Japan has made important contributions to the development of non-lethal whale population assessments methods, especially under the IWC/IDCR programme of Southern Hemisphere Minke Whale Assessment Cruises;

WHEREAS the Government of Japan, through its various modifications to the original research programme, including those outlined in SC/46/SH16 has attempted to address the concerns expressed by the Scientific Committee in its earlier reports;

WHEREAS Japan has not provided any information which adequately addresses the concerns expressed in the Scientific Committee on the ability to estimate the age-specific mortality of Southern Hemisphere minke whales;

WHEREAS the Commission takes cognizance of Article VIII of the International Convention for the Regulation of Whaling, under which the granting by any Contracting Government to its nationals of a Special Permit authorising the killing, taking or treatment of whales for purposes of scientific research remains the responsibility of each Contracting Government, exercising its sovereign rights in respect of maritime areas under its jurisdiction and freedom of the high seas;

Now, THEREFORE, the Commission

CONSIDERS; taking into account the comments of the Scientific Committee; that the proposed kill of minke whales in the Southern Hemisphere described in SC/46/SH16 does not fully satisfy the criteria specified in both the 1986 Resolution on Special Permits for Scientific Research and the 1987 Resolution on Scientific Research Programmes in that the proposed research is not structured so as to contribute information presently required for the management of whaling in these areas for this species, though it addresses certain research interests;

RECALLS that each of its previous resolutions on the catches under Special Permit under this research programme, which have expressed similar conclusions, has not produced the required restructuring of the scientific research programme;

INVITES the Government of Japan to reconsider the proposed research take of minke whales under special permit in 1994/95 in the light of the above;

RECOMMENDS the Government of Japan to restructure its research programme concerning minke whales in the Southern Hemisphere in such a manner that the research interests can be adequately addressed with non-lethal methods.

Annex 26: Resolution on Special Permit Catches by Norway, Resolution 1994-11, Appendix 15, Chairman's Report of the Forty-Sixth Annual Meeting, *Rep. int. Whal. Commn* 45, 1995, 48

**IWC Resolution 1994-11
Resolution on Special Permit Catches by Norway**

WHEREAS the Commission adopted a Resolution on a Norwegian proposal for special permits in 1993, inviting the Government of Norway to reconsider its proposed take of minke whales in 1993 and 1994 under special permit (*Rep.int.Whal.Commn* 44, *Appendix* 8);

WHEREAS the Commission has considered the Report of the Scientific Committee IWC/46/4 concerning the results of the Norwegian catches of minke whales in the North Atlantic described in SC/46/NA2 and 3, and the proposed catch in 1994 described in SC/46/NA3;

WHEREAS the Commission recognises the past efforts by Norway in research on whales and investigation of their habitat which do not involve the taking of whales;

WHEREAS the Commission takes cognizance of Article VIII of the International Convention for the Regulation of Whaling, under which the granting by any Contracting Government to its nationals of a Special Permit authorising the killing, taking or treatment of whales for purposes of scientific research remains the responsibility of each Contracting Government, exercising its sovereign rights in respect of maritime areas under its jurisdiction and freedom of the high seas;

Now, THEREFORE, the Commission

CONSIDERS, taking into account the comments of the Scientific Committee (IWC/45/4 and IWC/46/4), that the proposed kill of minke whales in the North Atlantic described in SC/46/NA3 and SC/46/NA5 does not fully satisfy the criteria specified in both the 1986 Resolution on Special Permits for Scientific Research and the 1987 Resolution on Scientific Research Programmes, in that the proposed research is not structured so as to contribute information presently required for the management of whaling in these areas for this species;

REITERATES its invitation to the Government of Norway to reconsider the proposed research take of minke whales under special permit in 1994 in the light of the above;

WELCOMES the decision of the Government of Norway not to issue special permits in 1995 and expresses its strong hope that it will be possible for Norway to continue its research programme through non-lethal methods.

Annex 27: Resolution on Whaling under Special Permit in Sanctuaries, Resolution 1995-8, Chairman's Report of the Forty-Seventh Annual Meeting, *Rep. int. Whal. Commn* 46, 1996, 46

**IWC Resolution 1995-8
Resolution on Whaling under Special Permit in Sanctuaries**

WHEREAS the International Convention for the Regulation of Whaling recognises the interests of the nations of the world in safeguarding for the future generations the great natural resources of the whale stocks;

WHEREAS the Commission has established, in paragraphs 7a and 7b of the Schedule, sanctuaries in the Indian and Southern Oceans in which commercial whaling is prohibited;

WHEREAS Article VIII of the Convention provides that Contracting Governments may grant to any of their nationals a special permit authorising those nationals to kill, take and treat whales for purposes of scientific research, and that such killing, taking and treating of whales shall be exempt from the operation of the Convention;

WHEREAS Contracting Governments should nevertheless respect fully the wish of the Commission to ensure the conservation of whales in sanctuaries designated by the Commission;

NOW THEREFORE the Commission:

CONSIDERS that Contracting Governments should undertake, and collaborate in, the conduct of a programme of research in the Southern Ocean Sanctuary using non-lethal methods and, in the exercise of their sovereign rights, refrain from issuing Special Permits for research involving the killing of cetaceans in such sanctuaries.

Annex 28: Resolution on Special Permit Catches by Japan, Resolution 1996-7, Appendix 7, Chairman's Report of the Forty-Eighth Annual Meeting, *Rep. int. Whal. Commn* 47, 1997, 51-52

**IWC Resolution 1996-7
Resolution on Special Permit Catches by Japan**

WHEREAS Article VIII of the Convention provides for the issuing by Contracting Governments of a special permit for scientific research;

WHEREAS paragraph 7(b) of the Schedule establishes a sanctuary in the Southern Ocean;

RECALLING IWC Resolution 1995-8 in which the Commission considered that research in the Southern Ocean Sanctuary should be undertaken using non-lethal means and requested Contracting Parties to refrain from issuing special permits for research involving the killing of cetaceans in such sanctuaries;

FURTHER RECALLING IWC Resolution 1995-9 on Whaling under Special Permit which establishes criteria against which the Scientific Committee should assess and provide advice on special permit research programmes and recommends that Contracting Governments refrain from issuing or revoke any permits that do not satisfy the criteria so specified;

NOTING nevertheless that the Government of Japan continues to issue special permits involving the killing of cetaceans and that the number of whales killed under special permit has increased substantially to 440 Southern Hemisphere minke whales and 100 North Pacific minke whales in the 1995-96 season;

NOTING FURTHER that the Government of Japan proposes as part of its 1996-97 research programme to issue special permits to take up to 440 Southern Hemisphere minke whales and 100 North Pacific minke whales;

NOTING ALSO that the JARPA programme is to be reviewed by the Scientific Committee;

NOW THEREFORE the Commission:

CONSIDERS that neither proposal for special permit has been found to meet the criteria for such permits established under IWC Resolution 1995-9;

REAFFIRMS that Contracting Governments should refrain from issuing special permits for research involving the killing of cetaceans in sanctuaries and expresses its deep concern at Japan's continuing proposal to conduct lethal research within the Southern Ocean Sanctuary;

REQUESTS that the Government of Japan, in the exercise of its sovereign rights, refrain from issuing a special permit for the take of Southern Hemisphere minke whales, particularly in the Southern Ocean Sanctuary and refrain also from issuing a special permit to take minke whales in the North Pacific;

FURTHER REQUESTS that the Government of Japan reconsider and restructures its research programmes so that research objectives are achieved by the use of non-lethal means.

Annex 29: Resolution on Special Permit Catches in the Southern Ocean by Japan, Resolution 1997-5, Appendix 5, Chairman's Report of the Forty-Ninth Annual Meeting, *Rep. int. Whal. Commn* 48, 1998, 47

**IWC Resolution 1997-5
Resolution on Special Permit Catches in the Southern Ocean by Japan**

WHEREAS Article VIII of the Convention provides for the issuing by Contracting Governments of a special permit for scientific research;

WHEREAS paragraph 7(b) of the Schedule establishes a sanctuary in the Southern Ocean;

WHEREAS the Commission requested Contracting Parties to refrain from issuing special permits for research involving the killing of whales within the Southern Ocean Sanctuary, and expressed deep concern at Japan's continuing lethal research within the Southern Ocean Sanctuary; and recommended that scientific research involving the killing of cetaceans should only be permitted where critically important research needs are addressed which cannot be answered by analysing existing data and/or use of non-lethal techniques; furthermore requested the Government of Japan to reconsider and restructure its research programmes so that the research objectives are achieved by non-lethal means (*IWC Resolutions 1995-8, 1995-9 and 1996-7*);

WHEREAS the Government of Japan nevertheless continues to issue special permits involving the killing of cetaceans and the number of whales killed each year under special permit in the Southern Ocean, after a substantial increase in 1995/96, has remained at that increased level of 440 minke whales.

WHEREAS the Scientific Committee this year undertook a comprehensive review of the Japanese research programme (JARPA) in the Southern Ocean, which is reported in SC/49/Rep1;

WHEREAS the Scientific Committee notes (IWC/49/4) that the results of the JARPA programme are not required for management;

WHEREAS the Scientific Committee also notes that these results have the potential to improve management in some ways, and that the results of analyses of JARPA data could thus be used to increase catch limits of minke whales in the Southern Hemisphere without increasing the depletion risk indicated by the RMP-trials for these minke whales;

NOW THEREFORE THE COMMISSION

AFFIRMS that the JARPA programme does not address critically important research needs for the management of whaling in the Southern Ocean;

REAFFIRMS that Contracting Governments should refrain from issuing special permits for research involving the killing of cetaceans in sanctuaries;

REITERATES ITS DEEP CONCERN at Japan's continuing scientific programme involving the taking of whales in the Southern Ocean Sanctuary;

STRONGLY URGES that the Government of Japan, in the exercise of its sovereign rights, refrain from issuing any further special permit for the take of any whales, particularly in the Southern Ocean Sanctuary;

INSTRUCTS the Scientific Committee not to consider Southern Hemisphere minke whales in the context of implementation of the RMP unless advised to do so by the Commission.

Annex 30: Resolution on Special Permit Catches in the North Pacific by Japan, Resolution 1997-6, Appendix 6, Chairman's Report of the Forty-Ninth Annual Meeting, *Rep. int. Whal. Commn* 48, 1998, 48

IWC Resolution 1997-6
Resolution on Special Permit Catches in the North Pacific by Japan

WHEREAS Article VIII of the Convention provides for the issuing by Contracting Governments of a special permit for scientific research;

WHEREAS the Commission requested Japan to refrain from issuing a special permit to take minke whales in the North Pacific; and recommended that scientific research intended to assist the comprehensive assessment of whale stocks and the implementation of the Revised Management Procedure shall be undertaken by non-lethal means; and recommended that scientific research involving the killing of cetaceans should only be permitted where critically important research needs are addressed which cannot be answered by analysing existing data and/or use of non-lethal techniques; furthermore requested the Government of Japan to reconsider and restructure its research programmes so that the research objectives are achieved by non-lethal means (*IWC Resolutions 1995-9 and 1996-7*);

WHEREAS the Government of Japan nevertheless continues to issue a special permit involving the killing of minke whales in the North Pacific;

NOW THEREFORE THE COMMISSION

AFFIRMS that the proposal for a special permit in the North Pacific does not address critically important issues which cannot be answered by the analysis of existing data and/or use of non-lethal techniques as established under IWC Resolution 1995-9;

REITERATES ITS REQUEST that the Government of Japan, in the exercise of its sovereign rights, refrain from issuing any further special permit for the take of minke whales in the North Pacific;

REITERATES ITS REQUEST that the Government of Japan reconsider and restructure its research programmes so that research objectives are achieved by the use of non-lethal techniques.

Annex 31: Resolution on Whaling under Special Permit, Resolution 1998-4, Appendix 4, Chairman's Report of the Fiftieth Annual Meeting, *Annual Report of the International Whaling Commission 1998*, 43

**IWC Resolution 1998-4
Resolution on Whaling Under Special Permit**

WHEREAS Article VIII of the Convention provides for the issuing by Contracting Governments of special permits for scientific research and paragraph 7 (b) of the Schedule establishes a sanctuary in the Southern Ocean;

RECALLING previous resolutions on whaling under special permits adopted by the Commission (1995-9, 1996-7 and 1997-5), relating to lethal scientific research in the Southern Ocean and the North Pacific Ocean;

NOTING that in 1997 the Commission affirmed that the JARPA and JARPN programmes did not address critically important research needs for the management of whaling in the Southern Ocean and the North Pacific Ocean;

NOW, THEREFORE, THE COMMISSION:

REGRETS that despite multiple IWC resolutions affirming that these lethal research programmes did not address critically important research needs, the Government of Japan continues the programmes of lethal research, particularly in the Southern Ocean Sanctuary.

DIRECTS the Scientific Committee, with respect to all special permit research programmes, to continue to identify non-lethal methods and alternative sources of data that might be used in meeting the stated research objectives;

INSTRUCTS the Secretary to notify the Contracting Government concerned if a continuing or proposed special permit research programme does not meet critically important research needs, as determined by the Commission in the above resolutions;

NOTES the grave concerns of eminent members of the international scientific community over the continuation of lethal whale research programmes which were specified in a letter, (IWC/50/17) of 23 January 1998, to the Chairman of the Commission, in particular, "that moral and ethical issues are properly raised when:

A single research programme results in over 2,500 cetaceans being killed over 8 years, with the prospect of another 8 years to come; and

Whale meat and other whale products resulting from lethal scientific whaling are being sold in commercial markets, while a moratorium on commercial whaling remains in force."

REQUESTS that the Secretariat undertake, for the next Annual Meeting of the International Whaling Commission, a comprehensive review of the ethical considerations taken into account by other international scientific organizations with respect to scientific research;

RECOMMENDS that, if whales are killed under the provisions of Article VIII of the Convention, this should be done in a manner consistent with the provisions of Section III of the Schedule;

REAFFIRMS its previous request that the Government of Japan refrain from issuing any further permits for the take of minke whales in the Southern Ocean Whale Sanctuary and the North Pacific Ocean.

Annex 32: Resolution on Whaling under Special Permit, Resolution 1999-3,
Appendix 4, Chairman's Report of the Fifty-First Annual Meeting,
Annual Report of the International Whaling Commission 1999, 52-53

IWC Resolution 1999-3
Resolution on whaling under Special Permit

NOTING that since IWC 50 in May 1998, the Government of Japan has issued new Special Permits under the provisions of Article VIII of the Convention for scientific research in the Southern Ocean Whale Sanctuary and the North Pacific Ocean;

NOTING also that information provided to the Whale Killing Workshop in May 1999 indicates that only 30% of whales are killed instantaneously in the JARPA and JARPN programmes;

FURTHER NOTING that the review of ethical considerations with respect to scientific research, prepared by the Secretary of the IWC in 1999, concludes that "the broad sense of the legislation, guidelines and codes of conduct which exist emphasise causing the minimum of stress and distress, suffering and pain, and at the same time considering if the research results can be achieved using fewer animals or by other (non-lethal) means."

RECALLING that grave concerns have been expressed by eminent members of the international scientific community and many others over the continuation of lethal whale research programmes, especially in areas designated as Sanctuaries in paragraph 7 of the Schedule;

NOW THEREFORE THE COMMISSION:

REQUESTS that the Government of Japan refrain from issuing any permits in the 1999/2000 seasons for the take of minke whales in the Southern Ocean Whale Sanctuary and the North Pacific Ocean.

Annex 33: Resolution on Whaling under Special Permit in the Southern Ocean Sanctuary, Resolution 2000-4, Appendix 1, Chairman's Report of the Fifty-Second Annual Meeting, *Annual Report of the International Whaling Commission 2000*, 56

IWC Resolution 2000-4
Resolution on whaling under Special Permit in the Southern Ocean Sanctuary

NOTING that since the 51st meeting in May 1999, the Government of Japan has issued special permits, under the provisions of Article VIII of the Convention, for lethal scientific research on minke whales in the Southern Ocean Sanctuary

NOTING also that the Scientific Committee this year considered all estimates of Southern Hemisphere minke whale population sizes which have been made available since 1990, and concluded that these estimates were "appreciably lower" than the estimate of 760,000 accepted by the Scientific Committee in 1990.

NOTING further that the Scientific Committee this year recommends that "minke whale" should be listed as two species in Section 1 of the Schedule to the Convention.

RECOGNISING that the Commission has agreed on the urgent need for the Scientific Committee to proceed with the planned review of the estimates of population sizes of minke whales, including development of agreed estimates, prior to seeking advice from the Commission on how to assess the impacts of JARPA on these stocks

NOW THEREFORE THE COMMISSION REQUESTS that the Government of Japan refrains from issuing any Special Permits for the 2000/2001 season for the take of minke whales in the Southern Ocean Sanctuary.

Annex 34: Resolution on Whaling under Special Permit in the North Pacific Ocean, Resolution 2000-5, Appendix 1, Chairman's Report of the Fifty-Second Annual Meeting, *Annual Report of the International Whaling Commission 2000*, 56

IWC Resolution 2000-5
Resolution on Whaling under Special Permit In The North Pacific Ocean

WHEREAS Paragraph 1 of Article VIII of the International Convention for the Regulation of Whaling (Convention) provides that, notwithstanding anything contained in the Convention, any Contracting Government may grant to any of its nationals a Special Permit (Special Permit) authorising that national to kill, take and treat whales for the purposes of scientific research, subject to such other conditions as the Government thinks fit;

RECALLING previous IWC Resolutions on whaling under Special Permit adopted by the Commission (1996-7, 1997-5, 1998-4, and 1999-3) and in particular Resolution 1995-9, in which the Commission recommended that scientific research involving the killing of cetaceans should only be permitted in exceptional circumstances where the questions address critically important issues which cannot be answered by the analysis of existing data and/or use of non-lethal research techniques;

RECALLING also that in 1997 the Commission affirmed that the JARPN programme did not address critically important research needs for the management of whaling in the North Pacific Ocean;

WHEREAS Paragraph 30 of the Schedule to the Convention provides that all proposed Special Permits be reviewed by the Scientific Committee, and that IWC Resolution 1999-2 specifically requested the Scientific Committee to provide advice on this to the Commission;

NOTING the Government of Japan's proposal to instigate in 2000 the JARPN II programme, under which takes of minke whales, and, for the first time, takes of sperm and Bryde's whales, would be authorized;

FURTHER NOTING the many major concerns expressed and not allayed during the 52nd meeting of the Scientific Committee, including (among others) concerns that the proposal did not address questions of high priority relevant to management, did not make full use of existing data, and revealed many methodological problems;

NOTING, in particular, that the Scientific Committee did not endorse the JARPN II proposal;

NOW THEREFORE THE COMMISSION:

AFFIRMS that gathering information on interactions between whales and prey species is not a critically important issue which justifies the killing of whales for research purposes;

PROPOSES that information on stock structure, which may be relevant to management, be obtained using non-lethal means;

STRONGLY URGES the Government of Japan to refrain from issuing special permits for whaling under JARPN II

Annex 35: Resolution on Southern Hemisphere Minke Whales and Special Permit Whaling, Resolution 2001-7, Annex C, Chair's Report of the Fifty-Third Annual Meeting, *Annual Report of the International Whaling Commission 2001*, 57

Resolution 2001-7

Resolution on Southern Hemisphere Minke Whales and Special Permit Whaling

RECOGNISING that the Southern Ocean Whale Sanctuary may provide a valuable precautionary measure against uncertainties in whale management in the Antarctic;

NOTING that the IDCR/SOWER cruises have been a major investment of the budget and time of the commission and the scientific committee for many years;

FURTHER NOTING that refinement of the experimental design for these cruises has been a continuous process throughout the past two decades;

RECALLING concerns expressed in Resolution 2000-4, regarding appreciably lower abundance estimates for Southern Hemisphere minke whales;

FURTHER RECALLING that IWC Scientific Committee agreed in 2000 that there was no agreed estimate for Southern Hemisphere minke whales;

NOTING that this year's Scientific Committee report provided a crude estimate of abundance for Southern Hemisphere minke whales which, although derived from an incomplete data set for the third circumpolar cruise, nevertheless suggests a substantially lower abundance estimate for Southern Hemisphere minke whales;

CONCERNED that the Scientific Committee report cannot rule out that the Southern Hemisphere minke whale population may have suffered a precipitous decline over the past decade;

NOW THEREFORE THE COMMISSION

COMMENDS the Scientific Committee's proposal to proceed with the completion of its review of minke whale abundance in the Southern Hemisphere;

ENDORSES the Scientific Committee's proposal to present at its 2003 meeting revised estimates of abundance and trends of Southern Hemisphere minke whales, using improved methodology developed during the course of the review, for the full three circumpolar sets of IDCR/SOWER surveys;

REQUESTS the Scientific Committee to provide to the Commission at IWC 54:

- (i) a list of plausible hypotheses that may explain this apparent population decline,
- (ii) the possible implications that such a decline in abundance may have for the management of minke whales in the Southern Hemisphere, and for ecologically-related species, in particular other cetaceans, and the state of the Antarctic marine ecosystem;

STRONGLY URGES the Government of Japan to halt the lethal takes of minke whales conducted under the JARPA programme, at least until the Scientific Committee has reported to the Commission on the impacts of the JARPA programme on the stocks of minke whales in Areas IV and V.

Annex 36: Resolution on Expansion of JARPN II Whaling in North Pacific, Resolution 2001-8, Annex C, Chair's Report of the Fifty-Third Annual Meeting, *Annual Report of the International Whaling Commission 2001*, 57

Resolution 2001-8
Resolution on Expansion of Jarpn Ii Whaling in North Pacific

Proposed by U.S.A., Australia, Germany, Italy, Monaco, Netherlands, New Zealand, Sweden and U.K.

WHEREAS Article VIII of the International Convention for the Regulation of Whaling provided that any Contracting Government may grant special permits authorising their nationals to kill whales for scientific purposes;

RECALLING that the Government of Japan started research whaling on minke whales in the North Pacific in 1994 and then expanded the program last year to include Bryde's and sperm whales, despite numerous concerns raised by the Scientific Committee and the Commission;

WHEREAS because of the timing of the Scientific Committee in 2002, the Committee will not be able to review and comment on any new JARPNII proposal before the start of scientific whaling next year;

NOTING the concern of many members of the Scientific Committee that the lack of any quantifiable objectives in JARPNII effectively means that no reasonable performance standard has been set with which to judge the success or failure of the feasibility phase of the research programme;

NOTING also that more than 600 whales have been killed in the North Pacific since the start of the program;

FURTHER NOTING that the data collected by lethal sampling of sperm, minke and Bryde's whales in JARPN II are not essential in the context of the RMP;

NOW THEREFORE THE COMMISSION:

AFFIRMS that data gathered under JARPN II on interactions between whales and prey species are not sufficient to justify the killing of these whales for research purposes;

PROPOSES that any information needed on stock structure can and should be obtained using non-lethal means;

STRONGLY URGES the Government of Japan for the reasons given above to refrain from issuing any special scientific permit for whaling under JARPN II. If the Government of Japan nevertheless considers issuing a permit in 2002, the Commission STRONGLY URGES that it not be issued until the end of July 2002, to give the Government of Japan adequate time to take into account the views of the Scientific Committee and the Commission.

Annex 37: The Berlin Initiative on Strengthening the Conservation Agenda of the International Whaling Commission, Resolution 2003-1, Annex C, Chair's Report of the Fifty-Fifth Annual Meeting, *Annual Report of the International Whaling Commission 2003*, 58

Resolution 2003-1
The Berlin Initiative on Strengthening the Conservation Agenda of the International Whaling Commission

WHEREAS the first objective of the International Convention for the Regulation of Whaling is "the interest of the nations of the world in safeguarding for future generations the great natural resources represented by the whale stocks";

MINDFUL that, given the depleted status of great whale populations at the inception of the IWC, and that during the last 25 years, the International Whaling Commission has devoted a overwhelming part of its work to the pursuit of that conservation objective;

NOTING that, through the adoption of more than a hundred conservation-oriented resolutions⁽¹⁾, as well as through various Schedule amendments, the Commission has evolved into an organization internationally recognized, among other things, for its meaningful contributions to the conservation of great whales; furthering that conservation work through those Resolutions and Schedule amendments, the Commission has gradually developed an extensive conservation-oriented agenda⁽²⁾;

NOTING that since the Convention came into force in 1948 several key conventions have been adopted which may affect great whales, including, *inter alia*, UNLOS, CITES, IOC, ICSU, the CBD, CMS, ACCOBAMS and ASCOBANS;

RECOGNIZING the various challenges referred to in previous Resolutions and Schedule Amendments, it is prudent for the Commission to effectively organize its future work in the pursuit of its objective by devising an appropriate agenda that places special emphasis on its benefits to conservation.

NOW THEREFORE THE COMMISSION:

WELCOMES initiatives to assess the achievements and orientation of the cumulative work of the Commission in the pursuit of its conservation objective;

ENDORSES the proposals made by various Contracting Governments to organize, on the basis of that assessment, the future Conservation Agenda of the Commission and to cooperate in its preparation;

DECIDES to establish a Conservation Committee of the Commission, composed of all Contracting Parties, in conformity with Article III paragraph 4 of the Convention;

DECIDES to entrust the Conservation Committee with:

- (1) The preparation and recommendation to the Commission of its future Conservation Agenda, taking full account of this Resolution;
- (2) The implementation of those items in the Agenda that the Commission may refer to it and
- (3) Making recommendations to the Commission in order to maintain and update the Conservation Agenda on a continuing basis.

INSTRUCTS the Conservation Committee to meet before the Commission's Annual Meeting in 2004, in order to organize its work, so that the Conservation Agenda can be considered for adoption by the Commission at that Annual Meeting.

DIRECTS the Conservation Committee to explore how the Commission can coordinate its conservation agenda through greater collaboration with a wider range of other organizations and conventions including *inter alia* CMS, CCAMLR, IMO, IUCN, and UNEP.

REQUESTS the Scientific Committee to advise the Conservation Committee in the performance of the tasks entrusted to it in this Resolution, and to ensure that the appropriate scientific research items, including *inter alia*, whalewatching, environmental issues and behavioural research, under the responsibility of the Scientific Committee are incorporated in the Conservation Agenda.

REQUESTS the Conservation Committee to begin exploring the possible establishment, by the Commission, of an appropriate trust fund (including the identification of potential contributors), to make available the necessary financial resources to the Commission and, particularly, to the Contracting Governments committed to implementing specific items of the Conservation Agenda related to conservation-oriented research. To that end, the Committee shall give priority to the question of securing assistance for scientific research and capacity building for scientists and institutions from developing countries, and shall take advantage from the experiences obtained in other international environmental and conservation conventions and treaties, in the establishment of similarly-oriented international funds.

DIRECTS the Secretariat to prepare a report, to be considered by the Commission at its next annual meeting, on the implementation of Resolution 1998-6 regarding the establishment of a dedicated "Environment Research Fund" to facilitate research on environmental change and cetaceans, as well as on the results of the appeal it made in its Resolution 1999-5 "to the Contracting Governments, other governments, international organizations and other bodies to contribute financially an in kind" to research programs, and to include in that report a recommendation to the Commission, as to how that Fund could best be considered in the light of the possible establishment of the trust fund referred to in the previous paragraph.

- (1) As can be appreciated in the "Compiled List of IWCA Conservation-Oriented Resolutions", attached hereto as Annex I.
- (2) As can be appreciated in Annex II of this Resolution, entitled "IWC Conservation Work: An Annotated Compilation":
 - Resolutions 1983/App.2; 1990/App.5 and 1998-8
 - Resolutions 1980/App.8; 1983/App.4; 1984/App.2; 1990/App.3; 1991/App.5; 1992/App.9; 1993/App.4; 1994-2; 1995-4; 1996-4; 1997-8 and 2001-13
 - Resolutions 1992/App.10; 1997-4 and 2001-4
 - Resolutions 1993/App.9; 1994-14 and 1996-2
 - Resolutions 1999-7 and 2000-2
 - Resolutions 1993/App.12 and 13; 1994-13; 1995/10; 1997-7 and 1998-5
 - Resolutions 1990/App.6 and 2001-9
 - Resolutions 1979/App.3; 1992/App.4; 1993/App.6; 1994-3; 1995-8; 1998-3 and 2000-4
 - Resolutions 1980/App.6 and 1981/App.6
 - Resolutions 1985/App.2; 1986/App.2; 1987/Apps. 1 to 4; 1998/Apps. 1 to 3; 1989/App. 1 to 4; 1990/Apps. 1 and 2; 1991/Apps. 2 and 3; 1992/Apps. 5 and 6; 1993/Apps. 7 and 8; 1994-8 to 11; 1995-8 and 9; 1996-7; 1997-5 and 6; 1998-4; 1999-2 and 3; 2000-5 and 2001-7
 - Resolutions 1978/App.D; 1980/App.5bis; 1998-8; 1999-6 and 2000/App.2
 - Resolutions 1978-4/1980-11/1982-4/1991-6/1992-1/1993-1/1994-1/1995-App.1/1995-1/1995-2/1997-1/1999-1/2001-2

Annex I
Compiled List of IWC Conservation-Oriented Resolutions, 1976-2001

Note on Resolution numbering: The Commission did not implement a Resolution numbering system until 1994. Resolutions adopted prior to 1994 are referred to here by the year of adoption and the number of the Appendix to the report of the corresponding meeting in which they are printed.

IWC 26th Annual Meeting

- **1976:4** Resolution on adherence to the convention.
- **1976:5** Resolution on the prohibition of transfer of vessels, equipment and assistance
- **1976:6** Resolution on bowhead whales and gray whales

IWC 29th Annual Meeting

- **1977:6** Reporting requests for small-type whaling
- **1977:7** Prevention of importation of whale products.
- **1977:8** Prevention of transfer of whaling vessels etc.

IWC December 1978 Special Meeting

- **1978:D** Resolution to CITES
- **1978:E** Importation of whale products from non-IWC member countries.
- **1978:F** Transfer of whaling equipment and expertise, etc.

IWC 31st Annual Meeting

- **1979:2** Resolution to consider the implications for whales of management regimes for other marine resources.
- **1979:3** Resolution in relation to the establishment of a whale sanctuary in the Indian Ocean.
- **1979:9** Importation of Whale Products from, Export of Equipment to, and Prohibition of Whaling by Non-member Countries.

IWC 32nd Annual Meeting

- **1980:5** Resolution on cooperation and coordination between the International Whaling Commission and the proposed commission for the conservation of Antarctic Marine Living Resources.
- **1980:6** Resolution aimed at discouraging whaling operations outside IWC regulations.
- **1980:8** Resolution concerning extension of the commission's responsibility for small cetaceans
- **1980:10** Resolution on preservation of the habitat of whales and the marine environment.

IWC 33rd Annual Meeting

- **1981:3** Resolution on Communication between the IWC and the Indian Ocean Coastal States.
- **1981:6** Resolution to implement recommendations of the Technical Committee Working Group on Non-IWC whaling.
- **1981:7** Resolution relating to pollutants in whales

IWC 35th Annual Meeting

- **1983:2** Resolution on the framework of a comprehensive assessment of whale stocks.

IWC 37th Annual Meeting

- **1985:2** Resolution on Scientific Permits

IWC 38th Annual Meeting

- **1986:2** Resolution on Special Permits for Scientific Research

IWC 39th Annual Meeting

- **1987:1** Resolution on Scientific Research Programmes
- **1987:2** Resolution on Republic of Korea's Proposal for Special Permits
- **1987:3** Resolution on the Icelandic Proposal for Scientific Catches
- **1987:4** Resolution on Japanese Proposal for Special Permits

IWC 40th Annual Meeting

- **1988:1** Resolution on Norwegian Proposal for Special Permits
- **1988:2** Resolution on the Icelandic Proposal for Scientific Catches
- **1988:3** Resolution on the Issuance of Special Permits for the Purposes of Scientific Research

IWC 41st Annual Meeting

- **1989:1** Resolution on the Icelandic Proposal for Scientific Catches
- **1989:2** Resolution on Norwegian Proposal for Special Permits
- **1989:3** Resolution on the Proposed Take by Japan of Whales in the Southern Hemisphere under Special Permit
- **1989:4** Recommendation on Scientific Coordination in the Indian Ocean

IWC 42nd Annual Meeting

- **1990:1** Resolution on Norwegian Proposal for Special Permits
- **1990:2** Resolution on Special Permit Catches by Japan in the Southern Hemisphere
- **1990:3** Resolution on Small Cetaceans
- **1990:4** Resolution on the Directed Take of Dall's Porpoises
- **1990:5** Resolution on Redirecting Research Towards Non-Lethal Methods
- **1990:6** Resolution in Support of the United Nations General Assembly Initiative Regarding Large-Scale Pelagic Driftnet Fishing and its Impact on the Living Marine Resources of the World's Oceans and Seas.

IWC 43rd Annual Meeting

- **1991:2** Resolution on Special Permit Catches by Japan in the Southern Hemisphere
- **1991:3** Resolution on USSR Proposal for Special Permit Catches in the North Pacific
- **1991:5** Resolution on Small Cetaceans

IWC 44th Annual Meeting

- **1992:2** Resolution on the Need for Research on the Environment and Whale Stocks in the Antarctic Region.
- **1992:4** Resolution on a Sanctuary in the Southern Hemisphere
- **1992:5** Resolution on Special Permit Catches by Japan in the Southern Hemisphere
- **1992:6** Resolution on Norwegian Proposal for Special Permits
- **1992:9** Resolution on Small Cetaceans
- **1992:10** Resolution on the Directed Take of Striped Dolphins in Drive Fisheries
- **1992:11** Resolution on the Directed Takes of White Whales and Narwhals

IWC 45th Annual Meeting

- **1993:4** Resolution on Addressing Small Cetaceans in the IWC
- **1993:5** Resolution on Research Related to Conservation of Large Baleen Whales in the Southern Oceans.
- **1993:6** Resolution on a Sanctuary in the Southern Ocean
- **1993:7** Resolution on Special Permit Catches by Japan in the Southern Hemisphere
- **1993:8** Resolution on Norwegian Proposal for Special Permits
- **1993:9** IWC Resolution on Whale-watching

- **1993:10** Resolution on the Directed Take of Striped Dolphins
- **1993:11** Resolution on Harbour Porpoise in the North Atlantic and the Baltic Sea
- **1993:12** Resolution on Research on the Environment and Whale Stocks
- **1993:13** Resolution on the Preservation of the Marine Environment
- **1993:18** Resolution on whaling by non-member states

IWC 46th Annual Meeting

- **1994:2** Resolution on Small Cetaceans
- **1994:3** Resolution on Biosphere Reserve of the Upper Gulf of California and the Colorado River Delta
- **1994:7** Resolution on International Trade in Whale Meat and Products
- **1994:8** Resolution on Scientific Permits
- **1994:9** Resolution on Special Permit Catches by Japan in the North Pacific
- **1994:10** Resolution on Special Permit Catches by Japan in the Southern Hemisphere
- **1994:11** Resolution on Special Permit Catches by Norway
- **1994:12** Resolution on promotion of Research Related to Conservation of Large Baleen Whales in the Southern Oceans
- **1994:13** Resolution on Research on the Environment and Whale Stocks
- **1994:14** Resolution on whalewatching

IWC 47th Annual Meeting

- **1995:6** Resolution on improving mechanisms to prevent illegal trade in whalemeat
- **1995:8** Resolution on whaling under special permit in sanctuaries
- **1995:9** Resolution on Whaling Under Special Permit
- **1995:10** Resolution on the environment and whale stocks

IWC 48th Annual Meeting

- **1996:2** Resolution on Whalewatching
- **1996:3** Resolution on Improving Mechanism to Restrict Trade and Prevent Illegal Trade in Whale Meat
- **1996:4** Resolution on Small Cetaceans
- **1996:7** Resolution on Special Permit Catches by Japan
- **1996:8** Resolution on Environmental Change and Cetaceans

IWC 49th Annual Meeting

- **1997:2** Resolution on Improved Monitoring of Whale Product Stockpiles
- **1997:4** Resolution on Cetacean Bycatch Reporting and Bycatch Reduction
- **1997:5** Resolution on Special Permit Catches in the Southern Ocean by Japan
- **1997:6** Resolution on Special Permit Catches in the North Pacific by Japan
- **1997:7** Resolution on Environmental Change and Cetaceans
- **1997:8** Resolution on Small Cetaceans

IWC 50th Annual Meeting

- **1998:2** Resolution on Total Catches over Time
- **1998:3** Resolution on the Southern Ocean Sanctuary
- **1998:4** Resolution on Whaling Under Special Permit
- **1998:5** Resolution on Environmental Changes and Cetaceans
- **1998:6** Resolution for the Funding of Work on Environmental Concerns
- **1998:7** Resolution on Coordinating and Planning for Environmental Research in the Antarctic
- **1998:8** Resolution on Cooperation Between the IWC and CITES
- **1998:9** Resolution on directed takes of white whales
- **1998:11** Resolution on IWC concern about human health effects from the consumption of cetaceans

IWC 51st Annual Meeting

- **1999:2** Resolution on Special Permits for Scientific Research
- **1999:3** Resolution on Whaling Under Special Permit
- **1999:4** Resolution on Health Effects from the Consumption of Cetaceans
- **1999:5** Resolution for the Funding of High Priority Scientific Research
- **1999:6** Resolution on Cooperation Between the IWC and CITES
- **1999:7** Resolution on Small Populations of Highly Endangered Whales
- **1999:8** Resolution on DNA Testing
- **1999:9** Resolution on Dall's porpoise

IWC 52nd Annual Meeting

- **2000:2** Resolution on Whaling of Highly Endangered Bowhead Whales in the Eastern Canadian Arctic
- **2000:4** Resolution on whaling under Special Permit in the Southern Ocean Sanctuary
- **2000:5** Resolution on Whaling Under Special Permit in the North Pacific Ocean
- **2000:6** Resolution on Persistent Organic Pollutants and Heavy Metals
- **2000:7** Resolution on Environmental Change and Cetaceans
- **2000:8** Resolution on Western North Atlantic Right Whales
- **2000:9** Resolution on the Conservation of Freshwater Cetaceans
- Appendix 2 – Memorandum of Understanding Between the Secretariat of the International Whaling Commission (IWC Secretariat) and the Secretariat of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) (UNEP/CMS Secretariat)

IWC 53rd Annual Meeting

- **2001:3** Resolution on Western North Pacific Gray Whale
- **2001:4** Resolution on the Incidental Capture of Cetaceans
- **2001:7** Resolution on Southern Hemisphere Minke Whales and Special Permit Whaling
- **2001:8** Resolution on Expansion of Japn II Whaling in North Pacific
- **2001:9** Proposed Resolution on Interactions Between Whales and Fish Stocks
- **2001:10** Resolution on the Stockholm Convention on Persistent Organic Pollutants
- **2001:11** Resolution on the Importance of Habitat Protection and Integrated Coastal Zone Management
- **2001:12** Resolution on Dall's Porpoise
- **2001:13** Resolution on Small Cetaceans

Annex II

IWC Conservation Work (An Annotated Compilation) (1976-2001)

INTRODUCTION: THE PROGRESSIVE DEVELOPMENT OF A CONSERVATION AGENDA IN THE INTERNATIONAL WHALING COMMISSION.

A primary objective of the International Convention for the Regulation of Whaling, as stated in its Preamble, is to conserve the great natural resources represented by the whale stocks for the benefit of all mankind and for future generations. Although in its first 25 years, the International Whaling Commission, the main organ of the Convention, remained a relatively exclusive forum of a few whaling nations, over the last 25 years the IWC has gradually expanded its membership and agenda, developing into a broad-based conservation organization whose focus now extends beyond the mere regulation of whaling, to address the multitude of threats that cetaceans face and will be facing to an increasing degree.

This broader focus is consistent with the original aims, purpose and mandate of the ICRW. To remain effective in a changing world, the IWC must continue to extend and update the scope of its activities, in order to address the most important and current conservation problems facing whales today and in the future.

The threats facing cetaceans in the 21st century can be expected to become more diverse and severe. The fishing effort is projected to continue to increase and to expand into previously unexploited areas, with a parallel increase in the numbers of cetaceans killed incidentally. The potential impacts on whales of the exploitation of other marine living resources are still poorly understood. High and increasing burdens of pollutants in many cetacean populations are a source of concern. Rapid changes to coastal habitat may threaten the populations of several cetacean species. Substantial fisheries for "small" cetaceans, unregulated by the IWC, exist in many areas. The rapid growth of high-speed shipping may pose a significant new threat to whale populations. The effects on cetaceans of impending climatic change and consequent changes to marine ecosystems, will need to be addressed.

The IWC has already moved some way along the path of expanding the scope of its activity, and enhancing its capacity to cope with the increasing extent and diversity of threats facing cetaceans.

It is particularly important for the IWC to develop its collaboration with other international agencies and with coastal states, to ensure that the conservation needs of cetaceans are not neglected in developments and decisions that affect the marine environment. The strong scientific profile of the Commission makes it well-placed to fulfill this role.

This background paper provides a summary of IWC decisions and actions in each of its main areas of activity, that indicate the progress made to date towards developing its new agenda, and provide a perspective for its future development.

The developing conservation inspired activities of the IWC are summarised under the following headings:

1. Scientific Research, including the development of non-lethal techniques
2. "Small" cetaceans
3. Incidental takes of cetaceans
4. Non-consumptive utilization of cetaceans
5. Highly endangered species and populations
6. Whales and their environment
7. Ecosystem approaches and interactions with other marine living resources
8. Sanctuaries
9. Enforcement and compliance with conservation measures
10. Management of "scientific whaling"
11. Collaboration with other organisations

1. SCIENTIFIC RESEARCH

A commitment to scientific research is enshrined in Article IV of the ICRW. In the first few decades of its existence, the IWC relied almost exclusively on data collected from whaling operations, and scientific activities of the IWC were limited to the application of traditional stock-assessment methods similar to those used in other fishery management bodies for the determination of whaling quotas.

Over time the scientific activities of the IWC and its Scientific Committee have developed substantially. Science is now a major emphasis of the IWC. Its Scientific Committee gathers unparalleled expertise in the science of cetacean conservation, management and population assessment. The agenda of the Scientific Committee is now longer limited to issues related to the regulation of whaling, but covers the spectrum of conservation issues facing cetaceans.

There follows a brief summary of the historical development of the IWC's current research agenda, and an outline of the new developments that are described further under the subsequent headings.

1. a) *International Decades of Cetacean Research*: The need for increased whale research was identified in the Declaration of the UN Conference on the Human Environment (Stockholm, 1972). In response, the IWC established the International Decade of Cetacean Research at its 24th Annual Meeting in 1972. The aim of the IDCR was to develop a research programme for whale stocks that would be largely independent of whaling operations.

The IDCR programme did not get underway until 1976, and its main project was the series of annual assessment cruises for baleen whales in the Antarctic, which were conducted each austral summer from 1978/9 to 1995/96. The second IDCR followed on the end of the first in 1985. The cruises initially involved whale marking exercises that only provide data on subsequent capture by whaling expeditions, but from 1984/85 onwards, exclusively non-lethal methods were used, primarily surveys based on visual sightings. Since 1996/97, the cruises have continued under the Southern Ocean Whales and Environment Research Programme, under which the focus has shifted, from pure population assessment to research aimed at identifying the relationship between the abundance of whales and factors in their environment.

1. b) *The Comprehensive Assessment*: Until the mid-1980's, the main work of the Scientific Committee had been to provide short-term management advice to the Commission, on the exploitation of the major harvested stocks of economic importance to the whaling industry. Given the limited data available, the urgent nature of the advice required, and the inevitably contentious nature of scientific advice with direct economic consequences, the Scientific Committee had little opportunity to develop a broader and longer-term approach to the scientific assessment of whale populations.

At its 34th Annual Meeting in 1982, the IWC adopted the cessation of commercial whaling from 1986 onwards, with the provision that a Comprehensive Assessment of the effects of this decision be conducted. Resolution 35:2, adopted by the IWC in 1983, outlined a framework for the Comprehensive Assessment. The concept of the Comprehensive Assessment soon expanded beyond the assessment of the effects of the moratorium decision *per se*, to include an assessment of whale stocks in greater breadth and depth than had been possible, in the context of providing short-term management advice for whaling. A Special Meeting of the Scientific Committee held in April 1986, made recommendations for the scope and conduct of a Comprehensive Assessment, which were adopted by the Commission at its 38th Annual Meeting. The Comprehensive Assessment included the main elements:

- i) methodological: development and application of new methods, including those independent of whaling operations, to assess the status and trends of whale populations;
- ii) a series of in-depth assessments of the status and trends of major whale populations;
- iii) review and evaluation of management objectives and procedures.

The main conclusions of the Comprehensive Assessment with respect to methodology were: The old whaling-based methods of assessment, such as Catch Per Unit Effort and Mark-Recapture methods, were of limited utility. Several existing and new non-lethal methods were found to have promise their development was given priority, including:

- Visual surveys
- Photo-identification of individual whales
- Telemetry
- DNA methods

These new non-lethal methods have now largely superseded the old whaling-based methods of study, although one

member state continues to insist on the killing of whales for scientific purposes (see "Scientific whaling" below). Resolution 1990:5, on redirecting research towards non-lethal methods, welcomes this development and calls on members to highlight their use of non-lethal methods in their research reports.

Comprehensive Assessments of major whale stocks were conducted over the subsequent years as follows:

| | |
|---------|---|
| 1990: | Eastern North Pacific Gray whales Southern Hemisphere minke whales Northern hemisphere minke whales |
| 1991: | Bowhead whales North Atlantic fin whales North Pacific minke whales |
| 1995-6: | North Pacific Brydes whales |
| 1998: | Right whales |
| 2001-2: | North Atlantic Humpback whales |

The Comprehensive Assessment of Southern Hemisphere humpback whales, is currently in progress, but no date for completion has been set. A reassessment of Southern Hemisphere minke whales, prompted by the possibility of a serious decline since the last Comprehensive Assessment in 1990, is expected to be completed in 2003.

Also included in the Comprehensive Assessment was the development of a Revised Management Procedure (RMP) which was approved by the Commission in Resolution 44:3, adopted in 1992, as one element of a Revised Management Scheme (RMS). The RMS is aimed at providing a comprehensive and secure basis for the regulation of commercial exploitation of baleen whales, to guarantee protection from overexploitation in the shorter and longer term. The contents of the RMS have been further clarified in subsequent Resolutions (1994:5; 1996:6; 1998:2 and 2000:3). Most elements are now agreed, and it is anticipated that when the process is complete, the IWC will be able to shift its focus of attention to more forward-looking tasks than the regulation of a legacy industry.

The other main developments in the IWC's scientific agenda, include:

1. c) Range of species covered: While the IWC previously focussed only on species of direct economic importance for whaling, its coverage now extends to all species for which conservation action is needed or may become so in the future, including species which are too small for too far to be a target of industrial whaling (see "Small cetaceans" and Highly endangered species" below).

1. d) Geographical scope: While the IWC previously concerned itself mainly with high-latitude regions, where the commercially significant concentrations of large whales have traditionally been exploited, recent years have seen a growth in research in sub-tropical and tropical waters, including the waters of developing coastal states and the adjacent ocean areas.

1. e) Range of threats addressed: Previously the IWC only considered the effects of whaling on whale populations, which was reasonable in the past when this was by far the greatest threat to whales. Over the years, the agenda has expanded to include: incidental catches; pollutants and contaminants; effects of exploitation of other species on which whales depend; effects of environmental change including climate change; habitat alteration and degradation; noise pollution;

1. f) Research collaboration: While the IWC's scientific work was earlier on a stand-alone basis, the expanded agenda has shifted the emphasis towards multi-disciplinary collaborative research with coastal states and other international organizations, because the issues and threats are increasingly of a nature that the IWC cannot address on its own.

1. g) Other new issues on the scientific agenda include:

- Scientific aspects of the management of non-consumptive utilization, including whale watching;
- Scientific aspects of enforcement and verification methods, such as DNA testing of market products;
- Issues associated with the human health risks of contaminated cetacean products.

1. h) Associated with the development of the scientific agenda, has been an expansion of the range of scientific disciplines that the IWC must call upon to address the questions before it, and an expansion of the range of countries from which experts with knowledge of the local cetacean fauna are required, particularly developing countries. This has highlighted the need to develop means to provide the required assistance for scientific research and capacity building, including financial assistance and other measures to enable scientists and other experts from developing countries to participate in the work of the Commission and its Scientific Committee.

2. "SMALL" CETACEANS:

2. a) In its first 30 years of existence, the IWC concerned itself almost exclusively with the species of large whale of most interest to industrial whaling, in particular sperm whales and the larger baleen whales. Over the years, the range of species which the Commission has shown an interest in has been gradually extended as outlined chronologically here:

1974: First meeting of the IWC Scientific Subcommittee on "Small Cetaceans"

1975: Establishment of the Standing Scientific Subcommittee on Small cetaceans. It recommended to the Commission that members report statistics on all direct and accidental takes of small cetaceans to the Commission. Specific management recommendations were provided on spotted dolphins, Dall's porpoise, harbour porpoise and Indus river dolphins.

1976: Adoption of an agreed list of small cetacean species, including 64 species of smaller odontocetes and 2 species of smaller baleen whales (*RIWC* 27:30-31)

Resolution 1977:6 on reporting requirements for 'small-type' whaling, called on member Governments to submit statistics on all direct and incidental catches of small cetaceans. These are published by the IWC from 1979 onwards.

The northern bottlenose whale was included into the IWC Schedule as a Protected Stock (*RIWC* 28:35).

Resolution 1980:8 on the extension of the Commission's responsibility for small cetaceans, directed the Scientific Committee to continue to provide scientific advice on small cetacean stocks to member Governments, coastal States, and other interested governments and inter-governmental organizations.

2. b) During the 1980's, the Scientific Committee conducted an in-depth assessment of major exploited small cetacean species, on a rotating basis as follows:

- 1981: White whales, narwhal, killer whales, pilot whales;
- 1982: Black Sea dolphins; Eastern Tropical Pacific spotted and spinner dolphins (*Stenella* spp.) and striped dolphins (*Stenella coeruleoalba*) in the Western North Pacific;
- 1983: Porpoises: harbour porpoise, vaquita and Dall's porpoise ;
- 1984: Cephalorhynchus spp.: Hector's dolphin (New Zealand), Heaviside's dolphin (Southern Africa), black dolphin (Chile) and Commerson's dolphin (Chile, Argentina, Kerguelen)
- 1985: Baird's beaked whale;
- 1986-7: Pilot whales in the North Pacific and in the North Atlantic;
- 1988: All beaked whales;
- 1989: All pilot whales;
- 1990: Porpoises: harbour porpoise, Dall's porpoise, vaquita and spectacled porpoise;

2. c) During the 1990's:

Resolution 1990:3 on small cetaceans. The Commission directed the Scientific Committee to prepare a comprehensive report on all stocks of small cetaceans subject to direct and incidental takes, and agreed to present a report of this work to UNCED (Rio 1992).

Resolution 1990:4 called on Japan to reduce its kill of Dall's porpoise as recommended by scientific advice.

Resolution 1991:5 on small cetaceans endorsed the Scientific Committee's report for UNCED and duly forwarded it. The report is published in *RIWC* Special Issue 15:73-130, and includes a revised list of 60 'small cetacean' species recognized by the Committee.

In **Agenda 21**, adopted in 1992 at UNCED, States agreed to recognize the work of the IWC Scientific Committee on all cetaceans (chapter 17.94).

Resolution **1992:9** on small cetaceans, noting the decisions taken by UNCED, called on States with small cetacean populations subject to anthropogenic threats, to seek advice from the IWC; invited other relevant organizations, including ICES and agreements concluded under CMS, to exchange information with the IWC; invited member Governments to provide assistance to States with endangered small cetacean stocks; and instructed the Scientific Committee to continue its work on assessing threats to small cetacean populations.

In view of the long-standing dispute over the extent of the IWC's competence for the management of small cetaceans, the Commission agreed to establish a working group to consider a mechanism to address small cetaceans in the IWC (*RIWC* 43-50).

Resolution **1992:10**, on the directed take of striped dolphins in drive fisheries, called on Japan to address the problem.

Resolution **1992:11** on directed takes of white whales and narwhals, called on States with white whales and narwhals in their waters to take appropriate conservation measures.

Resolution **1993:4** on addressing small cetaceans in the IWC, adopted by consensus, identified a need to improve mechanisms for handling small cetaceans in the IWC, including mechanisms to: ensure participation of coastal states, including non-members, in small cetacean research; improve availability and quality of data on small cetaceans; secure funding coastal State participation in small cetacean issues; develop the relationship between the IWC and regional organizations with respect to small cetaceans.

Resolution **1993:10** on the directed take of striped dolphins, again urged Japan to take appropriate action to conserve striped dolphins subject to its drive fishery.

Resolution **1993:11** on harbour porpoises in the North Atlantic and Baltic Sea, called on the range States to meet the Scientific Committee's request for more data on population, abundance, incidental catches, and pollutant levels in harbour porpoises, to take steps to reduce incidental catches, and to report on progress the following year. It also agreed on co-operation with the new Agreement on Small Cetaceans in the North and Baltic Seas (ASCOBANS) established under CMS.

Resolution **1994:2** adopted by consensus: specified efforts to be made to improve collaboration with coastal States on small cetacean issues; established a voluntary fund for the participation of scientists from developing countries in small cetacean work; and agreed to co-operate with UNEP and organizations established under the auspices of CMS.

Resolution **1994:3** on the Biosphere Reserve of the Upper Gulf of California and the Colorado River Delta, commended Mexico on its efforts to protect the vaquita and invited other members to provide assistance.

Resolution **1996:4** reminded members of the previous Resolutions on small cetaceans, and invited member Governments to report on progress with the previous recommendations.

Resolution **1997:8** called for the work of the Scientific Committee on small cetaceans to be continued and for members to co-operate with it.

Resolution **1998:9** on white whales, called on States with beluga populations to collaborate in the Scientific Committee's assessment of beluga.

Resolution **1999:9** on Dall's porpoises, instructed the Scientific Committee to conduct an assessment of Dall's porpoises in 2001, and invited Japan to submit information.

2. d) A Memorandum of Understanding was signed in 1999 with UNEP/CMS to ensure ongoing co-operation

between the UNEP/CMS and IWC Secretariats with respect to cetaceans

2. e) In the 2000's:

Resolution **2000:9** on freshwater cetaceans, called on States with freshwater cetaceans to collect and supply information and to ensure that conservation needs of freshwater cetaceans are taken into account in river development plans.

Japan indicated in 2000 that it would cease scientific collaboration on small cetaceans, if the Commission pursues its plan to conduct an assessment of Dall's porpoise in 2001. As from the 2001 Annual Meeting, Japan withdrew its participation in Scientific Committee work on small cetaceans, and declined to supply any data on Dall's porpoise.

Resolution **2001:12** on Dall's porpoise, called for the Scientific Committee to conduct a full assessment of Dall's porpoise and for Japan to supply the required information.

Resolution **2001:13** called on members to respond to Scientific Committee recommendations on small cetaceans and for the Committee to regularly review the implementation of its recommendations. It further encouraged members to provide technical, scientific and financial support to range States to assist their small cetacean conservation measures.

2. f) During the 1990's and beyond, the Scientific Committee continued its assessments of small cetaceans on a rotating basis, as follows:

- 1992: White whales and narwhals; species taken in Japanese drive fisheries;
- 1993: Small cetaceans in Southeast Asia;
- 1994: Small cetaceans in Latin America;
- 1995: Harbour porpoises in the North Atlantic and Baltic Sea;
- 1996: *Lagenorhynchus* spp;
- 1997: Small cetaceans in coastal waters of Africa and striped dolphins throughout the world;
- 1998: Small cetaceans in the Indian Ocean, Red Sea, and coastal waters of the Arabian peninsula;
- 1999: Bycatch mitigation, acoustic devices; white whales and narwhals;
- 2000: Freshwater cetaceans;
- 2001: Dall's porpoise and
- 2002: Humpback dolphins (*Sousa* spp.);

2. g) Special Issues of the IWC Report on small cetaceans have been published as follows:

- 1988: The genus *Cephalorhynchus*;
- 1993: Pilot whales (N. Hemisphere only) and
- 1995: Phocoenids (porpoises).

2. h) Although the issue of its competence to manage small cetaceans has long been a source of contention within the Commission, the attitude of members is gradually changing. Several members who had previously had reservations about the IWC's competence for small cetaceans, have since changed their views.

2. i) Implications for the IWC of small cetacean work: Despite differing views on its competence to manage smaller cetacean species, the scope of the IWC's work has gradually extended over the last 25 years beyond the species of traditional interest to the whaling industry (the large baleen and sperm whales), to cover the full range of cetacean species. This has brought the following shifts of emphasis:

- (1) A shift away from a concentration only for whales in the traditional high-latitude whaling grounds, of interest to relatively few countries, to also include species and populations in temperate and tropical waters, including in particular the coastal waters of many more countries, and of developing countries in particular;

(2) A shift away from concern exclusively with direct exploitation, towards addressing the panoply of threats, including accidental entanglement in fishing nets, habitat degradation and exclusion, and so on, that face cetaceans, especially smaller ones.

2. j) For this expansion in scope to be effective, it will be necessary to involve many more coastal States in the work of the IWC, preferably as full members. The need to improve the participation of coastal States, particularly developing countries, in the work of the Commission and its Scientific Committee, has been recognized in several IWC resolutions, including the need for financial assistance.

2. k) The discussions on the competence issue, have revealed that a distinction between cetacean species purely on the basis of body size is no longer the most useful distinction with respect to conservation and management issues. Rather than distinguishing between 'small' and 'large' cetaceans, the IWC should bring its classification into line with UNCLOS and distinguish between (a) highly migratory species of cetacean; and (b) other species. The highly migratory species include those listed in Annex A of UNCLOS, plus any other species subsequently confirmed to be highly migratory.

2. l) While the IWC remains the primary organization for the management and conservation of the highly migratory species, which Article 68 of UNCLOS requires States to co-operate with, primary responsibility for the remaining species rests with coastal States and regional organizations (such as those established under CMS). The IWC's main role here is to contribute in the form of scientific assessments and advice, assistance with the co-ordination of scientific research, and the building of scientific capacity.

3. INCIDENTAL TAKES OF CETACEANS:

3. a) In the past, the main catches of cetaceans were direct catches by whaling vessels. Today, more cetaceans are killed incidentally in nets than are captured deliberately. In 2000, approximately 2000 cetaceans were reported killed incidentally and approximately 2000 deliberately, but the true number killed incidentally is believed to be much higher (*JCRM* 4 (Suppl.):387-390, 2002).

3. b) The Scientific Committee originally recommended, in 1975, that data on incidental as well as deliberate catches of all cetaceans be submitted to the Commission. This was agreed by the Commission in Resolution **1977:6**. Statistics on incidental catches have been published in the Scientific Committee report since 1980. Although the number of countries supplying information has increased over the years from 4 in 1979 to 19 in 2000, the information is still very incomplete.

3. c) Resolution **1990:6** supported the UN General Assembly initiative to tackle the problem of large-scale pelagic driftnet fishing, and in October 1990 the Scientific Committee held a workshop on the mortality of cetaceans in fishing nets and traps (*RIWC* Special Issue 15:1-71, 1994). The workshop concluded that incidental takes were unsustainable for the highly endangered species vaquita and baiji, and that these face extinction if takes are not eliminated. In addition, incidental takes were estimated to be unsustainable for several other populations, including:

- Hump-backed and bottlenose dolphins on the coast of Natal, South Africa;
- Striped dolphins in the Mediterranean and
- Harbour porpoises in the western North Atlantic.

3. d) Cases where the level of take was unknown but believed likely to be unsustainable included:

- Dusky dolphins in the eastern South Pacific;
- Northern right whale dolphins in the central North Pacific and
- Sperm whales in the Mediterranean sea.

Levels of incidental takes in many other areas were unknown but considered to be significant.

3. e) Partly based on the findings of the IWC workshop, the UN General Assembly adopted Resolution 46/215 in December 1991, which called for a moratorium on pelagic driftnet fishing by the end of 1992.

3. f) In 1991, the Scientific Committee prepared a comprehensive global report on all small cetacean populations subject to incidental takes, that was submitted by the Commission in 1992 to UNCED (*RIWC* Special Issue 15: 76-130). This contributed to UNCED's recognition of the IWC's role with respect to all cetaceans.

3. g) Following Resolution **1993:11** on harbour porpoises, the Scientific Committee conducted extensive studies during 1994-97 on the assessment of incidental catches of harbour porpoises, the effects on the populations, and means of mitigation. From 1998 onwards, this work was continued by a joint working group of the IWC and ASCOBANS.

3. h) Resolution **1997:4** on cetacean bycatch reporting and bycatch reduction, drew attention to the fact that many members are not fulfilling their obligation to report incidental catches, and called upon them to do so from 1998 onwards. However, the Scientific Committee in 1999 re-iterated its concern that incidental catch figures were still not being submitted from many parts of the world, and called for this deficiency to be remedied (*JCRM 2 (Suppl):50*).

3. i) Resolution **1998:2** on total catches over time specified, for the first time, that incidental catches, along with collisions with ships and other sources of human-induced mortality, should be considered on a par with deliberate catches, and should be counted towards total allowable removals.

3. j) The Scientific Committee, in 1999, held a special session on acoustic mitigation measures to reduce by-catches ('pingers' that warn cetaceans of the presence of nets). While this method appeared promising in some trials, more studies were identified that needed to be conducted, to determine how effective they would be in practice. It was concluded that acoustic warning devices would not be a sufficient remedy for the problem of bycatch of the endangered vaquita. A further workshop held in 2000, examined other methods of bycatch mitigation.

3. k) From 2001 onwards, the Scientific Committee has maintained a regular subcommittee on "Bycatch and other Human-Induced Mortality" that meets annually. So far its main task has been to develop methods for improving estimation of the actual amounts of such mortality occurring.

3. l) Resolution **2000:8** on Western North Atlantic Right Whales, and Resolution **2000:9** on freshwater cetaceans, recognized incidental catch as one of the main factors leading to the predicted extinction of Northwest Atlantic right whales and the baiji respectively.

3. m) Resolution **2001:4** on the incidental capture of cetaceans, noted that incidental catch is also a major concern of other organizations, including organizations under CMS, and supports the Scientific Committee's work on the issue. It further recommended that entangled whales be released alive where possible, but where this is not possible, they should only be used commercially when a DNA sample is submitted to the appropriate register and the bycatch counts towards any catch limit that might be in force. The aim is not to prevent utilization of animals that are already dead, but to help ensure that "bycatches" do not develop into a form of exploitation outside IWC regulation.

3. n) Implications for the IWC of work on incidental takes: Although the issue of incidental takes has been considered by the IWC for over 20 years, it took some time before for incidental takes to be considered on a par with direct takes and in equal need of management. Incidental takes occur in a broader range of countries, regions and fisheries than direct takes, and hence their management will involve a substantial expansion of the IWC's focus. Management of incidental takes will also require more extensive collaboration with other bodies, including coastal States, regional fishery organizations, regional conservation agreements, and global bodies including FAO, UNEP and CMS. The major scientific, technical and legal challenges include:

- Improving methods of monitoring incidental takes;
- Developing technical methods to reduce incidental takes and
- Developing and implementing regulatory measures.

4. NON-CONSUMPTIVE UTILIZATION OF CETACEANS:

4. a) The International Whaling Commission has addressed the subject of whale watching since 1975. As the only global body responsible for the conservation of whales, the IWC has provided a focus for all aspects of the discussion regarding whale watching, including the scientific, legal, socio-economic and educational aspects. The IWC has provided the function of a clearinghouse for the collation, analysis and dissemination of information on whale watching to both member and non-member Governments.

The IWC has performed a critical function of providing a framework to help coastal States draft regulations and guidelines and peer review of the scientific aspects of issues arising from whale watching. This has contributed to the overall sustainability of whale watching and ensuring that the economic and educational benefits are capitalized upon.

4. b) 1975: Concerns were expressed within the IWC Scientific Committee, that excursion boats entering Scammon and other breeding lagoons in Mexico, which had started in 1970, might be detrimental to the whales.

4. c) 1976: IWC Scientific Committee asked the Commission to request the US and Mexican Governments to "... establish regulations to reduce harassment of (gray) whales in all their breeding areas". The Commission responded by adopting a Resolution, proposed by Denmark, that noted the Committee's recommendation and that "the gray whales are generally protected", and recommended "... that contracting governments establish such regulations as soon as possible."

4. d) 1982: The USA proposed at the IWC that there should be a special meeting in the Spring of 1983, "to address the non-consumptive utilization of cetacean resources, giving consideration to research, recreation, education and cultural aspects." The IWC agreed to co-sponsor such a meeting.

4. e) 1983: The first whale watching conference, "Whales Alive", was held in Boston, with the participation of the IWC Secretary as an Observer.

4. f) 1984: The outcome of the conference was considered by the IWC, including that the new issue of non-consumptive use should be considered by the IWC.

4. g) Resolution 1993:9: First whale watching resolution adopted by IWC in 1993, establishing a Working Group on Whale Watching to meet prior to the 1994 IWC and, *inter alia*, "assemble and summarise information about whale watching from both party and non-party states".

4. h) 1994: Whale watching working group meets just prior to the IWC, under the chairmanship of F. von der Assen (Netherlands). The main document under consideration was the report prepared by the Secretary on the basis of overviews provided by 11 member Governments, namely: Argentina, Chile, France, Ireland, Mexico, New Zealand, Oman, Spain, Sweden, UK (including British Virgin Islands and Cocos Islands), and the USA. There were in addition late papers from Japan, Brazil, Australia and Norway.

4. i) Resolution 1994:14: Resolution on whale watching adopted which, *inter alia*, requests the submission of information by Contracting Parties on whale watching, requests advice from the Scientific Committee in setting guidelines, and requests the IWC to keep under review all aspects relating to whale watching.

4. j) 1995–Present: The IWC Scientific Committee has addressed a large variety of scientific issues concerning whale watching. A standing whale watching Sub-Committee of the Scientific Committee was set up in 1998 from the Working Group set up in 1995. Matters addressed include:

- Identifying and assessing the possible effects of whale watching operations on cetaceans/whales;
- Examining current status of methods of assessment of impacts, including assessment of behavioural change;
- Providing advice on the management of future whale watching based on assessment of impacts;
- Reviewing information on noise production from vessels and aircraft and its effects on cetaceans;
- To draw up a set of guidelines to assist coastal states in the management of whale watching, based on the experience of member countries;
- Considering the assessment of possible short and long term effects of whale watching, and some special situations such as "swim-with" programmes and dolphin feeding programmes;
- Utilizing the opportunities for scientific research conducted from whale watching boats and
- Research on the effectiveness of, and compliance with, management measures.

4. k) Resolution 1996:2: IWC Resolution adopted which, *inter alia*, committed the Commission to discuss educational, economic and social aspects of whale watching at its Annual Meeting in 1997.

4. l) 1997: IWC considers the educational aspects of whale watching. The USA submitted information indicating the potential educational opportunities that are available through whale watching operations, and how to make best use of these opportunities.

4. m) 1998: IWC considers the socio-economic aspects of whale watching, indicating that:

- It offers new development opportunities for coastal communities;
- It can provide substantial economic benefits;
- It is a sustainable, non-consumptive use of cetaceans offering opportunities for non-lethal research and
- It offers opportunities for education and for development of research methods.

4. n) 1999: IWC considers the legal aspects of whale watching, including a compilation of existing and “model” legislation and guidelines from around the world.

4. ñ) 2000: IWC Considers the increasing value of whale watching to small island developing States, and endorses the continuing work of the Scientific Committee. The Scientific Committee held a special two day workshop on assessing the long-term effects of whale watching on cetaceans.

4. o) 2001: IWC continues the discussion regarding the value of whale watching as non-consumptive sustainable use of whales. New Zealand indicated that whale watching is a global industry worth more than 1 billion dollars per annum.

4. p) 2002: The Scientific Committee continued to address research from whale watch operations; the effects of noise on whales and the effectiveness and compliance with national whale watching guidelines and regulations.

4. q) Implications for the IWC of work of non-consumptive utilization:

When at the 1982 Annual Meeting the USA first proposed that the IWC consider the general issue of whale watching, the matter was dismissed by one Commissioner of a leading whaling nation as “trivial”. Since that time, whale watching has overtaken whaling as the economically, most significant form of utilization of whale resources on a global level, with an estimated worth of more than \$1,000m per annum. Given appropriate management, it has good prospects for being sustainable in the long term.

4. r) The transition from whaling to whale watching as the prevalent form of economic utilization of whales, impacts the IWC’s priorities in several ways. In particular, whale watching industries occur in a much wider range of countries (87 States and territories at the last count) than whaling.

4. s) The development of non-consumptive use is a key plank in the national policies of many IWC members with respect to whales, including Brazil, Mexico, South Africa and Australia, to name just a few.

5. HIGHLY ENDANGERED SPECIES AND POPULATIONS:

5. a) In the past, the IWC concerned itself almost exclusively with species and populations of whales that were still abundant enough to be commercially interesting. One species of whale after another was depleted to the point at which it needed complete protection. For example, in the Southern Hemisphere, blue and humpback whales were protected from 1965 onwards, fin whales from 1976 and sei whales from 1979. Right and gray whales had already been seriously depleted before the IWC came into existence: some populations have since recovered, others not. Once protected, previously exploited species tended to be forgotten, as attention turned to currently exploited species.

5. b) In recent years, the IWC has become increasingly conscious of its duty of care towards species and populations that have been seriously depleted by past whaling, and the need to ensure that they are closely monitored and protected from threats that could jeopardize their recovery:

The issue became especially topical in 1993, following revelations that large illegal catches by the former Soviet Union had caused some species to be even more severely depleted than had been previously realised. The following actions were taken:

Resolution **1993:5** recognized the importance of taking appropriate conservation measures for assisting the recovery of severely depleted populations, and adopts a proposal to develop a research programme for Southern Hemisphere blue whales.

Resolution **1994:12** welcomed the work by the Scientific Committee in preparing for such research and invites a full proposal to be submitted the following year.

Recognizing that visual surveys of whales as rare and scattered as blue whales in the Southern Hemisphere are not very practical, the Scientific Committee decided to focus on two items: (i) development of acoustic methods to detect blue whales; and (ii) develop means to distinguish the two types of blue whales (true and pygmy blue whales) at sea. The Commission approved the proposal in 1995.

The priorities of the IWC's Comprehensive Assessment programme have also been modified to shift the emphasis from commercially important species to highly endangered species that require conservation attention. Accordingly, a global Comprehensive Assessment of right whales was conducted by the Scientific Committee in 1998, and a special assessment of the highly endangered North Atlantic right whale was conducted in 1999. The assessments are published in Special Issue 2 of the IWC's new journal, *Journal of Conservation Research and Management* (2001).

Resolution **1999:7** on "Small Populations of Highly Endangered Whales" identified the following small populations that remain highly endangered from previous over-exploitation:

- Bowhead whales in the Okhotsk Sea, Spitsbergen and the eastern Canadian Arctic;
- Gray whales in the western North Pacific and Okhotsk Sea;
- Right whales throughout the Northern Hemisphere;
- Various blue whales populations in both hemispheres;

The Resolution welcomed the Scientific Committee's decision to give more priority to these populations, and calls on all members and non-members to avoid all takes of these species.

Resolution **2000:2** on the highly endangered bowhead whales in the eastern Canadian Arctic, calls for the hunting of these whales to be ended and urges Canada to rejoin the IWC.

Resolution **2000:8** on the western North Atlantic right whales, noted that this highly endangered population numbers less than 300 and is declining, and identifies entanglement in fishing gear and collisions with shipping as the two main causes of deaths of these right whales. It called for continued work to help ships avoid right whales and for co-operation with the International Maritime Organisation (IMO).

In 2001 the Scientific Committee expressed its serious concerns about the status of the western North Pacific gray whale, including the risk of disturbance from oil seismic exploration in their feeding grounds. Resolution **2001:3** on western North Pacific gray whales adopted by the Commission, notes the critical status of the population and calls for all disturbances to be minimized and for the studies of the population to continue. The Scientific Committee held a special workshop on the western North Pacific gray whale in October 2002, but no report is available yet.

5. c) Implications for the IWC of focus on highly endangered populations of whales: The scientific and management priorities of the IWC have begun to shift in recent years, from whale species and populations of commercial importance for potential exploitation, to the rarer and more endangered species whose conservation needs are greatest.

Since the main threats to these species are in most cases not direct takes, this change involves a shift in focus towards the kinds of conservation threats most critical for the highly endangered species, including entanglement in fishing gear and collisions with ships, plus possible food shortages, reproductive failure, and other dangers. Research methods will also need to be adapted accordingly, to cover small and sparse populations.

6. WHALES AND THEIR ENVIRONMENT:

6. a) When the ICRW was concluded in 1946, few of those involved suspected that protection of whales' habitat and environment would eventually become the greatest challenge in conserving whale populations for future generations.

6. b) Following the first UN Conference on the Human Environment in 1972, a regular item ("Effect of pollution on whale stocks, including small cetaceans") was placed on the agenda of the Scientific Committee, but action was initially limited to noting the information received.

6. c) In response to the Scientific Committee's concern about the lack of information, Resolution **1980:10** on the preservation of habitat of whales and the marine environment, notes the issue in general terms and calls upon governments to submit reports on environmental threats to whales as they become aware of them, and on remedial measures taken. The IWC then proceeded as follows:

Resolution **1981:7** on pollutants in whales repeated the call for information, mentioning explicitly the increasing levels of heavy metals, organochlorines and PCBs in whales, especially sperm whales, and the effects of shipping and offshore mining and drilling activities.

In 1982, Denmark tried to get the IWC to take action on the matter of icebreakers and the opening of regular shipping lanes in ice-covered areas, because of the threat to cetaceans from sonic pollution, but at the time IWC members were reluctant to accept Commission competence for such matters

From 1977, the Committee recommended that tissue samples be collected from all stranded cetaceans for pollutant analysis.

In 1979, the Committee reviewed the possible effects on cetaceans, especially bowhead whales, beluga and narwhal, of industrial developments in the North American Arctic. Concern was expressed that pollution could be the cause of the decline in the harbour porpoise in the Baltic and North Seas.

In 1981 the Scientific Committee again recommended that regular sampling for pollutants of stranded and other animals be conducted, especially for toothed whales, and that the IWC co-operate with ICES and IOC in this.

Over the next few years, sampling for pollutants was undertaken in many coastal States, and gradually the level of information improved, but little further collective action was taken by the Commission, until the 1992 UNCED Earth Summit put environmental issues back into the centre of the global agenda with the adoption of Agenda 21.

Resolution **1992:2** on the need for research on the environment and whale stocks in the Antarctic region, noted the adoption of the precautionary approach by UNCED with respect to environmental threats, and established the impact of environmental changes on whale stocks as a regular item on the agenda of the Scientific Committee. It directed the Scientific Committee to collaborate with CCAMLR and SCAR, to research the probable effect of global environmental change on whales in the Antarctic region.

Resolution **1993:12** on research on the environment and whale stocks, extended this mandate to cover environmental issues through the world's seas, and directed the Committee to convene a special workshop on the effects of global change on cetaceans before the 1996 meeting. Resolution **1993:13** on the preservation of the marine environment contained a further statement of policy, but did not identify specific action.

The Scientific Committee noted that work on environmental issues required expansion of the range of expertise available to it, and also the need to collaborate with other organizations, including WMO, IOC, ICES and UNEP. Given the enormity of the topic, the Committee decided to split it into several main areas:

- (a) Climate change;
- (b) Chemical pollution (contaminants);
- (c) Direct (e.g. bycatch) and indirect (e.g. competition for food) effects of fisheries on cetaceans and
- (d) Noise and other disturbance by human activities.

Resolution **1994:13** on research on the environment and whale stocks, endorsed the plans of the Scientific Committee and called on Governments to co-operate by providing information and appropriate experts.

The workshop on Chemical Pollutants and Cetaceans was held in March 1995, with the financial support of Norway and the Environmental Investigation Agency (EIA). The workshop recommended that systematic sampling programmes for chemical pollutants in cetaceans be established, and that comparative studies of more and less polluted cetacean populations be conducted, with a view to determining cause/effect relationships.

Resolution **1995:10** on the environment and whale stocks, endorsed the scientific recommendations and directed the Secretary to consult with members to facilitate the execution of the proposed research and sampling.

The Workshop on Climate Change and Cetaceans held in March 1996 in Hawaii, considered the possible effect of the various climate change scenarios on cetaceans, and how this could be assessed. Three main areas of work were recommended:

- (i) Collaboration with other organizations, especially CCAMLR and South Ocean GLOBEC on ecological research, to examine the relationship between cetacean distribution and changes in prey distribution;
- (ii) Investigation of the influence of climatic and other environmental factors on whale population dynamics for all populations with available data and
- (iii) Special attention to possible effects of climate change on Arctic cetaceans given the predicted loss of sea ice.

The Scientific Committee established the Southern Ocean Whale and Environment Research Programme (SOWER), as the successor to the earlier IDCR series of research cruises, to reflect the change in emphasis away from the assessment of whale populations for commercial purposes, towards the understanding of the relationship of whales with their environment.

Resolution **1996:8** on environmental change and cetaceans, endorsed the establishment by the Scientific Committee of a Standing Working Group on Environmental Concerns, and instructed them to continue to address the main areas of concern on an ongoing basis:

- (i) Development of methods to predict effects of climate change on cetaceans;
- (ii) Sampling of contaminant burdens in cetacea and development of cause-effect (dose-response) relationships;
- (iii) Impact of noise;
- (iv) Effects of habitat degradation on cetaceans and
- (v) Direct and indirect effects of fisheries.

The Resolution further instructed the Committee to collaborate with other organizations, particularly SCAR, CCAMLR, GLOBEC, IPCC and IOC, noting that few of the issues can be tackled by the IWC alone.

Resolution **1997:7** on environmental change and cetaceans, endorsed two major research programmes involving two long-term collaborative multi-disciplinary multinational research programmes, developed by the Scientific Committee, one on contaminants in whales, which became the Pollution 2000+ project, and one, in collaboration with CCAMLR and SO-GLOBEC, on field research in the Southern Ocean, to understand the relationship between whales and food supply, that could be affected by environmental change, the main item of which became the SOWER 2000 project. Workshops to plan the research activities for each of these two programmes, were held in March 1999. The Scientific Committee identified in 1998 two further priority areas for research:

- (i) Effect on cetaceans of habitat degradation and
- (ii) Effects of environmental change on Arctic cetaceans.

Resolution **1998:5** endorsed the Committee choice of projects and priority areas and directed the Committee to:

- (i) Give high priority to implementation of the proposed research on environmental factors, and to continue to produce costed scientific proposal for non-lethal research, to identify and evaluate the effects of environmental change on cetaceans in all priority areas;
- (ii) Ensure the participation of experts with the necessary expertise in environmental change and

(iii) Include, in its ongoing programme of Comprehensive Assessments of whale stocks, an assessment of the impacts of environmental change, and other non-whaling human influences, on the dynamics of cetacean populations.

The Resolution also established 'Environmental Concerns' as a regular item on the Commission's agenda.

Resolution **1998:7** on coordinating and planning for environmental research in the Antarctic, urged members with Antarctic whale research programmes, to co-operate towards realizing the field research activities envisaged in the Scientific Committee's project on whales and their environment in the Southern Ocean.

Resolution **1998:6** on the funding of work on environmental concerns, agreed in principle to the use of the Commission's reserves to fund this work, and Resolution **1999:5** on the funding of high priority scientific research, explicitly authorized the use of these funds.

Resolution **1998:11** about human health effects of the consumption of cetaceans, noted the mandate of the Convention that the Commission shall take "into consideration the interests of the consumers of whale products", and for the first time addressed in the IWC context the issue of the health implications of the consumption of certain cetacean products, in the light of current knowledge of the levels of chemical contaminants in cetaceans. It called for collaboration between the IWC and WHO on this issue.

Resolution **1999:4** on the same topic took the health issue further, by agreeing to keep the matter under regular review, and directed the Scientific Committee to collate and forward information on toxic contaminant burdens in cetaceans to the WHO and competent national authorities.

The first Special Issue of the Commission's new "Journal of Cetacean Research and Management" (*JCRM*) is devoted to chemical pollutants and cetaceans (1999), and contains the finalized proposal for the Pollution 2000+ project. The project focuses on PCB's in harbour porpoises and bottlenose dolphins, these being the substances and species for which meaningful conclusions might be obtainable in the shorter term.

The first joint IWC and CCAMLR field research under the SOWER 2000 project, took place in the 1999/2000 Antarctic season.

Resolution **2000:6** on persistent organic pollutants and heavy metals, urged members to ratify the protocol on Persistent Organic Pollutants of the Convention on Long Range Transboundary Air Pollution (LRTAP), with a view to reducing the rate of entry of these contaminants into the marine food chain. Resolution **2001:10** on the Stockholm Convention on Persistent Organic Pollutants (POP's), urged members to ratify the new Convention.

Resolution **2000:7** on environmental change and cetaceans, directed the Scientific Committee to produce an annual "State of the Cetacean Environment Report" (SOCER), and endorsed the Committee's plans for workshops on habitat degradation and cetacean/fishery interactions.

6. d) Implications for the IWC of work on environmental concerns: Research into whales and their environment is the fastest-growing area of the IWC's range of activities. It is a large topic that in future will occupy a large part of the Commission's attention.

The increasing attention to environmental issues will affect the character of the IWC in several ways. It will greatly expand the breadth of expertise needed to carry out its work, which will in turn necessitate substantially more collaboration with other agencies, whose focus of activities and expertise complement those of the IWC.

The past focus of the IWC on short-term and tightly circumscribed management questions, will gradually be replaced by an emphasis on longer-term programmes and policies of a more open-ended nature.

7. ECOSYSTEM APPROACHES AND INTERACTION WITH OTHER MARINE LIVING RESOURCES:

7. a) Resolution 1979:2 on the implications for whales of management regimes for other marine resources, drew attention to the potential impact on whales of a krill fishery in the Southern Ocean, and calls for IWC involvement in the proposed convention, then under negotiation, of Antarctic marine living resources, to ensure that the possible effects on whales are taken into account.

7. b) Resolution 1980:5 on co-operation and co-ordination between the IWC and the proposed Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), called for formal relations to be established between the IWC and CCAMLR as soon as the latter comes into existence. This was subsequently implemented and the scientific collaboration relationship between the IWC and CCAMLR continues.

7. c) In 1978 the Scientific Committee noted the problems arising when fishermen believe that cetaceans are responsible for declining coastal fish stocks, leading to killing of the cetaceans involved, in the absence of scientific evidence of an actual relationship. Examples cited were false killer whales and bottlenose dolphins at Iki Island in Japan, and killer whales along the coast of Norway. The Committee called for research by member nations, into cases of actual or alleged cetacean-fishery interactions, and this request was endorsed by the Commission (RIWC 29:26-27). Reports on interactions were reviewed annually until 1983, and information supplied to FAO which published a World Review of interactions between marine mammals and fisheries (FAO Fish. Tech. Pap. 251, 1984). The main interactions were the incidental take of cetaceans in fisheries; losses by fisheries to cetaceans occurred but not to a widespread extent.

7. d) The issue of cetacean/fishery interaction returned to the IWC agenda in 1999, following Japanese claims that cetaceans were consuming five times as much fish as the entire world fish catch. The Scientific Committee prepared a proposal for a workshop to address the issue, which the Commission endorsed in principle in Resolution 2000:7, for further development as part of its programme of work on environmental change and cetaceans. A revised proposal for the workshop was endorsed by the Commission in Resolution 2001:9 on interactions between whales and fish stocks, proposed by the USA and Japan, which also called for the participation of FAO. Regrettably, Japan subsequently refused to participate in the Workshop, which was held in June 2002. The report is still in preparation.

7. e) In 2000, Japan announced the expansion of its scientific whaling in the North Pacific, to encompass Bryde's and sperm whales as well as minke whales, giving as the main motivation a desire to study whale diets for the purpose of determining the impact of whales on fisheries. In 2002, the programme was further expanded to include sei whales as well, with the same motivation given.

8. SANCTUARIES:

8. a) Article V of the ICRW provides for the fixing of open and closed waters, including the designation of Sanctuary areas.

A sanctuary (known as "The Sanctuary") was in effect from 1938 to 1954 in the eastern South Pacific sector of the Southern Ocean, having originally been designated by the ICW, the ICRW's predecessor. The Sanctuary applied only to pelagic baleen whaling, which it effectively closed for the area in that sector south of 40 degrees S. From a current standpoint, it would be more appropriately described as a closed area than a sanctuary, because it lacked ecologically coherent boundaries and was only of limited effectiveness in protecting the whales, which passed through the area.

8. b) Indian Ocean Sanctuary: The first sanctuary in accord with modern concepts of whale sanctuaries was the Indian Ocean Sanctuary, proposed by the Republic of the Seychelles in 1979, and adopted by the Commission. The Sanctuary covers the entire Indian Ocean north of 55°S, plus adjacent waters including the Red and Arabian Seas and the Gulf of Oman (RIWC 30:27). The provision was to last for 10 years, subject to a review after 5 years.

The aim of the proposal was to provide an area where whale populations could be studied in the absence of disturbance from whaling, to provide an opportunity for depleted populations to recover, and to provide a reserve in case other populations elsewhere in the world of the species occurring in the Indian Ocean were lost.

The sanctuary was originally intended as an ecologically coherent area, but the boundary at 55°S was adopted as a compromise, to accommodate the interests of those countries conducting pelagic whaling in the Indian Ocean sector of the Antarctic, whaling which continues to this day.

The Scientific Committee's views on the sanctuary proposal were mixed. At that time, the main source of data on

whale populations was from whaling, and many scientists had concerns that a sanctuary could lead to a lack of data on the whale populations in the region, although it was noted that whaling under scientific permits would not be prohibited.

In any event, the years following the sanctuary designation saw a rapid development in non-lethal techniques for the study of whales, including those developed on the pioneering *Tulip* cruises in the Indian Ocean, sponsored by the World Wildlife Fund and other bodies. Knowledge of the cetacean fauna of the Indian Ocean is now much more extensive than it was in 1979, but there is still much to be learned.

Resolution **1979:3** in relation to the establishment of a whale sanctuary in the Indian Ocean, called on the Scientific Committee to investigate the kinds and level of research that would be needed in the Indian Ocean Sanctuary, to address the questions of interest to the Commission, and to report back by 1981. This advice was provided to the Commission (*RIWC* 32:132-135), which also received and endorsed the recommendations from a meeting of Indian Ocean States held in the Seychelles in 1980, including the proposal to hold a scientific meeting to plan research in the Sanctuary. This took place in 1981, under the sponsorship of the Seychelles and the Netherlands.

Resolution **1981:3** on communication between the IWC and Indian Ocean Coastal States, proposed by Oman, directed the Secretary to keep Indian Ocean States, including non-member States, informed of the Commission's work on the Sanctuary.

The accession, after the Sanctuary was adopted, of India, Kenya, Oman, Egypt, and Mauritius to the ICRW, increased the representation of Indian Ocean States within the IWC.

In view of the provision for a review after 5 years, the Scientific Committee in 1983 drew up an agenda for a scientific review meeting on the Sanctuary (*RIWC* 34:167), to be held in collaboration with FAO, IOC and UNEP, who were asked to provide assistance for the participation of representatives of IWC non-members.

Other priorities of the Commission delayed the review, but at the insistence of the Seychelles, Kenya, India, Oman, Australia, France and South Africa, the Commission agreed in 1985 to appoint a sub-committee of Indian Ocean member States, to prepare a proposal for a review to be held in 1987 (*RIWC* 36:13). At its 1986 meeting, the Commission approved the plans for a scientific review meeting on the sanctuary to be hosted by the Seychelles, and noted UNEP's offer to fund the participation of representatives from non-IWC Indian Ocean coastal States.

The scientific meeting held in 1987, found that cetacean research in the Indian Ocean Sanctuary had taken some time to get underway, mainly due to economic factors, and because of a shortage of expertise in the countries bordering the sanctuary. The situation was, however, improving thanks to support from UNEP and others. An administrative meeting on the Sanctuary held just before the 1987 Annual Meeting, made a number of recommendations to promote and co-ordinate research in the Indian Ocean Sanctuary, and the Commission established a sub-committee to implement these recommendations (*RIWC* 38:16-17). The general review of the prohibition of whaling in the Sanctuary, provided for in the original decision to be held by 1984, was re-scheduled for 1989, when the decision on whether or not to renew the Sanctuary would be taken. In 1988, the Commission endorsed the recommendation of the sub-committee, that the Scientific Committee compile a review of all research conducted in the Sanctuary since its establishment (*RIWC* 39:16-17). This was published by UNEP.

The Scientific Committee found that approximately up to half the published research was directly related to the Sanctuary designation, while the remainder would probably have occurred anyway (*RIWC* 40:72-73). The Committee noted further that the pause in commercial whaling, in force since 1986, had reduced the importance of the sanctuary designation, relative to the situation when it was adopted in 1979, but that this could change if commercial whaling were resumed.

After considerable debate on the merits of the Indian Ocean Sanctuary, the Commission adopted Recommendation **1989:4**, which noted that fulfilment of research objectives in the Indian Ocean Sanctuary is a long-term process, and depends on: (1) assistance to countries with little previous experience in cetacean research to develop their skills and capacity; (2) co-ordination of methods and exchange of materials, data and results and (3) facilitation of access [for research in waters under national jurisdiction]. The recommendation empowered the Secretary to work with UNEP, IOC and appropriate regional bodies to help achieve these goals.

Considering that a decision on the longer-term future of the Sanctuary should await the results of the Comprehensive Assessment, the Commission agreed by consensus to extend the Indian Ocean Sanctuary for three years (to 1992).

When the Commission returned to the matter in 1992, it took account of developments in the interim, both political and scientific. At a meeting of IOMAC (Indian Ocean Marine Affairs Committee), the Indian Ocean States, including the members and the non-members of the IWC, had passed a resolution calling for the declaration of the Indian Ocean as a Sanctuary for whales for all time. On the scientific front, one of the main results of the global Comprehensive Assessment was the draft Revised Management Procedure (RMP) which was to replace the previous management procedure of the IWC. The draft RMP, which was accepted by the Commission in Resolution 1992:3, did not envisage exploitation of baleen whales in their breeding grounds such as in the Indian Ocean Sanctuary. The Commission agreed by consensus to extend the Indian Ocean Sanctuary indefinitely, without any changes to its boundaries, but with a provision for review after 10 years (2002).

When the issue came up for review in 2002, the Scientific Committee reviewed extensive compilations of the research conducted in the Sanctuary to date. The Committee attempted to address the questions contained in the tentative evaluation guidelines for sanctuaries that were drawn up by the Commission in 2001. Although the Committee was able to provide substantive advice on many of the questions posed, no consensus conclusions could be reached as to the implications of this advice for the merits or otherwise of continuing the sanctuary. The Committee drew attention to the need to make the scientific objectives of sanctuaries clearer, and for the evaluation criteria themselves to be made more precise and operational (see below).

8. c) Southern Ocean Sanctuary: France first presented its proposal for a Sanctuary for great whales in all waters south of 40°S to the 44th Annual Meeting of the IWC in 1992. France appreciated that many members needed more time to consider it. Resolution 1992:4 on a Sanctuary in the Southern Hemisphere, adopted by consensus, agreed to consider the proposal fully at the 45th Meeting in 1993. It called on member Governments to submit comments and questions in the meantime, and for the Secretary to seek comments from CCAMLR, SCAR and other relevant international organizations. The Scientific Committee was instructed to review and advise on the scientific comments and questions raised.

Considerable support for the proposal was apparent at the 45th Annual Meeting. The Technical Committee endorsed the proposal by a majority vote. However, many members felt that more time was needed to fully consider all the implications of such a far-reaching proposal. Countries whose own exclusive fishery or economic zones might overlap with the proposed sanctuary, such as Chile, needed time to consider the implications especially carefully, and in particular the boundaries of the proposed sanctuary.

Resolution 1993:6, adopted by a majority vote, endorsed the concept of a sanctuary in the Southern Ocean, and resolved to address the outstanding legal, ecological, geographical, management, financial and global environmental issues relating to such a sanctuary. It accepted the offer by Australia to host a working group meeting to address these outstanding issues, and to make recommendations with a view to enabling the Commission to take a decision on the sanctuary at its 46th Meeting in 1994.

The Working Group met in Norfolk Island in 1994, and made an extensive set of recommendations which were endorsed by the Commission. In particular, it noted that there are no irreconcilable objections among the members of the Working Group and that a sanctuary could be created if the Commission so decided.

In 1994 the Commission adopted, by 24 votes to 1, an amended version of the French proposal, put forward by Mexico, whose boundary was at 60°S in the SE Pacific and far SW Atlantic sectors, thereby not overlapping the EEZ's of Argentina and Chile. In the Indian Ocean sector, the amended proposal had a boundary at 55°S, thereby adjacent to but not overlapping the Indian Ocean Sanctuary. The boundary was set at 40°S in the central and eastern South Atlantic and the western South Pacific. The sanctuary overlaps with the EEZ's of Australia and New Zealand, and with the fishery conservation zones of overseas territories of France and the UK.

The decision contained a provision that it be reviewed at 10-year intervals. The first review is due in 2004, but the Scientific Committee has proposed, and the Commission agreed, that its review of the scientific aspects should start in 2003, to be completed in 2004.

Japan lodged an Objection under the ICRW within the prescribed 90-day period, to the Sanctuary with respect to minke whales. No general objections to the Sanctuary were lodged, but Norway, and subsequently Japan, questioned the legality of the sanctuary decision, on the grounds that it was not "based on scientific findings" as Article V of the ICRW requires.

Some of the recommendations from the Norfolk Island Working Group related to scientific research in the sanctuary, and thus remained relevant after its adoption. These were considered by a Workshop to Outline a Programme of Non-lethal Research in the Sanctuary, held in 1995 with the co-sponsorship of WWF, Greenpeace and IFAW. The IWC Scientific Committee reported that most of the research recommendations from Norfolk Island were addressed in the Scientific Committee's ongoing Comprehensive Assessment of southern hemisphere baleen whales, and in its work on environmental concerns.

In 1995, 1996, 1997 and 1998, Japan presented legal opinions to the Commission which challenged the legality of the Sanctuary decision, but the Commission did not find it necessary to take any action on this, with many members commenting that the decision had been properly taken, that Japan had exercised its right to object with respect to one of the species affected, and that the proper way to call for a revision of the decision would be to propose a Schedule amendment. Accordingly, Japan in 1999 proposed amendments to the Sanctuary decision, including the exclusion of minke whales from the Sanctuary provision, but this was not adopted by the Commission. In 2000, 2001 and 2002, Japan submitted further proposals for Schedule amendments, which aimed at qualifying the prohibition on whaling in the Sanctuary, to make it dependent on advice from the Scientific Committee. All these proposals were withdrawn or voted down by the Commission. In 2002, Japan also submitted a proposal to abolish the Southern Ocean and Indian Ocean Sanctuaries, packaged with a proposal to adopt some elements of the Revised Management Scheme (RMS), but this was also voted down.

Resolution **1995:8** on whaling under Special Permit in Sanctuaries, called on members to conduct research in the Sanctuary using non-lethal methods and to refrain from issuing Special Permits for catches of whales in the Sanctuary.

In response to a request from the Scientific Committee for clarification of the scientific objectives of the Sanctuary, the Commission adopted Resolution **1998:3** on the Southern Ocean Sanctuary. The Resolution affirmed that the agreed objectives are to provide for: (1) recovery of whale stocks, including research and monitoring of depleted stocks; (2) the continuation of the Comprehensive Assessment of the effects on whale stocks of zero catch limits; and (3) the undertaking of research on the effects of environmental change on whale stocks. It further directed the Scientific Committee to provide the Commission with a long-term framework for non-lethal research, including multi-disciplinary research on the impact of environmental changes on cetaceans in the Sanctuary, and in particular to give priority to non-lethal research that will be relevant to the review of the Sanctuary in 2004 and beyond.

In 1999 the Scientific Committee reported back on its work in this regard. This include its SOWER 2000 project in collaboration with CCAMLR and SO-GLOBEC, its ongoing blue whale research programme under SOWER, and its ongoing comprehensive assessments of southern hemisphere baleen whales.

A new development relevant to the Sanctuary was the Scientific Committee's finding in 2000, that its earlier estimates of minke whale abundance in the Sanctuary from the 1990 Comprehensive Assessment appeared no longer to be current, and that the abundance appeared to have declined substantially. A programme of work was initiated to investigate this further. Definitive conclusions are scheduled for 2003. Resolution **2000:4** noted the concern and renewed the call on Japan to refrain from scientific whaling in the Sanctuary.

8. d) South Atlantic Sanctuary: In 1999 Brazil developed a proposal for a South Atlantic Sanctuary, to cover the waters of the South Atlantic bounded in the North by the equator, in the west by the Atlantic coast of South America, in the South by the boundary of the Southern Ocean Sanctuary, and in the east by the coast of Africa and the boundary of the Indian Ocean Sanctuary. It includes coastal waters of Argentina, Uruguay, Brazil, South Africa, Namibia, Angola, Dem. Rep. Congo, Congo, Gabon, Equatorial Guinea and São Tomé and Príncipe. In order to allow time for more consultations with member countries bordering the Sanctuary, Brazil asked for consideration by the Commission to be deferred to 2001.

Brazil and Argentina formally proposed the South Atlantic Sanctuary to the Commission in 2001, emphasising their rights as coastal states to utilize whale resources non-lethally, and that this be respected and protected by the Commission against the threat from a possible resumption of commercial whaling. With 19 votes for and 13 against, the proposal did not achieve the required $\frac{3}{4}$ majority. Some members indicated that they had not voted for it because of the lack of information on whether non-member countries in the region endorsed the proposal. Brazil consulted

with non-members and reported their responses to the Commission in 2002, and re-proposed the Sanctuary. It failed again with 23 for to 18 against. Gabon had in the meantime joined the Commission, and voted against the Sanctuary in 2002.

Brazil, Argentina and South Africa have already established whale sanctuaries in their coastal waters.

8. e) South Pacific Sanctuary: Australia and New Zealand tabled a proposal in 1999 for a sanctuary covering the western and central South Pacific, between the equator and the Southern Ocean Sanctuary, adjoining the Indian Ocean Sanctuary in the west. The proposal was referred to the Scientific Committee, which could not give a definitive recommendation, but listed general arguments for and against sanctuaries.

The sanctuary was formally proposed to the Commission in 2000. The proponents, Australia and New Zealand, believed that it would: (1) protect whale stocks that have been severely depleted in the 19th and 20th centuries and allow their recovery; (2) complement and improve the effectiveness of the Southern Ocean Sanctuary in protecting migratory whale species; (3) foster long-term ecosystem-based research on whale stocks that are not being harvested; and (4) enable management of whale stocks in accordance with the goal of long-term conservation of biodiversity and the precautionary principle.

Despite considerable support, the South Pacific Sanctuary proposal failed to gain the required ¾ majority (18 votes for to 11 against). The proposal was resubmitted in 2001 and 2002, with similar voting results (approx. 60% for to 40% against, not counting abstentions).

The Commission was informed that meetings of the South Pacific Regional Environmental Programme (SPRIEP), and the Pacific Island Leaders' Forum, where most countries in the region were represented, had expressed support for the Sanctuary. Australia and New Zealand stressed the importance of recognizing the non-consumptive relationship of the people in the region with whales.

Many South Pacific countries have now declared their Exclusive Economic Zones (EEZs) to be whale sanctuaries, or zones of protection for whales. Environment Australia indicates that the waters of New Zealand and Vanuatu are *de facto* sanctuaries as a result of whale protection legislation. In addition the EEZs of French Polynesia, The Cook Islands, Niue, Tonga and Australia have been declared sanctuaries.

8. f) Other sanctuaries: Various other sanctuaries have been mooted, including the NW Atlantic (by Jamaica), a proposal from UK for a NE Atlantic sanctuary, and the Mediterranean sanctuary which was agreed by all the Parties to ACCOBAMS (the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area), but is yet to be brought forward to the IWC, though Italy announced its intention to do so at the 2002 IWC Commission meeting.

8. g) General criteria for sanctuaries: At the 1981 and 1982 Commission meetings, Australia noted the desirability of the Commission drawing up general guidelines on the matter of sanctuaries, to facilitate evaluation of future sanctuary proposals. A Technical Committee Working Group was established, which drew up criteria that a sanctuary should satisfy, and information that should be supplied in order for a sanctuary proposal to be evaluated.

The Technical Committee proposals were not formally adopted, because questions were raised by several countries about coastal State jurisdiction in sanctuaries. The Commission directed the Secretary to collect information from member Governments on areas of protection for whales in waters under their jurisdiction. The Secretary presented a list of these areas in 1984, based on the responses received from members, and additional information from F/AC and UNEP on protected areas in the waters of non-member countries.

Over the 1980's and 1990's, consideration of sanctuaries by the IWC was entirely in the specific contexts of the Indian Ocean Sanctuary and the Southern Ocean Sanctuary, that was adopted in 1994. The issue of generic criteria for sanctuaries was raised by the Scientific Committee again in 2000, when it was asked to review the proposal for a South Pacific Sanctuary.

In 2001, the Commission adopted a set of "Instructions from the Commission to the Scientific Committee for Reviews of Sanctuaries", and directed the Committee to use them for the review of the Indian Ocean Sanctuary in 2002, and for any new sanctuary proposals, and to report back to the Commission on the utility of these guidelines.

In 2002 the Scientific Committee used the guidelines for its review of the Indian Ocean Sanctuary, but found that they needed to be made more precise and operational. It agreed to develop a proposal for a more precise set of criteria

to be presented to the Commission in 2003 (IWC/54/4 p.98)

8. h) **Conclusions on sanctuaries:** Whale sanctuaries represent an opportunity for all aspects of the emerging expanded agenda of the IWC, to be realized in an ecologically coherent region. This is especially evident in the Southern Ocean Sanctuary, and to some extent in the Indian Ocean Sanctuary, although in the latter case it is clear that more assistance is needed to help coastal States develop their capacity and expertise for cetacean research and conservation. The Indian Ocean Sanctuary is, however, a good example of how the IWC can support a regional consensus, that uses of whales be strictly non-lethal.

The cases of the proposed South Pacific and South Atlantic sanctuaries, show that the IWC has a potential role to play in providing international support to coastal States who seek to develop exclusively non-lethal uses of their cetacean resources. They seek support and protection from the IWC, as the only body capable of giving protection to the whales in their waters, while they are passing through High Seas areas.

It is therefore important to explore within the IWC context, the concept of sanctuaries as regions of special protection for whales, in which the IWC could declare a policy of supporting coastal States' desires for exclusively non-lethal use of the cetaceans migrating into their waters. The pillars of such an approach could include:

- (1) Collaboration with coastal states;
- (2) Co-operation with other regional conservation organisations, including agreements established under the auspices of CMS (Bonn Convention) and
- (3) A policy of not relaxing current ICRW protection measures for whales in these regions (for example the zero catch limits in effect since 1986).

9. ENFORCEMENT OF CONSERVATION MEASURES AND MONITORING OF COMPLIANCE:

9. a) In the IWC's first 30 years or so, large-scale catches of whales were authorized by the IWC, and the debates focused on what conservation measures were necessary. As the Commission gradually moved to a more conservation-oriented and precautionary approach to management, and has steadily extended the scope of its conservation measures, the importance of ensuring that the Commission's conservation measures are actually complied with, has gathered in importance relative to the adoption of new measures.

9. b) **Non-member whaling:** In the 1970's the main compliance problem was considered to be non-member whaling. In 1974 the IWC sought the assistance of UNEP in persuading non-member countries engaged in whaling to join the IWC. Resolution **1976:4** on adherence to the Convention called on non-members engaged in whaling to join the Commission, while Resolution **1976:5** resolved that members should prohibit the transfer of whaling vessels, equipment, or expertise to non-member countries or entities. Resolutions **1977:2, 3** and **4** on specific whale stocks called on specific non-member whaling countries to join the Commission. Resolution **1977:8** repeated this call and resolved that members report on the steps taken to implement it. Resolution **1977:7** on the prevention of importation of whale products, required members to prohibit the import into their countries of whale products, as did Resolution **1978: E** on the importation of whale products from non-IWC countries. Resolution **1978: F** on the transfer of whaling equipment and expertise, repeated the call not to export whaling technology or expertise to non-members. Resolution **1979:9** on the importation of whale products from, export of whale products to, and prohibition of whaling by non-member countries, reiterated these requirements with more force, and further called on members to prohibit non-member whaling within their fishery conservation zones, the precursors to the EEZ's that would be recognized under the emerging Law of the Sea.

9. c) Partly as a result of the resolutions, whaling countries Korea, Spain, Chile and Peru became members of the IWC in 1979.

9. d) The Commission in 1979 established a register of whaling vessels, to help members take action against whaling by vessels flying flags of convenience (RW/C 30/32).

- 9. e)** Resolution **1980:6** on discouraging whaling operations outside IWC regulations, established a Working Group to consider all questions relating to whaling operations outside the ICRW, and called for consideration of Schedule amendments to enforce the measures relating to prohibitions of imports from, and exports of technology to, non-member whaling countries or entities. Resolution **1981:6** adopted the recommendations of the Working Group, including the endorsement of procedures to enable the IWC to gather information on whaling vessels, via insurance records and inspection visits to non-member countries (subject to the latter's agreement).
- 9. f)** Resolution **1993:18** on whaling activities by non-member states, returned to the issue, and directed the Secretary and members to gather and submit information on whaling by non-member States.
- 9. g)** International trade in whale products and co-operation with CITES: CITES (Convention on International Trade in Endangered Species of Flora and Fauna) came into force in 1975. From the beginning, it supported the conservation efforts of the IWC by including in its Appendix I those species which were fully protected from commercial whaling by the IWC, namely blue, humpback, right and gray whales. By prohibiting international commercial trade, or introduction from the sea, in these species, it provided a legal means to assist with the implementation and enforcement of IWC conservation measures.
- 9. h)** In 1977, the IWC offered to CITES to be its adviser on cetaceans, to provide scientific information on whale populations in relation to the CITES listing criteria, information on the explanation of species listed on CITES appendices, and advice on the identification whale products (*RIWC* 28:23). The IWC offer was accepted by the CITES Special Working Session in 1977, where it was provisionally agreed that CITES would provide protection to whale populations, not just whole species, that were protected by the IWC. This request was formalized in IWC Resolution **1978:D**, addressed to CITES. CITES in turn adopted Resolution 2.9 at its 2nd Conference of Parties in 1979, which called on its members not to issue permits for imports or exports of products from whale populations protected from commercial whaling by the IWC. The populations were added to Appendix I of CITES, and all other cetaceans were placed on Appendix II.
- 9. i)** Subsequently, when all remaining large whale populations became protected from commercial whaling by the IWC in 1986, CITES transferred them to Appendix I. The policy of CITES adopted in Resolution 2.9 remains in effect, having been consolidated into Resolution 11.4, adopted at the 11th CITES COP in 2000.
- 9. j)** The IWC did not follow up on its original offer to assist with the identification of cetacean products in trade, until new DNA analysis technology became widely available in the 1990's, that made it practical to identify cetacean species from samples of meat and blubber on the market.
- 9. k)** Following discoveries of various illegal shipments of whale products, and the identification of various prohibited species on domestic whalemeat markets, Resolution **1994:7** on international trade in whale meat and products, requested members to provide information on whale products in their domestic markets, and their source; information on intercepted shipments; and information on national laws and regulations relating to trade in whale meat. CITES reciprocated with Resolution 9.12, that requested its members to forward any information on illegal trade in whalemeat to the Secretariat, and for the CITES and IWC Secretariats to exchange any information received.
- 9. l)** Resolution **1995:6** on trade in whale meat, called on members to prohibit domestic sales of whale products that could not have come from whales obtained in accordance with IWC and CITES regulations; to conduct random sampling of whale products on their markets; to determine the species on sale; and to establish measures to monitor the composition of whale meat stockpiles, and report this to the Commission.
- 9. m)** Resolution **1996:3** on improving mechanisms to restrict trade in whale meat, called on members to report annually, from 1997 onwards, on stockpiles of whale products, and on domestic regulations to control illegal trade in whale meat and on the actions taken to enforce them.
- 9. n)** Resolution **1997:2** on improved monitoring of whale meat stockpiles, called on members to maintain registries of DNA samples of each individual whale entering into commerce and to make these databases available to the Commission.
- 9. ñ)** Resolution **1998:8** on co-operation between the IWC and CITES, reaffirmed the long-standing relationship between the IWC and CITES, and called on members to fully comply with the previous resolutions relating to trade in whale products.
- 9. o)** Resolution **1999:8** on DNA testing, added a regular item to the agenda of the Scientific Committee relating to

the collection, archiving and analysis of DNA samples from direct and incidental catches, frozen stockpiles, and seized or impounded products, and to provide advice on a system for tracking and verifying all legal whale products.

9. p) Resolution **1999:6** on co-operation between the IWC and CITES, notes the valuable contribution of CITES to the enforcement of IWC conservation measures, by including on its Appendix I all whale species subject to zero catch limits under the ICRW, and informs CITES that the IWC is not yet ready to amend such zero catch limits.

10. MANAGEMENT OF LETHAL SCIENTIFIC RESEARCH (“SCIENTIFIC WHALING”):

10. a) The ICRW is a science-friendly convention. It empowers the IWC to co-ordinate and conduct scientific research, and requires it to base its decisions on scientific findings. It also gives members the right, under Article VIII, to issue permits for the take of cetaceans for scientific purposes.

10. b) Unfortunately, some members have interpreted this provision as a licence to bypass the IWC’s conservation measures, and to issue scientific permits for catches of whales on a similar scale to ordinary commercial whaling. Although Article VIII does indeed exempt whales taken for scientific purposes from the specific regulations of the Convention, it does not authorize members to ignore the general obligation to conserve whales for the benefit of future generations. Nor does it exempt members from general requirements under international law, including the Law of the Sea, to ensure that marine resources are not overexploited and to co-operate with the appropriate international organizations.

10. c) The (ab)use of the scientific permit provision to conduct commercial-scale whaling on protected species and stocks, has long been an issue of contention within the Commission. For example, in the 1970’s some members issued permits for the take of commercial quantities of Brydes whales in the Southern Hemisphere, despite the Commission’s decision to set a precautionary zero catch limit for Bryde’s, pending a satisfactory estimate of stock size (*RIWC* 27:34).

10. d) In 1979, the Commission obtained legal advice that it was permissible under the Convention, Article VIII notwithstanding, to require prior review of Scientific Permits by the Scientific Committee, and a Schedule amendment to that effect was adopted (*RIWC* 30:31).

10. e) In 1985, some members submitted plans for the issuance of scientific permits, which implied that they would continue whaling after the coming into effect of the moratorium in 1986, at a level similar to their (then) current commercial whaling activities. Resolution **1985:2** drew attention to the risk that scientific whaling could assume the characteristics of commercial whaling during the moratorium period, and established a working group to address the problem. These discussions resulted in Resolution **1986:2**, which recommended that Scientific Permits only be issued when the research objectives cannot be met by non-lethal methods, and when the research is structured to provide information that is essential for the rational management of the stock.

10. f) Resolution **1987:1** further recommended that the Scientific Committee review each proposed permit against the above criteria, and determine whether it addresses questions that need to be answered, to conduct the Comprehensive Assessment or meet other critically important research needs. The Resolution mandated the Commission to review annually the Committee’s advice on Scientific Permits and to inform the governments concerned when a permit or proposed permit is found not to meet the guidelines. On this basis, Resolutions **1987:2**, **3** and **4** called on those members with scientific whaling programmes to end them (in one case) or suspend them pending clarification of some questions (in two cases).

10. g) Resolution **1988:3** on the issuance of scientific permits, recommended that no permits be issued until members of the Commission had had at least 60 days to consider the Scientific Committee’s evaluation of the proposed permit. Resolutions **1988:1-2** found that one proposed and one ongoing scientific whaling programme did not meet the criteria established in the above Resolutions, and notified the relevant governments accordingly. Resolutions **1989:1-3** called for the reconsideration of three members’ scientific whaling programmes. In 1990, two of these programmes were still continuing, and Resolutions **1990:1-2** repeated the call to reconsider them. One of these programmes (Japanese scientific whaling in the Antarctic) continued in 1991 and Resolutions **1991:2**, **1992:5**, **1993:7** and **1994:10** called again for it to be reconsidered. Resolution **1991:3** called for a proposed new programme by the then USSR, not to commence until it had been brought into line with Commission’s guidelines and reviewed anew by the Commission. Resolution **1992:6** called for a new scientific whaling programme announced by Norway to be reconsidered. This request was not complied with, and was repeated in Resolutions **1993:8** and **1994:11**.

10. h) In 1994, Japan announced a new scientific whaling programme for minke whales in the North Pacific. The

Commission, on the advice of the Scientific Committee, found that the objectives of the research did appear to meet the Commission's criteria, but recommended that they be achieved by non-lethal methods (Resolutions **1994:8 and 9**).

10. i) The continuation of scientific whaling in the Antarctic, despite its designation as a sanctuary in 1994, introduced a new dimension into the scientific whaling problem. Resolution **1995:8** on whaling under scientific permit in sanctuaries, called on members to collaborate on a programme of research in the Southern Ocean Sanctuary using non-lethal methods, and to refrain from issuing scientific permits for the take of whales in the Sanctuary.

10. j) Resolution **1995:9** on whaling under special permit, replaced Resolutions 1986:2 and 1987:1. It recommended that scientific research to assist in the Comprehensive Assessment be conducted by non-lethal means, and that the killing of cetaceans for scientific purposes only be permitted in exceptional circumstances, where the research addresses critically important issues which cannot be answered by the analysis of existing data or the application of non-lethal methods. It further instructed the Scientific Committee to reassess all existing and new scientific whaling to identify what critically important questions, if any, are addressed by the lethal takes and whether these could be met by non-lethal means. This resolution is still in effect and represents current IWC policy with respect to scientific whaling.

10. k) Based on these criteria, Resolution **1996:7** called on Japan to end its scientific whaling in the Southern Ocean and the North Pacific. This request was repeated in Resolutions **1997:5 and 6**.

10. l) Resolution **1998:4** notes that other scientific organizations now have ethical guidelines as to under what circumstances the killing of animals for scientific research is justified, and instructed the Secretariat to compile information on the policies of other international scientific organisations in this regard. Resolution **1999:3** noted the finding of this review that the legislation, guidelines and codes of conduct that exist, generally require that research be conducted so as to minimize the stress, distress, pain and suffering caused to the animals, and that non-lethal means or fewer animals be used where possible. Accordingly, Resolution **1999:2** instructed the Scientific Committee to determine, in each case, whether the information obtained from scientific permits is (a) required for management and (b) obtainable by non-lethal means.

10. m) In 2000, Japan announced the expansion of its scientific whaling in the North Pacific to encompass Bryde's and sperm whales, as well as minke whales, giving as the main motivation a desire to study whale diets for the purpose of determining the impact of whales on fisheries. In 2002, the programme was further expanded to include sei whales as well, with the same motivation given. Resolutions **2000:5** and **2001:8** stated the Commission's view that this is not a sufficient justification for the takes of whales.

10. n) In 2000 and 2001, the Scientific Committee noted that recent data indicate that the abundance of minke whales in the Southern Ocean, appears to have declined substantially since the last Comprehensive Assessment of these populations was conducted in 1990. It initiated a thorough reassessment of Southern Ocean minke whale abundance to be completed in 2003. Resolutions **2000:4** and **2001:7** asked Japan to cease catches of minke whales in the Southern Ocean Sanctuary, pending the results of this review.

10. ñ) Conclusions on the scientific whaling problem: The non-compliance with the Commission's policy on scientific whaling is now a greater conservation problem than official commercial whaling. Current definitions of non-compliance with respect to marine conservation, such as that in the draft FAO compliance agreement, define non-compliance to include any action that undermines the effectiveness of conservation measures adopted by the competent regional or international organization, regardless of whether or not the action is technically legal. Thus, even countries which take the view that Article VIII of the ICRW legalizes all scientific takes, however excessive, cannot claim to be in compliance with the ICRW so long as they continue to ignore IWC decisions in this regard.

Given the limited success in obtaining compliance with the IWC decisions to date with respect to scientific whaling, it is clear that a new approach is needed. However, it is important that any difficulties encountered in tackling this problem do not delay progress in the many other areas where the IWC needs to move forward.

11. COLLABORATION WITH OTHER ORGANISATIONS:

11. a) In its first few decades, most conservation actions of the IWC related purely to the regulation of whaling: at that time the impact of whaling on the whale populations dwarfed the other conservation issues relating to whales. Consequently, most of the actions taken by the IWC could be taken in isolation with little reference to other organizations.

11. b) However, the mandate of the IWC is not limited to the regulation of whaling. Article IV of the ICRW empowers the Commission to collaborate with agencies of the member Governments or with other public or private agencies, establishments or organizations, to encourage, recommend or, if necessary, organize studies and investigations relating to whales. Article VI empowers the Commission to make recommendations on any matters relating to whales and to the objectives of the ICRW.

11. c) As the emphasis of the IWC's activities shifts away from its traditional focus on the regulation of whaling, and more towards the conservation of whale populations with respect to the whole panoply of new threats which they face, so will the extent to which the IWC can achieve its objectives working alone diminish. The multi-faceted nature of the new threats to cetaceans are such, that they impinge on the responsibilities of States and numerous international and regional agencies, such that the Commission's work will inevitably be characterized by increasing collaboration with States and other agencies.

11. d) Over the years the IWC and its Scientific Committee have co-operated with a number of other international organizations whose fields of competence or activity overlap with those of the IWC, or relate to matters that have implications for whale conservation. The specifics of this collaboration are listed under the relevant subject items in this document.

11. e) Interactions between cetaceans and fisheries, including incidental catch, have necessitated co-operation with FAO, ICCAT, and IATTC.

11. f) The dependence of many whales on the Southern Ocean ecosystem, and the possible effects of exploitation of other resources there, and of environmental change, has motivated the collaboration with CCAMLR, SCAR, and SOGLOBEC.

11. g) The co-operation with CITES is described in the section on trade in whale products.

11. h) There has long been collaboration with UNEP and IUCN on a variety of cetacean conservation issues.

11. i) Co-operation with ICES has been on sampling of pollutants in cetaceans, and more recently on multi-species modelling and management issues involving cetaceans.

11. j) The IWC has on occasions provided direct input to the UN, for example in 1990 on the issue of cetacean bycatch in large pelagic driftnets, on the question of Antarctica, and input to UNCED in 1992.

11. k) The Convention on Migratory Species (CMS) and regional cetacean conservation agreements negotiated under CMS, such as ASCOBANS in the North and Baltic Seas, and ACCOBAMS in the Black and Mediterranean seas, provide a framework for conservation measures for cetaceans that complement those of the IWC, and scientific collaboration on issues of population status and threats is clearly advantageous. A Memorandum of Understanding between the IWC and CMS was signed in 2000.

11. l) The increasing attention of the IWC to the effects of global ocean change on cetaceans, motivates the increased collaboration with the Intergovernmental Oceanographic Commission (IOC).

11. m) The co-operation with IOMAC (Indian Ocean Marine Affairs Co-operation) has been in the context of implementation and renewal of the Indian Ocean Sanctuary.

11. n) Implications for the IWC of increased collaboration: The increased emphasis on collaborative actions will in turn involve changes to the structure and working methods of the IWC and its subsidiary bodies, such as the Secretariat and Scientific Committee.

An increasingly important role of the IWC is not only to take actions itself, but to ensure that cetacean conservation needs are taken into account in decisions by other bodies that impact cetaceans and their environment. With its strong scientific profile the IWC, together with its new proposed Conservation Committee, is well-placed to fulfill this role, provided that it is successful in developing its standing as a world scientific, technical and management authority for cetaceans. Its Conservation Agenda will be instrumental to this end. The IWC has much scientific expertise at its disposal that is mutually complementary to that of other agencies. It is important that the IWC works to "put itself on the map" in the perception of States and agencies involved in marine affairs.

**Annex 38: Resolution on Whaling under Special Permit, Resolution 2003-2,
Annex F, Chair's Report of the Fifty-Fifth Annual Meeting,
Annual Report of the International Whaling Commission 2003, 102**

**Resolution 2003-2
Resolution on Whaling under Special Permit**

AWARE that Article VIII of the ICRW allows contracting Governments to grant Special Permits for purposes of scientific research on whales;

NOTING that Article VIII of the ICRW was drafted and accepted by States Parties in 1946, at a time when few alternatives to lethal investigations existed, a situation drastically different from today;

RECALLING that since the adoption of the moratorium on commercial whaling in 1985/1986, the IWC has adopted over 30 resolutions on special permit whaling in which it has expressed its opinion that special permit whaling should: only be permitted in exceptional circumstances (1995-8 and 9); meet critically important research needs (1987); satisfy criteria established by the Scientific Committee; be consistent with the Commission's conservation policy (1987/1); be conducted using non lethal research techniques (1995-9); and ensure the conservation of whales in sanctuaries (1995-8);

RECALLING in particular that the Commission has expressed serious concern at the possibility of whaling for scientific purposes assuming the characteristics of commercial whaling (1985/2);

RECALLING also that the Commission has stated that the meat and products of special permit whaling should be utilised entirely for domestic consumption (IWC1994-7) and that any commercial international trade in whale products obtained from research whaling undermines the effectiveness of the IWC's conservation programme (1994-7);

CONCERNED that over 7,500 whales have been taken in special permit whaling operations since the moratorium on commercial whaling entered into force and there is no complete record as to how many whales have been struck and lost;

AWARE that whales caught in Japan's special permit operations provide over 3,000 tonnes of edible products per year that are sold for commercial purposes;

NOTING that Iceland has presented a programme to the Commission which would allow the killing of 250 whales (100 minke, 100 fin and 50 sei whales) a year for two years in a Special Permit whaling operation that would provide over 4000 tonnes of edible products;

NOTING that there has never been a formal assessment of sei whales in Icelandic waters, that considerable concern was expressed during the discussions of the Scientific Committee with regard to the status of this population, and that the take of 50 sei whales under the Icelandic feasibility programme would likely threaten its recovery;

RECOGNISING that considerable information on feeding ecology collected by Iceland under its previous Special Permit suggests that fin and sei whale diet is comprised principally of krill and that genetic analysis of whale seats would provide an ideal non-lethal method for determining prey shifts in their diet;

NOTING with concern that most of the data collected under Iceland's previous Special Permit has not yet been published; that most whales killed under that previous permit were exported; and that thousands of archival tissue samples are currently available which could enable the completion of this feasibility programme.

NOW THEREFORE THE COMMISSION

EXPRESSES deep concern that the provision permitting special permit whaling enables countries to conduct whaling for commercial purposes despite the moratorium on commercial whaling;

STATES that the current and proposed Special Permit whaling operations represent an act contrary to the spirit of the moratorium on commercial whaling and to the will of the Commission;

STATES that Article VIII of the Convention is not intended to be exploited in order to provide whale meat for commercial purposes and shall not be so used;

REAFFIRMS that non-lethal techniques available today will usually provide better data at less cost to both animals and budget;

URGES any country conducting or considering the conduct of Special Permit whaling to terminate or not commence such activities and to limit scientific research to non-lethal methods only.

Annex 39: Resolution on Southern Hemisphere Minke Whales and Special Permit Whaling, Resolution 2003-3, Annex G, Chair's Report of the Fifty-Fifth Annual Meeting, *Annual Report of the International Whaling Commission 2003*, 103

Resolution 2003-3

Resolution on Southern Hemisphere Minke Whales and Special Permit Whaling

NOTING that the Government of Japan continues to issue Special Permits, under the provisions of Article VIII of the Convention, for lethal scientific research on minke whales in the Southern Ocean Sanctuary (Japan's Whale Research Program under Special Permit in Antarctica – JARPA);

RECALLING that the Scientific Committee agreed in 2000 that there was no valid estimate for Southern Hemisphere minke whales and that there is still no agreed estimate for Southern Hemisphere minke whales;

FURTHER RECALLING concerns expressed in Resolution 2000-4 regarding appreciably lower preliminary abundance estimates for Southern Hemisphere minke whales;

CONCERNED that the Scientific Committee report of 2001 did not rule out that the Southern Hemisphere minke whale population may have suffered a precipitous decline over the past decade;

NOTING Resolution 2001-7, which requested that the Scientific Committee provide to the Commission at IWC 54:

- (i) a list of plausible hypotheses that may explain this apparent population decline;
- (ii) the possible implications that such a decline in abundance may have for the management of minke whales in the Southern Hemisphere, and for ecologically-related species, in particular other cetaceans, and the state of the Antarctic marine ecosystem;

FURTHER NOTING that the list of plausible hypotheses reported by the Scientific Committee (IWC/54/4 – Report of the Scientific Committee) mostly focused on explanations for a decline in abundance estimates rather than an actual decline in population; and concluded it was most appropriate to fully address the request contained in Resolution 2001-7 after completing its work on reviewing the IDCR/SOWER abundance estimates, which in 2003 remains incomplete;

RECOGNISING the emerging importance of alternative non-lethal research methodologies such as scat DNA sampling and biopsy samples;

NOW THEREFORE THE COMMISSION

REQUESTS the Scientific Committee to provide to the Commission, after the completion of the IDCR/SOWER abundance estimates, all plausible hypotheses to explain any decline in abundance estimates that may emerge, and in doing so to consider fully:

- (i) the possible negative impact of the take of minke whales, under Japan's Research Program in the Antarctic, including struck and lost data, on the decline in minke whales population estimates; as well as
- (ii) the impact of environmental change factors;

CALLS ON the Government of Japan to halt the JARPA program, or to revise it so that it is limited to non-lethal research methodologies;

RECOMMENDS that no additional JARPA programs be considered until the Scientific Committee has completed:

- (i) an in-depth review of the results of sixteen years of JARPA;
- (ii) its review of the abundance estimates for Southern Hemisphere minkes; and
- (iii) the actions requested above

and that any such programs should be limited to non-lethal research;

Annex 40: Resolution on JARPA II, Resolution 2005-1, Annex C, Chair's Report of the Fifty-Seventh Annual Meeting, *Annual Report of the International Whaling Commission 2005*, 1

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Annex C

Resolutions Adopted at the 57th Annual Meeting

Resolution 2005-1

RESOLUTION ON JARPA II

AWARE that Article VIII of the International Convention for the Regulation of Whaling allows Contracting Governments to grant Special Permits for the purpose of scientific research on whales,

RECALLING that since the moratorium on commercial whaling came into force in 1985/86, the IWC has adopted over 30 resolutions on Special Permit whaling in which it has generally expressed its opinion that Special Permit whaling should: be terminated and scientific research limited to non-lethal methods only (2003-2); refrain from involving the killing of cetaceans in sanctuaries (1998-4); ensure that the recovery of populations is not impeded (1987); and take account of the comments of the Scientific Committee (1987).

ALSO RECALLING Resolution 2003-3 that no additional Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) programs be considered until the Scientific Committee has completed an in-depth review of the results of JARPA;

FURTHER RECALLING that earlier this year the Government of Japan concluded JARPA - an 18-year program of whaling under Special Permit in Antarctic waters;

NOTING that the results of the JARPA program have not been reviewed by the Scientific Committee this year;

CONCERNED that more than 6,800 Antarctic minke whales (*Balaenoptera bonaerensis*) have been killed in Antarctic waters under the 18 year of JARPA, compared with a total of 840 whales killed globally by Japan for scientific research in the 31 year period prior to the moratorium;

NOTING that it is the Government of Japan's stated intention to more than double the annual catch of Antarctic minke whales and also take 50 fin whales (*B. physalus*) and 50 humpback whales (*Megaptera novaeangliae*) under the proposed JARPA II program;

NOTING that the Third Circumpolar Survey indicates that the abundance of Antarctic minke whales is substantially lower than the earlier estimate of 760,000, and that the Scientific Committee is working to identify factors contributing to the differences between the two surveys;

CONCERNED that there are no agreed data to indicate that endangered fin whale populations have increased since the cessation of whaling;

ALSO NOTING that some humpback whales which will be targeted by JARPA II belong to small, vulnerable breeding populations around small island States in the South Pacific and that even small takes could have a detrimental effect on the recovery and survival of such populations; and

ALSO CONCERNED that JARPA II may have an adverse impact on established long-term whale research projects involving humpback whales;

NOW THEREFORE THE COMMISSION:

REQUESTS the Scientific Committee to review the outcomes of JARPA as soon as possible; and

STRONGLY URGES the Government of Japan to withdraw its JARPA II proposal or to revise it so that any information needed to meet the stated objectives of the proposal is obtained using non-lethal means.

Resolution 2005-2

RESOLUTION ON FACILITATING CLOSER COOPERATION AMONG THE RANGE STATES TO EXPEDITE THE SIGHTING SURVEY ON THE MINKE WHALES OFF KOREAN PENINSULA

RECOGNISING THAT the common minke whale stock migrating off Korea, Russia, China and Japan should be conserved and managed appropriately, and that the Scientific Committee is now preparing the in-depth assessment for this stock;

NOTING THAT the spatio-temporal coverage of the past research on this stock for a population assessment was restricted and that data and samples for stock identification are still insufficient; and

NOTING THAT the Commission has classified this stock as a "Protected Stock" and a comprehensive assessment has not been conducted during the past twenty years;

NOW THEREFORE THE COMMISSION:

WELCOMES a workshop for non-lethal research collaboration on this stock to be held in Ulsan early in 2006 to be hosted by the Republic of Korea and encourages all range states and other interested parties to participate in the workshop;

REQUESTS the relevant countries that have unsurveyed waters under their jurisdictions to conduct cooperative non-lethal scientific research for the 2006 surveys; and

RECOMMENDS that scientists from range states and other countries to collaborate in association with the IWC Scientific Committee and harmonize efforts to develop a research program and conduct analysis of data, and that funds to be provided.

Annex 41: Resolution on JARPA, Resolution 2007-1, Annex E, Chair's Report of the Fifty-Ninth Annual Meeting, *Annual Report of the International Whaling Commission 2007*, 90

Annex E

Resolutions Adopted at the 59th Annual Meeting

Resolution 2007-1

RESOLUTION ON JARPA

WHEREAS paragraph 7(b) of the Schedule establishes a sanctuary in the Southern Ocean;

RECALLING that the Commission has repeatedly requested Contracting Parties to refrain from issuing special permits for research involving the killing of whales within the Southern Ocean Sanctuary, has expressed deep concern at continuing lethal research within the Southern Ocean Sanctuary, and has also recommended that scientific research involving the killing of cetaceans should only be permitted where critically important research needs are addressed;

CONSCIOUS that the Scientific Committee last year convened a Workshop to analyse the results of JARPA I, which is reported in SC/59/Rep1;

NOTING that the Workshop agreed that none of the goals of JARPA I had been reached, and that the results of the JARPA I programme are not required for management under the RMP;

FURTHER NOTING that the Government of Japan has authorised a new special permit programme in the Antarctic, JARPA II, in which the take of minke whales

has been more than doubled, and fin whales and humpback whales have been added to the list of targeted species;

CONCERNED that fin whales in the Southern Hemisphere are currently classified as endangered, and that humpback whales in the JARPA II research area may include individuals from depleted breeding populations overwintering in the waters of certain Pacific Islands; and

CONVINCED that the aims of JARPA II do not address critically important research needs;

NOW THEREFORE THE COMMISSION:

CALLS UPON the Government of Japan to address the 31 recommendations listed in Appendix 4 of Annex O of the Scientific Committee report relating to the December 2006 review of the JARPA I programme to the satisfaction of the Scientific Committee; and

FURTHER CALLS UPON the Government of Japan to suspend indefinitely the lethal aspects of JARPA II conducted within the Southern Ocean Whale Sanctuary.

Annex L

Proposed Guidelines for Review of Scientific Permits

In reviewing scientific permits the Scientific Committee should provide the following information.

1. A statement as to whether the permit proposal adequately specifies the four sets of information required under Paragraph 30 of the Schedule.
2. Comments on the objectives of the research to be carried out under the proposed scientific permit, including in particular how they might relate to research needs identified by the Scientific Committee.
3. A review of the most recent information on the stock or stocks concerned, including information on any exploitation, stock analysis and recommendations by the Scientific Committee to date (including, where appropriate, alternative analyses and conclusions and points of controversy).
4. Comments of the methodology of the proposed research and an evaluation of the likelihood that the methodology will lead to achievement of the scientific objectives. These comments may also include evaluation of the methodology in terms of current scientific knowledge.
5. Comments on the adequacy and implications of specified arrangements for participation by scientists of other nations.
6. An evaluation of the specification in the permit proposal of 'possible effect on conservation of the stock'. As appropriate, the Scientific Committee may carry out its own its analysis of the possible effects.

Annex 43 Resolution on Special Permits for Scientific Research, Appendix 2,
Chairman's Report of the Thirty-Eighth Annual Meeting, *Rep. int.*
Whal. Commn 37, 1987, 25

1986-Appendix 2
Resolution on Special Permits for Scientific Research

WHEREAS the purpose of the International Whaling Commission is to provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry; and

WHEREAS the Commission has decided that catch limits for the killing for commercial purposes of whales from all stocks for the 1986 coastal and the 1985/86 pelagic seasons and thereafter shall be zero, this provision to be kept under review based on the best scientific advice, the Commission being required by 1990 at the latest to undertake a comprehensive assessment of the effects of this decision on whale stocks and consider modification of this provision and the establishment of other catch limits; and

WHEREAS Article VIII of the International Convention for the Regulation of Whaling provides that notwithstanding anything contained in the Convention any Contracting Government may grant to any of its nationals a special permit authorizing that national to kill, take and treat whales for purposes of scientific research subject to such other conditions as the Contracting Government thinks fit; and

WHEREAS paragraph 30 of the Schedule of the Convention provides for all proposed permits to be reviewed by the Scientific Committee; and

WHEREAS the killing, taking and treating of whales for purposes of scientific research should only be undertaken in a manner consistent with the principles and in accordance with the provisions of the Convention.

NOW THEREFORE the Commission, until the Comprehensive Assessment under Schedule paragraph 10(e) is completed,

Recommends that prior to deciding on the granting of permits for the killing, taking and treating of whales for the purpose of scientific research, Contracting Governments while complying fully with Paragraph 30 of the Schedule, should also take account of guidelines drawn up by the Scientific Committee.

Recommends that Contracting Governments in deciding the issuance of, or modifications, postponement, or withdrawal of the permits, should take account of the comments of the Scientific Committee.

Recommends that the duration of any such permits issued by the Contracting Governments should be strictly limited to the need for completion of the proposed research.

Reaffirms that as stated in Paragraph 30 of the Schedule the preliminary results of the scientific research will be subject to annual review by the Scientific Committee.

Recommends that Contracting Governments when considering proposed research permits and the Scientific Committee when reviewing such permits and when reviewing the results of research from permits previously issued in accordance with the procedures of the Convention should take into account whether:

- (1) the objectives of the research are not practically and scientifically feasible through non-lethal research techniques;
- (2) the proposed research is intended, and structured accordingly to contribute information essential for rational management of the stock;
- (3) the number, age and sex of whales to be taken are necessary to complete the research and will facilitate the conduct of the comprehensive assessment;
- (4) whales will be killed in a manner consistent with the provisions of Section III of the Schedule, due regard being had to whether there are compelling scientific reasons to the contrary.

Recommends that Contracting Governments ensure that maximum scientific information be obtained from any whales taken under special permits for scientific research.

Recommends that, taking into account Paragraph 2 of Article VIII of the Convention, following the completion of scientific treatment the meat as well as the other products should be utilised primarily for local consumption.

Recommends that great care should be taken by Contracting Governments when considering issuing special permits for the taking of whales from a Protection Stock. Contracting Governments should take care to ensure that the proposed catch will not further deplete the stock or substantially impede its recovery.

Reiterates that Contracting Governments should grant no permits until the proposals for such permits have been reviewed in accordance with Paragraph 30 of the Schedule and further:

Recommends that Contracting Governments submit proposals for scientific permits and results of research obtained from permits previously issued in accordance with the procedures of the Convention, to the Secretary of the Commission not later than 60 days before the next Annual Meeting of the Scientific Committee.

Annex 44: Resolution on Scientific Research Programmes, Appendix 1,
Chairman's Report of the Thirty-Ninth Annual Meeting, *Rep. int.*
Whal. Commn 38, 1988, 27-28

1987-Appendix 1
Resolution on Scientific Research Programmes

WHEREAS the International Whaling Commission adopted under Article V of the Convention and incorporated in paragraph 10(e) of the Schedule a regulation providing that catch limits for the killing for commercial purposes of whales from all stocks for the 1986 coastal and the 1985/86 pelagic seasons and thereafter shall be zero, this provision to be kept under review based on the best scientific advice, the Commission being required by 1990 at the latest to undertake a comprehensive assessment of the effects of this decision on whale stocks; and

WHEREAS Article VI of the Convention provides that the Commission may make recommendations to Contracting Governments on any matters which relate to whales or whaling and in accordance with Article VI the Commission adopted in 1986 a Resolution on Special Permits for Scientific Research (IWC/38/28) which remains in effect; and

WHEREAS Article VIII of the Convention provides that a Contracting Government may grant to any of its nationals a special permit authorizing that national to kill, take and treat whales for purposes of scientific research, and that such killing, taking and treating of whales in accordance with the provisions of this Article shall be exempt from the operation of the Convention; and

WHEREAS paragraph 30 of the Schedule to the Convention provides for the Scientific Committee to review all proposed special permits to be issued by Contracting Governments and research programs under existing special permits that involve the killing, taking, or treating of whales, and

WHEREAS the Commission recognises that the conduct of the comprehensive assessment as referenced in paragraph 10(e) of the Schedule to the Convention is considered of highest priority for the Commission while such paragraph is applicable,

NOW, THEREFORE, THE COMMISSION, in order to safeguard and promote its international whale conservation program and in furtherance of the objectives expressed in paragraph 10(e) of the Schedule;

REQUESTS that the Scientific Committee annually review all research programs involving the killing of whales under special permits and report their views on whether the programs under an existing or proposed special permit at least satisfy the following criteria in addition to such guidelines as may be applicable, including the criteria specified in the Resolution adopted in 1986 on Special Permits for Scientific Research (IWC/38/28):

- (1) The research addresses a question or questions that should be answered in order to conduct the comprehensive assessment or to meet other critically important research needs;
- (2) The research can be conducted without adversely affecting the overall status and trends of the stock in question or the success of the comprehensive assessment of such stock;
- (3) The research addresses a question or questions that cannot be answered by analysis of existing data and/or use of non-lethal research techniques; and
- (4) The research is likely to yield results leading to reliable answers to the question or questions being addressed.

AGREES to review, annually, beginning with the 39th IWC meeting, the Report of the Scientific Committee regarding special permits involving the killing of whales.

AGREES, should an ongoing or proposed research program not satisfy the criteria specified in the Resolution adopted in 1986 on Special Permits for Scientific Research (IWC/38/28) and, additionally, beginning at the 40th IWC meeting, the above criteria in the view of the Commission, to so notify the Contracting Government concerned.

RECOMMENDS that Contracting Governments, in providing the Secretary with proposed special permits and in submitting reports on programs under to the Scientific Committee for review, specify how each proposed special permit or program satisfies each of the above criteria in addition to such guidelines as may be applicable.

RECOMMENDS that Contracting Governments, in the exercise of their Sovereign rights, refrain from issuing or revoke permits to its nationals that the Commission, taking into account the comments of its Scientific Committee, considers do not satisfy each of the criteria specified above and therefore are not consistent with the Commission's conservation policy.

Annex O Review of Scientific Permits

The Proposal: 'A statement as to whether the permit proposal adequately specifies the four sets of information required under paragraph 30 of the Schedule.' (*Rep. int. Whal. Commn 36*: 133).

1. 'Objectives of the research;' (Sched. Para. 30)
2. 'Number, sex, size and stock of the animals to be taken;' (Sched. Para. 30)
3. 'Opportunities for participation in the research by scientists of other nations; and' (Sched. Para. 30)
4. 'Possible effect on conservation of the stock;' (Sched. Para. 30)

Objectives: The objectives of the proposal as specified by the proposer should first be given; the Committee will then comment on the following:

1. 'Comments on the objectives of the research to be carried out under the proposed scientific permit, including in particular how they might relate to research needs identified by the Scientific Committee.' (*Rep. int. Whal. Commn 36*: 133)
2. 'The proposed research is intended, and structured accordingly to contribute information essential for rational management of the stock;' (*Rep. int. Whal. Commn 37*: 25)
3. 'The research addresses a question or questions that should be answered in order to conduct the comprehensive assessment or to meet other critically important research needs;' (*Rep. int. Whal. Commn 38*: 27-28)

Methodology: A brief summary of the methodology as specified by the proposer should first be given, followed by the Committee's comments on:

1. 'Comments on the methodology of the proposed research and an evaluation of the likelihood that the methodology will lead to achievement of the scientific objectives. These comments may also include evaluation of the methodology in terms of current scientific knowledge.' (*Rep. int. Whal. Commn 36*: 133)
2. 'The objectives of the research are not practically and scientifically feasible through non-lethal research techniques;' (*Rep. int. Whal. Commn 37*: 25)
3. 'The research addresses a question or questions that cannot be answered by analysis of existing data and/or use of non-lethal research techniques; and' (*Rep. int. Whal. Commn 38*: 27-28)

4. 'The number, age and sex of whales to be taken are necessary to complete the research and will facilitate the conduct of the comprehensive assessment;' (*Rep. int. Whal. Commn 37*: 25)

5. 'Whales will be killed in a manner consistent with the provisions of Section III of the Schedule, due regard being had to whether there are compelling scientific reasons to the contrary.'

(*Rep. int. Whal. Commn 37*: 25)

This was later clarified by the Commission to refer to the use of non-explosive harpoons

(*Rep. int. Whal. Commn 38*: 12)

6. '...that maximum scientific information be obtained from any whales taken under special permits for scientific research.' (*Rep. int. Whal. Commn 37*: 25)
7. 'The research is likely to yield results leading to reliable answers to the question or questions being addressed.' (*Rep. int. Whal. Commn 38*: 27-28)

Effect of catches on the 'stock': A summary of the proposer's view should first be given followed by the Committee's views on:

1. 'A review of the most recent information on the stock or stocks concerned, including information on any exploitation, stock analysis and recommendations by the Scientific Committee to date (including, where appropriate, alternative analyses and conclusions and points of controversy).'

(*Rep. int. Whal. Commn 36*: 133)

2. 'An evaluation of the specification in the permit proposal of 'possible effect on conservation of the stock'. As appropriate, the Scientific Committee may carry out its own analysis of the possible effects'

(*Rep. int. Whal. Commn 36*: 133)

3. 'The research can be conducted without adversely affecting the overall status and trends of the stock in question or the success of the comprehensive assessment of such stocks;'

(*Rep. int. Whal. Commn 38*: 27-28)

Research co-operation: A brief summary of the arrangements made by the proposer should first be given followed by the Committee's views on:

1. 'Comments on the adequacy and implications of specified arrangements for participation by scientist of other nations.' (*Rep. int. Whal. Commn 36*: 133)

Annex 46: Resolution on Whaling under Special Permit, IWC Resolution 1995-9, Appendix 10, Chairman's Report of the Forty-Seventh Annual Meeting, *Rep. int. Whal. Commn* 46, 1996, 46-47

IWC Resolution 1995-9
Resolution on Whaling under Special Permit

WHEREAS the International Convention for the Regulation of Whaling recognises the interest of the nations of the world in safeguarding for future generations the great natural resources represented by the whale stocks;

WHEREAS the Commission adopted in paragraph 10(c) of the Schedule to the Convention zero catch limits on commercial whaling because of concern about over-exploitation of whale stocks;

WHEREAS Article VIII of the Convention provides that any Contracting Government may grant to any of its nationals a special permit authorising that national to kill, take and treat whales for purposes of scientific research, and that such killing, taking and treating of whales in accordance with the provisions of this Article shall be exempt from the operation of the Convention;

WHEREAS Contracting Governments, in exercising their rights under Article VIII, should nevertheless respect fully the Commission's arrangements to conserve whales and ensure that the killing, taking and treating of whales for scientific research is only undertaken in a manner consistent with the provisions and principles of the Convention;

WHEREAS the Commission is developing a Revised Management Scheme for commercial whaling and has adopted a Resolution (IWC 1994-5) accepting that the specification of the Revised Management Procedure given in Annex H (*Rep. int. Whal. Commn* 44:145-52) completed the main scientific component in the Scheme;

WHEREAS with the development of modern scientific techniques it is not necessary to kill whales to obtain the information that is needed for initial implementation of the Revised Management Procedure for a particular whale stock;

NOW THEREFORE the Commission:

RECOMMENDS

-that scientific research intended to assist the comprehensive assessment of whale stocks and the implementation of the Revised Management Procedure shall be undertaken by non-lethal means;

-that scientific research involving the killing of cetaceans should only be permitted in exceptional circumstances where the questions address critically important issues which cannot be answered by the analysis of existing data and/or use of non-lethal research techniques;

REQUESTS the Scientific Committee, with respect to all Special Permit research programmes:

-to undertake a comprehensive review of all existing programmes notified to it and report its views on whether such programmes remain justifiable in the light of the recommendations above and, in particular, on whether any lethal scientific research substantially contributes to answering critically important questions which cannot be answered by other means;

-to consider all new programmes submitted to it in the light of the above recommendations;

-to undertake annual reviews of all programmes and to undertake more intensive reviews of all long-term programmes at five year intervals;

-to structure its reviews of programmes to:

identify the relationship between programme objectives and research needs previously identified by Scientific Committee;

evaluate the likelihood of the programme meeting its objectives by providing reliable answers to the questions posed;

identify, where a proposal specifies lethal methods, non-lethal methods and alternative sources of data which might be used in meeting the research objectives;

AGREES, should a continuing or proposed special permit research programme not, in the view of the Commission, satisfy the criteria specified in this Resolution to so notify the Contracting Government concerned;

RECOMMENDS that Contracting Governments, in providing the Secretary with proposed special permits and in submitting reports on research programmes to the Scientific Committee for review, specify how each proposed special permit or programme satisfies the above recommendations;

REQUESTS each Contracting Government to ensure that all scientific information and data available to it with respect to whales and whaling, including results of research conducted pursuant to Articles IV and VIII of the Convention, are submitted promptly to the Scientific Committee for review, analysis and consideration;

RECOMMENDS that Contracting Governments, in the exercise of their sovereign rights, refrain from issuing or revoke, permits to its nationals that the Commission, taking into account the comments of its Scientific Committee, considers do not satisfy the criteria specified above and therefore are not consistent with the Commission's conservation policy;

RECOMMENDS that, if whales are killed under the provisions of Article VIII of the Convention, this should be done in a manner consistent with the provisions of Section III of the Schedule;

AGREES that this Resolution replaces the Resolutions adopted in 1986 and 1987 on Special Permit whaling (*Rep. int. Whal. Comm* 37:25 and 38:27).

Annex 47: Resolution on Special Permits for Scientific Research, IWC Resolution 1999-2, Appendix 3, Chairman's Report of the Fifty-First Annual Meeting, *Annual Report of the International Whaling Commission 1999*, 52

**IWC Resolution 1999-2
Resolution on Special Permits for Scientific Research**

WHEREAS Paragraph 1 of Article VIII of the International Convention for the Regulation of Whaling (Convention) provides that, notwithstanding anything contained in the Convention, any Contracting Government may grant to any of its nationals a Special Permit (Special Permit) authorising that national to kill, take and treat whales for the purposes of scientific research, subject to such other conditions as the Contracting Government thinks fit; and

WHEREAS Paragraph 30 of the Schedule (Schedule) to the Convention provides that all proposed Special Permits be reviewed by the Scientific Committee; and

WHEREAS Paragraph 3 of Article VIII also requires that each Contracting Government shall transmit to such body as shall be designated by the Commission, insofar as is practicable and at intervals of not more than one year, scientific information available to that Government with respect to whales and whaling, including the results of research conducted pursuant to Paragraph 1 of Article VIII; and

WHEREAS the Scientific Committee receives and reviews information provided by Contracting Governments under Paragraph 3 of Article VIII and reports on this to the Commission.

NOW THEREFORE, the Commission:

REQUESTS the Scientific Committee, with respect to all Special Permit Research Programmes, to provide advice to the Commission, on the research to be undertaken pursuant to any proposed Special Permit or that has been undertaken in respect of any Special Permit, as to whether the information sought in the research programme under each Special Permit is:

- required for the purposes of management of the species or stock being researched; and
- whether the information sought could be obtained by non-lethal means.

Annex Y

Guidelines for the Review of Scientific Permit Proposals

Greg Donovan

The Committee has been given a number of guidelines for the review of scientific permit proposals by the Commission. The most recent of these was Resolution 1999-2, the active part of which states:

REQUESTS the Scientific Committee, with respect to all Special Permit Research Programmes, to provide advice to the Commission, on the research to be undertaken pursuant to any proposed Special Permit or that has been undertaken in respect of any Special Permit, as to whether the information sought in the research programme under each Special Permit is:

1. required for the purposes of management of the species or stock being researched; and
2. whether the information sought could be obtained by non-lethal means.

This Annex includes all the Guidelines grouped under five headings, following the approach adopted for the review of the first JARPN proposal (*Rep. int. Whal. Commn* 45: 82ff.)

(A) The Proposal

The relevant guidelines are as follows:

1. 'A Statement as to whether the permit proposal adequately specifies the four sets of information required under paragraph 30 of the Schedule.' (*Rep. int. Whal. Commn* 36: 133)
2. 'Objectives of the research;' (Sched. Para 30)
3. 'Number, sex, size and stock of the animals to be taken;' (Sched. Para 30)

(B) Objectives

The relevant guidelines are as follows:

1. 'Comments on the objectives of the research to be carried out under the proposed scientific permit, including in particular how they might relate to research needs identified by the Scientific Committee;' (*Rep. int. Whal. Commn* 36: 133)
2. 'The proposed research is intended and structured accordingly to contribute information essential for rational management of the stock;' (*Rep. int. Whal. Commn* 37: 25)
3. Is 'required for the purposes of management of the species or stock being researched;' (Resolution 1999-2)
4. 'The research addresses a question or questions that should be answered in order to conduct the

comprehensive assessment or to meet other critically important research needs;' (*Rep. int. Whal. Commn* 38: 27-28)

5. 'The number, age and sex of whales to be taken are necessary to complete the research and will facilitate the conduct of the comprehensive assessment;' (*Rep. int. Whal. Commn* 37: 25)

(C) Methodology

The relevant guidelines are as follows:

1. 'Comments on the methodology of the proposed research and an evaluation of the likelihood that the methodology will lead to achievement of the scientific objectives. These comments may also include evaluation of the methodology in terms of current scientific knowledge;' (*Rep. int. Whal. Commn* 36: 133)
2. 'The objectives of the research are not practically and scientifically feasible through non-lethal research techniques;' (*Rep. int. Whal. Commn* 37: 25)
3. '... whether the information sought could be obtained by non-lethal means;' (Resolution 1999-2)
4. 'The research addresses a question or questions that cannot be answered by analysis of existing data and/or use of non-lethal research techniques;' (*Rep. int. Whal. Commn* 38: 27-28)
5. 'Whales will be killed in a manner consistent with the provisions of Section III of the schedule, due regard being had to whether there are compelling scientific reasons to the contrary;' (*Rep. int. Whal. Commn* 37: 25) [The Commission agreed that it has been intended by this for the Committee to report if cold grenade harpoons were used in special permit catches. (*Rep. int. Whal. Commn* 38: 13)]
6. 'The research is likely to yield results leading to reliable answers to the questions being addressed;' (*Rep. int. Whal. Commn* 38: 27-28)

(D) Effect of catches on the 'stock'

The relevant guidelines are:

1. 'A review of the most recent information on the stock or stocks concerned, including information on any exploitation, stock analysis and recommendations by the Scientific Committee to date (including where

- appropriate, alternative analyses and conclusions and points of controversy);' (*Rep. int. Whal. Commn 36: 133*)
2. 'An evaluation of the specification in the permit proposal of 'possible effect on conservation of the stock'. As appropriate, the Scientific Committee may carry out its own analysis of the possible effects; (*Rep. int. Whal. Commn 36: 133*)
 3. 'The research can be conducted without adversely affecting the overall status and trends of the stock in question or the success of the comprehensive assessment of such stocks;' (*Rep. int. Whal. Commn 38: 27-28*)

(E) Research cooperation

The relevant guideline is:

1. 'Comment on the adequacy and implications of specified arrangements for participation by scientists of other nations'. (*Rep. int. Whal. Commn 36: 133*)

FORMAT OF THE REPORT

The format of reporting agreed at that time was that there were two sub-sections under each major grouping: (1) a summary of the view of the proponents of the proposal; and (2) comments and discussion by the full Committee.

Annex 49: Process for the Review of Special Permit Proposals and Research Results from Existing and Completed Permits, Annex P, Report of the Scientific Committee, *J. Cetacean Res. Manage.* 11 (Suppl.), 2009, 398-401

Annex P

Process for the Review of Special Permit Proposals and Research Results from Existing and Completed Permits

1. SUBMISSION OF PROPOSALS

New proposals should be submitted to the Chair of the Scientific Committee at least six months prior to the Annual Meeting at which they are to be discussed, following a *pro forma* supplied by the Secretariat. Proposers may request that the proposal remains confidential. The proposal shall be structured in the manner given below.

(1) Objectives of the study:

The objectives should:

- (a) be quantified to the extent possible;
- (b) be arranged into two or three categories, if appropriate: 'Primary', 'Secondary' and 'Ancillary';
- (c) include a statement for each primary proposal as to whether it requires lethal sampling, non-lethal methods or a combination of both;
- (d) include a brief statement of the value of at least each primary objective in the context of the three following broad categories objectives:
 - (i) improve the conservation and management of whale stocks;
 - (ii) improve the conservation and management of other living marine resources or the ecosystem of which the whale stocks are an integral part and/or;
 - (iii) test hypotheses not directly related to the management of living marine resources;
- (e) include, in particular for d(i) and d(ii), at least for each primary objective, the contribution it makes to *inter alia*
 - (i) past recommendations of the Scientific Committee;
 - (ii) completion of the Comprehensive Assessment or in-depth assessments in progress or expected to occur in the future;
 - (iii) the carrying out of Implementations or Implementation Reviews of the RMP or AWMP;
 - (iv) improved understanding of other priority issues as identified in the Scientific Committee Rules of Procedure (IWC, 2006, p.180);
 - (v) recommendations of other intergovernmental organisations.

(2) Methods² to address objectives:

(a) Field methods, including:

- (i) species, number (and sex (s) below), time frame, area;
- (ii) sampling protocol for lethal aspects of the proposal; and
- (iii) an assessment of why non-lethal methods, methods associated with any ongoing commercial whaling, or analyses of past data have been considered to be insufficient;

(b) laboratory methods;

(c) analytical methods, including estimates of statistical power where appropriate;

(d) time frame with intermediary targets.

(3) Assessment of potential effects of catches on the stocks involved:

- (a) A summary of what is known concerning stock structure in the area concerned;
- (b) the estimated abundance of the species or species, including methods used and an assessment of uncertainty, with a note as to whether the estimates have previously been considered by the Scientific Committee;
- (c) provision of the results of a simulation study on the effects of the permit takes on the stock that takes into account uncertainty and projects (1) for the expected life of the permit (i.e. n years); (2) for situations where the proposal is assumed to continue for (a) a further n years; (b) a further $2n$ years; and (c) some longer period of years since the start of the proposal.

(4) A note on the provisions for co-operative research:

- (a) Field studies;
- (b) analytical studies.

(5) A list of the scientists they propose to send to the intersessional review workshop.

2. THE REVIEW PROCESS

Intersessional specialist workshop

The initial review of a new proposal, or interim and final reviews, shall take place at a small specialist workshop with a limited but adequate number of invited experts (who may

¹ There are two existing ongoing permits. For JARPA II the review will take place in 2009. JARPA II started in 2005/06 and the first six-year period will be finished in 2011/12. The periodic review will take place shortly after, for example within 1-2 years.

² Where novel or non-standard methods are proposed, sufficient information must be given to allow these to be properly assessed.

or may not be present members of the Scientific Committee). A limited number of scientists associated with the proposal should attend the workshop in an advisory role, primarily to present the proposal and answer points of clarification. It is important that the composition of the specialist group is considered balanced and fair. The choice of experts shall be made by the Chair, Vice-Chair and Head of Science in conjunction with a Standing Steering Group (SSG) established by the Chair at an Annual Meeting, with special emphasis on the field and analytical methods provided in the proposal and estimation of the effect of catches on the stocks(s). The SSG shall be selected by the Chair, Vice-Chair and Head of Science, such that it represents an appropriate range of experience and expertise within the Scientific Committee. The selection process for the specialist group shall occur in the manner described below. A schedule of events for the review process is shown in Table 1.

Procedure for review of new proposals

The Chair shall circulate the proposal to the Vice-Chair, Head of Science and SSG, normally within **1 week** of receipt.

- (1) The SSG shall examine the proposal and in particular the field and analytical methods and, normally within **2 weeks**, suggest names for consideration for the specialist group (if these experts are not members of the Committee they shall include a rationale for their choice) and the suggestions will be available to all SSG members.
- (2) The Chair, Vice-Chair and Head of Science will develop a proposed final list (with reserves) for consideration by the SSG within **2 weeks** and begin the process of establishing the time and venue of the Workshop taking into account the availability of the proposed experts and the scientists associated with the proposal.
- (3) The SSG will send final comments within **1 week**.

- (4) The Chair, Vice-Chair and Head of Science will agree a final list (with reserves); the proposal (with a note concerning any restrictions) will be sent to the selected experts and reserves – the process thus far will have taken about 6 weeks since the proposal has been received.

The Workshop will take place at least **100 days** before the Annual Meeting. In addition to the selected experts it will include at least one of the Chair, Vice-Chair and Head of Science, one of whom shall chair the workshop.

Terms of reference of the specialist workshop for review of new proposals

The primary objective of the specialist workshop will be to review the proposal in the light of the stated objectives following the guidelines in the *pro forma* provided by the Secretariat. In particular, the Workshop shall:

- (1) comment briefly on the perceived importance of the stated primary objectives from a scientific perspective and for the purposes of conservation and management, noting particularly its relevance to the work of the Scientific Committee;
- (2) provide advice and suggestions on components of the programme that might be achieved using non-lethal methods, including, where appropriate, power analyses and time-frames;
- (3) determine whether the proposed field and analytical methods are likely to achieve the stated quantified objectives within the proposed time-frame, where appropriate, commenting on sample size and time-frame considerations;
- (4) provide advice on the likely effects of the catches on the stock or stocks involved under various scenarios of length of the programme – this will include *inter alia* examination of abundance estimates provided and may involve a different analysis to that provided in the

Table 1

Schematic schedule of events in the Scientific Committee process of (a) reviewing Special Permit proposals; and (b) periodic reviews of results from ongoing Special Permit research and final results from completed Special Permit research. The dates shown in the tables are for illustrative purposes only assuming an Annual Meeting beginning on 1 June.

| | Schedule of events |
|---|--|
| (a) Review of Special Permit proposals | |
| Receipt of Special Permit proposal | >6 months prior to Annual Meeting (1 Dec) |
| Distribute proposal to Vice Chair, Head of Science and SSG | 1 week |
| SSG suggest names for the Specialist Workshop | 2 weeks |
| Chair, Vice Chair and Head of Science develop list of Specialists and reserves | 2 weeks |
| Final comments from SSG | 1 week |
| Invitation and documents to Specialists | 1 week |
| Hold Workshop | >100 days prior to Annual Meeting (23 Feb) |
| Final Workshop Report made available to Proponents | > 80 days prior to Annual Meeting |
| Distribution of the Proposal, Workshop Report and comments from Proponents to the Committee | > 40 days prior to Annual Meeting |
| Discussion and submission of documents to the Commission | Annual Meeting (1 June) |
| (b) Periodic and final reviews | |
| Information on likely analytical methods to be used in the documents to the Workshop | 9 months prior to Annual Meeting (1 Sep) |
| Distribute documents to Vice Chair, Head of Science and SSG | 1 week |
| SSG suggest names for the Specialist Workshop | 2 weeks |
| Chair, Vice Chair and Head of Science develop list of Specialists and reserves | 2 weeks |
| Final comments from SSG | 1 week |
| Invitation and documents to Specialists | 1 week |
| Receipt and circulation of results/review documents from Special Permit research | >6 months prior to Annual Meeting (1 Dec) |
| Hold Workshop | >100 days prior to Annual Meeting (23 Feb) |
| Final Workshop Report made available to Proponents | > 80 days prior to Annual Meeting |
| Distribution of result documents, Workshop Report and comments from Proponents to the SC | > 40 days prior to Annual Meeting |
| Discussion and submission of documents to the Commission | Annual Meeting (1 June) |

original proposal, including assumptions that short permit proposals may be projected further into the future;

- (5) review the proposed intermediary targets and suggest when an intermediate review or reviews should take place.

Procedure for periodic and final reviews

For ongoing research without a defined final year, a periodic review shall take place in accordance with either the advice provided under Item (5) of the workshop to review new proposals or on the advice of a periodical review workshop¹ and taking into account the availability of the proponents. The final review shall take place no later than three years after the final take under Special Permits. The periodic and final reviews shall be based on documents provided by the proposers and other members of the Scientific Committee **six months** before the Annual Meeting at which the Workshop report is to be presented. Information on the analytical methods likely to be used in documents presented to the Workshop that might assist with the selection of appropriate experts shall be circulated **nine months** before the Annual Meeting.

The Chair shall circulate the information on the analytical methods to the Vice-Chair, Head of Science and SSG, normally within **1 week** of receipt.

- (1) The SSG shall examine the information available on the field and analytical methods and, normally within **2 weeks**, suggest names for consideration for the Specialist Workshop (if these experts are not members of the Committee they shall include a rationale for their choice) and the suggestions will be available to all SSG members.
- (2) The Chair, Vice-Chair and Head of Science will develop a proposed final list (with reserves) for consideration by the SSG within **2 weeks** and begin the process of establishing the time and venue of the Workshop taking into account the availability of the proposed experts and experts associated with the proposal.
- (3) The SSG will send final comments within **1 week**.
- (4) The Chair, Vice-Chair and Head of Science will agree a final list (with reserves); the proposal (with a note concerning any restrictions) will be sent to the selected experts and reserves – the process thus far will have taken about 6 weeks since the information on analytical methods has been received.
- (5) The full documents shall be circulated no later than 6 months before the Annual Meeting.
- (6) Responses to those documents shall be submitted no later than 1 month before the Workshop.

The Workshop will take place at least **100 days** before the Annual Meeting. In addition to the selected experts it will include at least one of the Chair, Vice-Chair and Head of Science, one of whom shall chair the workshop.

Availability of data relevant to the periodic or final review

Applications for the access to data for the purpose of periodic or final review, should follow the recommended approach of Procedure B of the IWC SC Data Availability Agreement (IWC, 2004). For data provided under the DAA, the conditions for data recipients are outlined in the agreement. Applications made by members of the Scientific

Committee and other participants at the Specialist Workshop should be considered promptly and normally accepted within two weeks of the application.

Terms of reference of the Specialist Workshop for periodic and final reviews

The primary objective of the specialist workshop will be to review the scientific aspects of the research under Special Permits in the light of the stated objectives following the guidelines in the *pro forma* provided by the Secretariat. In particular, the Specialist Workshop shall evaluate:

- (1) how well the initial, or revised, objectives of the research have been met;
- (2) other contributions to important research needs;
- (3) the relationship of the research to relevant IWC resolutions and discussions, including those dealing with the respective marine ecosystems, environmental changes and their impact on cetaceans and Committee reviews of special permit research;
- (4) the utility of the lethal techniques used by the Special Permit Programme compared to non-lethal techniques; and
- (5) in case of periodic review, provide advice on:
 - (i) practical and analytical methods, including non-lethal methods, that can improve research relative to stated objectives;
 - (ii) appropriate sample sizes to meet the stated objectives, especially if new methods are suggested under item (i);
 - (iii) effects on stocks in light of new knowledge on status of stocks;
 - (iv) when, in the case of ongoing programmes, a further review should occur.

Reports of Workshops (applies to new proposals, periodic reviews and final reviews)

The Chair is responsible for the level and nature of participation of the scientists involved in the proposal, which should be limited to (1) providing information to the invited experts in addition to that contained in the proposal or research results and (2) answering questions posed by the invited experts. The specialist group should attempt to reach consensus on the individual issues referred to above, but where this is not possible, the rationale behind the disagreement should be clearly stated in the Workshop report. The final report of the Workshop shall be completed at least 80 days prior to the Annual Meeting and will be made available to the proponents.

Circulation to the Scientific Committee

The original special permit proposal, or the original result documents from ongoing or completed special permit research, the report of the specialist workshop, and any revised permit proposal (following the agreed protocol), or any revised results, from the Contracting Government shall be submitted to Scientific Committee members no later than **40 days** before the Annual Meeting. The revised proposal, or revised results, will also be submitted to the members of the specialist group and they will be invited to submit joint or individual comments on that revision to the Annual Meeting.

Discussion at the Scientific Committee

The report of the specialist workshop will be discussed but not amended by the Scientific Committee. The comments of the Scientific Committee will be included in the Scientific

Committee report. The original proposal and any revised proposal, the specialist workshop report (and subsequent comments on any revised proposal), and the Scientific Committee report will then be submitted to the Commission and become publicly available at the opening of the IWC Annual Meeting.

REFERENCES

- International Whaling Commission. 2004. Report of the Scientific Committee. Annex T. Report of the data availability working group. *J. Cetacean Res. Manage. (Suppl.)* 6:406-08.
- International Whaling Commission. 2006. Rules of Procedure of the Scientific Committee. *Ann. Rep. Int. Whaling Comm.* 2005:180-83.
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Annex 50: Report of Technical Committee Working Group on Socio-Economic Implications and Small-Type Whaling (1991) IWC/43/16

IWC/43/16

REPORT OF TECHNICAL COMMITTEE WORKING GROUP ON SOCIO-ECONOMIC IMPLICATIONS AND SMALL-TYPE WHALING

The meeting was held on 25 and 26 May 1991 at the Hotel Saga, Reykjavik, Iceland.

1. CHAIRMAN'S WELCOME

The Chairman, Mr E. Lemche (Denmark) welcomed participants, who are listed in Appendix 1.

2. APPOINTMENT OF RAPPORTEUR

Ms N. Daves (USA) was appointed as Rapporteur.

3. ADMISSION OF OBSERVERS

Government and non-government observers were admitted as listed in Appendix 1.

4. TERMS OF REFERENCE

At the 41st Annual Meeting the Commission established a Technical Committee Working Group on Socio-economic Implications and Small-type Whaling with the following terms of reference:

- (1) To review any information submitted on the social and economic implications of implementing a zero catch limit, the steps taken, and possible future steps to address resulting problems.
- (2) Without restricting the scope of the discussion, to give further consideration to the situation of various kinds of small-type whaling and to review any information submitted.
- (3) To report on its deliberations to the 42nd Annual Meeting.

(Rep. int. Whal. Commn 40:37, App. 5)

At the 42nd Annual Meeting the Commission endorsed the recommendations of the Working Group which concluded that:

- (1) The Working Group be continued;
- (2) the documentation be reviewed and revised between meetings;
- (3) the Chairman, in consultation with the Chairman of the Commission and the Secretary, determine if an additional meeting needs to be convened before the next Annual Meeting in the light of any new documentation received (such a decision would be communicated in December). The Chairman requested the members wishing to submit new materials between meetings of the Commission

The paper provides current information on the socio-economic implications of the zero catch limit in the two STCW communities of Ayukawa and Abashiri. In speaking to this report, Mr Abe, a resident of Ayukawa, gave detailed examples of boat owners' efforts to rationalise the STCW fishery following the loss of minke whale quotas in 1988, the difficulties faced by crew members who lost their jobs, the outmigration of people from Ayukawa, the reduced attraction of the town as a tourist destination, the impact of the cessation of whaling on the local fishery activity and the recent failure of salmon farming efforts in the immediate area. In the case of Ayukawa in particular, all these factors serve to undermine local people's confidence in the future of their community. Unlike fishing communities elsewhere, whose local economy and traditions are affected by resource depletion, people in Japanese STCW communities see evidence of increasing whale stocks so regard the continuation of the moratorium as unwarranted. The local people look forward to a resumption of coastal whaling and have established local management committees to regulate the distribution of meat in order to preserve their distinctive local cultural traditions.

New Zealand asked whether the Baird's beaked whale and pilot whale catches reported in TC/43/SEST2 are replacing the minke whales caught prior to the moratorium. Japan answered that in each year following the moratorium there was a harvest of 54 Baird's beaked whales in Japan, half of which were caught in Ayukawa. Seven pilot whales were also caught in Ayukawa each year. Whale meat is regional food. Minke whale meat is preferred in the Ayukawa and Abashiri areas, whereas Baird's beaked whale meat is preferred in other small-type coastal whaling areas.

New Zealand also asked whether factors other than the cessation of whaling had caused population loss. Japan answered that precise details were unavailable, but that unlike the remote communities where depopulation occurs gradually, Oshika township experienced a sudden change. The decrease of population is due to two reasons. First, those engaged in whaling left the community. Secondly, those associated with affiliated industries, such as trucking and whale meat wrapping were affected. It resulted in structural changes in local industry.

Australia asked if there was a third reason for the decline in population, that being the decline in fishing industries. Japan answered that 80% of the local industry was supported by whaling in Ayukawa. Depopulation relates to the decline in whaling. The portion of the population decline related to decline in fisheries is small.

2. TC/43/SEST1, The Cultural Significance of Everyday Food Use

The report tabled last year entitled Quantification of Local Need for Minke Whale Meat for the Ayukawa-based Minke Whale Fishery (TC/42/SEST8) set out to quantify the local human need for minke whale meat consumed for culturally-significant end uses. In that study, thirty-one culturally-significant uses were recognized, one of which was "everyday use." The Working Group asked for further clarification of this area of consumption. TC/43/SEST1 was presented by Japan.

The first part of the paper reviews the current social science literature, which agree that everyday meal events serve to facilitate and maintain the individual's social integration with the community. In the second part, the principles of whale meat and blubber consumption in the STCW communities was summarised. Six criteria are considered when choosing food items, the food preparation method, and when considering the types of food eating event; these criteria are: availability, sensory preference, symbolic value, health value, historical value and social value. Comparison of everyday use and ceremonial use made it clear that the people in STCW communities use whale meat and blubber to satisfy most of the criteria for both types of meal. Another comparison was made between the use of whale meat in everyday meals with that of chicken, pork and beef. Whereas these non-whale food items may satisfy the criteria of availability and sensory preference, they fail to provide sufficient fulfilment of symbolic, health, historical, aesthetic, social and locational considerations. Therefore in the whaling communities such substitute meats do not satisfactorily ensure a sense of well being for the people concerned.

3. TC/43/SEST4 Age Difference in Food Preference with Regard to Whales Meat: Report of a Questionnaire Survey in Oshika Township

Japan made reference to the conclusion of TC/43/SEST4 "Age Difference in Food Preference with Regard to Whale Meat", where it was stated that the adverse effects of the whaling ban are not limited only to the older age groups, but rather, extend to all generations in the population.

TC/43/SEST4 and TC/43/SEST1 were discussed together.

UK stated that it appeared that as whale meat became in short supply, it was increasingly being used for ceremonial meals, but could not see what conclusion was to be drawn from this.

New Zealand noted that paper TC/43/SEST1 had attempted to set cultural food preferences in a global context. In this regard, it was interesting to note that New Zealand had some experience with the conflict between traditional use of species and conservation needs. They have found that while it is true that cultural preferences for certain foods are slow to change, there is a gradual adaptation. The paper TC/43/SEST4 indicated that younger people in Japan were gradually adapting to the new situation.

Japan responded that the case of small-type coastal whaling communities is not analogous to the example cited by New Zealand since in the case of small-type coastal whaling, we are not talking about irreversible depletion of resources. In response to the UK comment Japan noted that differences between small-type coastal whaling and other forms of commercial whaling is that the meat is eaten fresh, unfrozen and mainly locally. In response to New Zealand's statement, Japan stated that there are different ways to interpret the data. One interpretation is that dietary preferences change as people get older. Socialisation in localised culture and development of self identity increase with age. Therefore younger people will develop a taste for whale meat if it is available. Another way to interpret the table is that because this research was done in 1988, the results reflect the reduction in availability of whale meat and blubber.

UK asked that Japan explain the relevance of TC/43/SEST1 in explaining how small-type coastal whaling differs from other forms of whaling. Japan responded that the sashimi supplied by coastal whaling was only consumed locally. UK noted that the bulk of the whale meat from Ayukawa was distributed outside the community. Japan responded by noting that the outflow of whale meat from small-type coastal whaling communities was a reflection of already distorted markets and that a local management committee has been established to localise distribution.

4. TC/43/SEST3 Summaries of Documents on Socio-Economic Implications and Small-type Coastal Whaling

Japan presented these synopses of previous documents, calling the attention of Working Group members to the depth and scope of the research that has been conducted. They offered other non-government documents available from the Government of Japan on request.

The US requested that new information on the proportion of certain grades of meat not consumed locally, but sold in more distant markets be provided as requested in last year's Working Group. Japan responded that this information would be provided by the next meeting.

Iceland reminded the Working Group of the 40 page document on whaling in Iceland presented last year. They announced that the document was available from the delegation of Iceland.

It was the view of the Netherlands that Japan's submissions appeared to be more of a plea for the lifting of the moratorium than a request for the creation of another category of whaling and stated that commercial

Whaling rules must apply in this case. Japan responded that their submissions address the findings of social scientists that document a form of whaling that is between commercial whaling and aboriginal subsistence whaling. It was the Dutch position that small type coastal whaling should not be exempt from the current moratorium and that the trade and destination of whale products indicates that it resembles commercial whaling.

8. SOCIAL AND ECONOMIC IMPLICATIONS OF IMPLEMENTING A ZERO CATCH LIMIT

Mr. Eggertsson (Iceland), Chairman of the Minke Whalers' Association spoke of the hardships caused by the cessation of minke whaling in the isolated coastal communities. He recalled that research had shown that the minke stocks were abundant and that those whose livelihood depended on minke whaling could be trusted to abide by strict conservation measures. The IWC must live up to its responsibilities and avoid the influence of extremists; otherwise the future of the organization was in danger. He stressed again the unity of the Icelandic people behind their cause which related to the need to have a balanced management of marine resources. He contrasted the position of some nations with regard to whaling with their inhumane policies in military matters. Finally he called for cooperation to preserve the IWC.

Japan noted that the impacts of the moratorium are increasing with time and that the moratorium has caused uncertainty concerning the stability of life in small-type coastal whaling communities. Japan stated its view that given the objectives of the Convention, if whale stocks can sustain rational utilisation, the Commission should re-establish a stable way of life for the people in small-type whaling communities. Japan indicated that it is committed to providing updated information on the impact of the moratorium and expressed the hope that in the mean time, the Commission would take a more humane approach to this issue.

The Working Group agreed to add to the report the following statement agreed to in the report of its 1989 and 1990 meetings which were:

"The Working Group agreed that it was clear that the zero catch limits have several levels of socio-economic impacts and that it is important for the Commission to have these facts and opinions as they proceed with their deliberation. The group identified several elements. Some of the socio-economic effects are serious, but governments at times have to take painful actions that affect their citizens. While these decisions are painful several delegations stressed it is the responsibility of the government to take mitigating measures. Though governments can successfully take actions to mitigate change, some are permanent and cannot be remedied. Under such conditions no consequences of government action can prevent or reverse changes to certain cultural, traditional and religious lifestyles. The impacts of zero catch limits are greater in sociological terms in rural areas, where local economies and traditions are linked to the natural resources, than in larger and more industrialised communities."

9. CONSIDERATION OF THE SITUATION OF VARIOUS KINDS OF SMALL-TYPE WHALING

Japan noted that over the past six years it had submitted many documents, including one that provided the basis of the distinction between small-type coastal whaling and large-type coastal whaling (TC/42/SEST3). Some characteristics of small-type coastal whaling are similar to those found in aboriginal/subsistence whaling. This provides the justification for requesting special consideration.

On the definition of commercial whaling, Denmark noted that even in aboriginal subsistence whaling, a limited part is sold from one settlement to another. They would hope that the IWC, after further negotiations, would reach an agreement on an *ad hoc* solution allowing limited whaling activities for small populations which have a tradition for whaling dating back from before the Second World War.

St Vincent supported Denmark's position.

UK stated that its conclusion on the matter had not changed from last year, believing that the bulk of the whale meat landed is sold outside the community and the per capita consumption is low compared to aboriginal subsistence. Although they have sympathy for the plight of the coastal communities, they could not justify a new category of whaling.

The Chair asked if Japan was seeking a special Schedule amendment to cover small-type coastal whaling. Japan responded affirmatively.

The US stated that the hunt is essentially commercial in nature and that they would not support the establishment of a new category or an interim quota. New Zealand expressed the same view.

Japan responded by noting that the outflow of whale meat from the small-type coastal whaling communities was a reflection of already distorted markets and that a local management committee has been established to localise distribution (TC/42/SEST7). Japan also responded that comparison of *per capita* consumption of whale meat in Eskimo communities and small-type coastal whaling communities was not appropriate since the Japanese diet, in contrast to the Eskimo diet, is not meat based and because in the case of small-type coastal whaling communities we are not talking about nutritional need.

10. OTHER BUSINESS

The Working Group agreed to make the same recommendation as last year as stated below.

The group concluded its deliberations with the recommendations that: (1) the working group be continued; (2) the documentation be reviewed and revised between meetings; (3) members wishing to submit new materials for consideration of the Working Group should notify the Secretary and submit abstracts of the papers by 1 December 1991; (4) if abstracts are received, the Secretary will arrange to convene an additional meeting; (5) documents should be submitted by 15 April 1992, for immediate distribution to governments participating in this year's Working Group.

The Working Group thanked the Chairman and the Rapporteur for their efforts.

11. ADOPTION OF THE REPORT

The report was adopted by the Working Group.

Appendix 1

LIST OF PARTICIPANTS

Australia

G. Anderson
M. Bossley
P. Eiser
P. Woolcott

Brazil

J.T. Palazzo Jr
A. Quintella

Chile

M. Valenzuela

People's Republic of China

H. Zhang
R. Zhang
Y. Zhuo

Denmark

H. Fischer
A. Jessen
E. Lemche
F. Lyng
N. Mikkelsen

Iceland

K. Eggertsson
G. Eiriksson
K. Juliusson
K. Loftsson
G. Petursson

Japan

T. Abe
S. Azumi
S. Goto
M. Iwasaki
T. Kasuya
H. Kato
Y. Kikuchi
T. Koya
S. Mitaki
T. Miyoshi
F. Nagasaki
T. Nakamura
S. Ohtsomi
N. Ohtsuki
K. Shima
S. Shimojo
Y. Shimomichi
Y. Shoji
K. Tanaka
S. Tanaka
N. Yagi

Republic of Korea

Z.G. Kim

Netherlands

F. von der Assen

New Zealand

C. Bogle
I.L.G. Stewart

Norway

S. Bastesen
A.H. Hoel
A.M. Henriksen
I. Winsnes

St Vincent & The Grenadines

F. Hester

Seychelles

S.J. Holt

Spain

H. Quiroga
C. Seoanez

Sweden
J. Bodegard
S. Irberger
M. Ris

UK
A.M. Blackburn
C. Phillips
C. Southgate
R.M. Wilson

USA
N. Azzam
J. Brennan
B. Britten
N. Daves
S.A. Earle
J.H. Prescott
R. Rootes
E. Sobeck
M. Tillman

Non-Member Government Observer

Canada
M. Freeman

Non-Governmental Organisation Observers

Alaska Eskimo Whaling Commission
M. Adams
J. Aiken

Antarctic and Southern Ocean Coalition
N. Funahashi

Friends of Whalers
A. Macnow

Institute for the Study of Animal Problems
P. Forkan

International Marine Mammal Association
C. Carlson

International Wildlife Coalition Trust
D.J. Morast

Inuit Circumpolar Conference
Environmental Commission
I. Egede

Appendix 2

AGENDA

1. Chairman's welcome
2. Appointment of Rapporteur
3. Admission of Observers
4. Terms of reference
5. Review of documents
6. Adoption of agenda
7. Submissions
 - 7.1 Japan
 - 7.2 Iceland
8. Social and economic implications of implementing a zero catch limit
9. Consideration of the situation of various kinds of small-type whaling
10. Any other business
11. Adoption of the report

Appendix 3

LIST OF DOCUMENTS

- TC/43/SEST1 Government of Japan. Cultural significance of everyday use of whale meat.
- TC/43/SEST2 Government of Japan. Socio-economic implication update report: Some examples of small-type whaling.
- TC/43/SEST3 Government of Japan. Summaries of documents on socio-economic implications and small-type whaling.
- TC/43/SEST4 Government of Japan. Age difference in food preference with regard to whale meat: Report of a questionnaire survey in Oshika Township.

Background papers

- TC/43/AS4 Caulfield, R. A. Qeqertarsuarmi arfanniarneq: Greenlandic Inuit whaling in Qeqertarsuaq Kommune, West Greenland.

The Committee **recommends** that it be a requirement to record any lactating whale that is taken. This information shall be forwarded to the Secretariat at the end of the season and included in the IWC database.

Operational data: The Committee last examined the value of such data at the Comprehensive Assessment Workshop in 1987 (IWC, 1989a). The Committee agreed that operational data may be of value in monitoring. It is important if such data are to be used that they are obtained from the start of any whaling operation. Insufficient time was available at this meeting to review the most appropriate factors to record in this regard. It was noted that the Schedule (Para. 28 and Appendix A) currently requires detailed operational data to be collected (although some of these are only relevant to sperm whales). Technology now exists that would make recording of such data less onerous.

The Committee **recommends** that the requirements for collection of operational data included in the current Schedule be retained. The data shall be submitted to the IWC Secretariat within *time*² of the close of the season. The Committee draws the Commission's attention to the fact that future deliberations may result in the Committee reducing the number of such items required.

7.1.3 Guidelines for conducting surveys and analysing data

In its Resolution on the RMS last year, the Commission had stated that one of the additional steps required was agreement on guidelines for conducting surveys and analysing the results (IWC, 1993c). A suggestion for such guidelines was presented in SC/45/O 13. Specific proposals on certain items were given in SC/45/Mg6. The authors of SC/45/O 13 had identified certain topics that required further discussion, particularly on the questions related to minimum standards for data. These were considered under Item 7.1.2. It was noted that these Guidelines will require updating from time to time as new methodology and analytical techniques are developed.

The Committee **recommends** that the Guidelines for Conducting Surveys and Analysing Data within the Revised Management Scheme given as Annex J be adopted.

7.1.4 Mechanism for amendment of the RMP

The Committee distinguished between: (i) mechanisms for amendment of the RMP itself; and (ii) mechanisms for the amendment of case-specific implementations. The former involves amendment to the defining text of the RMP, while the latter involves changes to the designation or boundaries of Management Areas and the choice of catch-capping and/or catch-capping options for particular implementations.

Amendment of the RMP

At last year's Annual Meeting, the Committee had outlined a suggestion for a three-step process for the evaluation of amendments to the RMP and had recommended that the matter be considered further (IWC, 1993f, p.58). It had also recognised that the protocol for amendment should in principle form part of the RMP specification.

As last year, the Committee emphasised the thorough and extensive testing process that had accompanied the

² An appropriate time needs to be determined following discussion with those familiar with coding such data.

development of the RMP and that the question of amendments should not be approached in a casual manner. In particular it agreed that, for a proposal for an amendment to be considered, there needed to be some evidence, in the form of simulation trial results or otherwise, that the proposed amendment would result in improved performance in at least some respect. Following the suggestions from last year, the Committee **recommends** that the following protocol forms the basis for evaluating amendments to the RMP.

- (i) Adequate notice shall be given to the Commission and the Scientific Committee of any proposal for amendment to the RMP.
- (ii) Given the time it will take for the Committee to evaluate such proposals, suitable evidence shall be presented to indicate that the proposed amendment would indeed represent an improvement. In this context, an amended procedure that allowed higher catches or lower catch limit variability will only be considered an improvement by the Committee if it performs adequately on all risk-related performance statistics, and better than the current version of the RMP on at least some catch- or risk-related performance statistics. This evidence shall take the form of results from appropriate, fully specified and programmed simulation trials, a list of which needs to be developed by the Scientific Committee (based *inter alia* on Table 3 in IWC, 1993k). These trials shall have been carried out by the proposer.
- (iii) The Committee may then specify further simulation trials and/or modification of trials already carried out along with criteria for the evaluation of the results. Advice to the Commission may then be given at its next Annual Meeting, subject to completion of the work specified.

It was understood that the above process would only need to be followed in the case of proposed changes to the substance of the RMP, such as changes to the structure or parameters of the CLA or the multi-stock rules, not with merely textual changes to the RMP specification aimed at clarifying ambiguities or overcoming practical problems of implementation.

With reference to the report of the Working Group on North Pacific minke whale trials (Annex G), the question was raised as to whether a catch limit could be set for a specific time of year. The Committee agreed that this matter required further discussion.

Amendment of case-specific implementations

The Committee recognised the need to distinguish between two types of 'assessment', as previously defined, that need to be conducted under the RMP. The first is the relatively simple and routine business of applying the CLA to existing Management Areas with the existing choice of catch-capping and/or catch-cascading options in order to calculate catch limits. For clarity, this is termed 'Catch Limit Calculation' (CLC). The second type is an 'Implementation' or 'Implementation Review' in the course of which, revisions to Management Area boundaries or designations (at the Small, Combination, Medium, or Large Area levels) could be considered, along with possible changes to the selection of catch-capping and/or catch-cascading options. The Committee agreed that the wording of the RMP specification (Annex H) should be modified to reflect this distinction (see Item 9.3.1).

Annex 52: Report of the Scientific Committee and Annex O1, Report of the Standing Working Group on Scientific Permits, *J. Cetacean Res. Manage.* 8 (Suppl.), 2006, 48-52 and 259-264

obtained through this monitoring will contribute to the development of ecosystem models, which are necessary for ecosystem-based management of whales.

The review meeting considered that JARPA had made good progress in addressing its objectives, and also agreed that tasks identified in the IWC mid-term review meeting in 1997 (see section 5 of SC/57/O6) had been appropriately addressed.

Some members of the Committee noted that the meeting to review JARPA hosted by Japan had been attended largely by representatives of nations that supported whaling, and thus they questioned the objectivity of this non-IWC review. In response it was noted that the review meeting had been widely made known, and that all members of the Scientific Committee had been invited, although it had been agreed that this review meeting would not be considered an IWC sponsored meeting (IWC, 2005c, p.46).

16.1.5 Preparations for JARPA review

The JARPA Review Planning Steering Group worked interessionally to prepare for a full review of the JARPA programme by the Scientific Committee when the complete set of results of the 18 year programme is available. It had been agreed that the review would not be limited simply to results relating to Antarctic minke whales, but that research areas not covered in the original plan, and later adopted by JARPA, such as the work on blue and humpback whales, would also be considered. Abundance estimates and sightings survey work are also part of JARPA and need to be considered in full. The Group agreed that this review should be carried out by an Interseasonal Working Group to Review Data and Results from Special Permit Research on Minke Whales in the Antarctic. This would be done during an interseasonal meeting, most likely in Tokyo in late 2006. Progress in planning for this review was summarised, and a draft Terms of Reference and a draft Agenda were provided as appendices to the progress report (given as Annex O2 to this report).

The Steering Group had agreed on most aspects of the proposed review except for the draft Terms of Reference numbers 3 and 4, and proposed agenda item 9. There was some disagreement over how to address Resolutions made by the Commission with respect to the review, including issues surrounding the utility of lethal or non-lethal methods (proposed agenda items 9.1 and 9.2). It was agreed that a group led by Zeh (Annex P(30)) would reconsider this issue by re-examining the Commission's Resolutions in detail.

Noting the differences of opinion between members over interpretation of the Commission's Resolutions, the Committee nevertheless agrees that only scientific and not ethical issues should be considered by the review. However, a discussion of the scientific aspects of the respective merits of lethal and non-lethal methodologies was important. In view of the fact that some experts from outside the Scientific Committee would be invited to the review meeting, the Committee agrees that some discussion of the respective merits of lethal and non-lethal methodology (proposed agenda items 9.1 and 9.2, and Proposed Terms of Reference 3 and 4) is necessary to allow the Invited Participants to the Review to contribute to this debate. However, the main focus of the review would be on the remaining agenda items, and these more contentious issues would mainly be discussed at the subsequent Scientific Committee meeting by the full Committee. The Committee

accepts the proposed terms of reference and proposed agenda with this qualification.

16.1.6 Responses to previous Scientific Committee reviews

Childerhouse asked what changes had been made to each of the research programmes as a result of extensive comments received from the Scientific Committee in previous years. In response it was noted that the meso-scale surveys had been added to the JARPA research programme as a direct result of recommendations made at the mid-term review of JARPA in 1997. It was noted, however, that no modifications to the JARPN II work plan had been implemented as a result of any comments or suggestions made by the Committee in previous years. In reply it was stated that all comments on JARPN II research plans had been studied and considered but that few if any were constructive while others were difficult to accommodate.

With regard to Icelandic common minke whale research, it was noted that SC/57/O14 states that no major changes had been made to the original proposal, but that some new non-lethal components had been added in response to Scientific Committee comments made on the original proposal. Specifically, the Committee was informed that additional prey sampling was being conducted by taking samples from the posterior end of the rectum of sampled animals to compare with stomach contents and potentially with faecal samples collected at sea.

Although there is no formal requirement for Special Permit holders to report on what changes have been made to their research plans as a result of any comments or suggestions received from the Scientific Committee, the Committee agrees that it would be good practice to do so. This would help to speed up future reviews and would constitute an act of good faith.

16.2 Review of new or continuing proposals

16.2.1 JARPA II

The Plan for the Second Phase of the Japanese Whale Research Programme under Special Permit in the Antarctic (JARPA II) was presented in SC/57/O1.

JARPA was conducted between the 1987/88 and 2004/05 austral summer seasons, under Article VIII of the International Convention for the Regulation of Whaling. The IWC Scientific Committee conducted an interim review of JARPA results in 1997. In January 2005, a non-IWC JARPA review meeting called by the Government of Japan was held.

Based on its stated desire to take into account species-interaction (ecosystem) effects in understanding the dynamics of the baleen whale species in the Antarctic ecosystem, and predicting future trends in their abundance and population structure, the Government of Japan will launch a new comprehensive study under the Second Phase of the Japanese Whale Research Programme under Special Permit in the Antarctic (JARPA II), combining lethal and non-lethal methods, starting from the 2005/06 austral summer season. The first two seasons (2005/06 and 2006/07) will be dedicated to feasibility studies. The practicability and appropriateness of sighting methods in the enlarged area and sampling procedures given the increased sample size and number of species to be sampled, will be examined. Methods for catching, flensing and taking biological measurements of the larger species will be tested. The full-scale JARPA II will start from the 2007/08 season.

It will be a long-term research programme with the following objectives:

- (1) monitoring of the Antarctic ecosystem;
- (2) modelling competition among whale species and developing future management objectives;
- (3) elucidation of temporal and spatial changes in stock structure; and
- (4) improving the management procedure for the Antarctic minke whale stocks.

JARPA II will focus on Antarctic minke, humpback and fin whales and possibly other species in the Antarctic ecosystem that are major predators of Antarctic krill. Annual sample sizes for the full-scale research (lethal sampling) are 850 (with 10% allowance) Antarctic minke whales (eastern Indian Ocean and western South Pacific stocks), 50 humpback whales (D and E stocks) and 50 fin whales (Indian Ocean and the western South Pacific stocks). During the feasibility study, a maximum sample of 850-10% Antarctic minke whales and ten fin whales will be sampled in each season. Humpback whales will not be taken during the feasibility study.

The research methods for the JARPA II are basically the same as the previous JARPA with some modifications. The programme also includes non-lethal research techniques such as sighting surveys, biopsy sampling, acoustic surveys for prey species and the collection of oceanographic data.

The research proposal for JARPA II as described in SC/57/O1 was elaborated upon in an audio-visual presentation. In response to subsequent questions of clarification from members of the Committee, it was made clear that there will be six vessels involved in the JARPA II survey. Two of these will be dedicated sighting vessels and these will cover the entire area independently of the sighting and sampling vessels, but their tracklines have not yet been determined. Three of the vessels will be sighting and sampling vessels (the sixth vessel being the research base vessel). In response to a query as to how the same vessels could double the catch rate achieved under JARPA within the same seasonal sampling period, the Committee was informed that in previous seasons about 1,000 schools had been encountered, but that not all schools had been sampled and that whereas previously one animal per school had been taken, the plan for JARPA II was to take two animals per school. It was stated that sampling just one animal might lead to bias, and that sampling two animals per school would therefore be less biased. It was also stated that a larger area would be covered by JARPA II. The objective in JARPA II was to sample sufficient animals to achieve statistically significant results, and this required more animals to be taken.

There are as yet no plans to use trawls to validate acoustic estimates of krill abundance, although the independent meso-scale surveys of the area using another vessel may employ trawls to monitor krill at a later date. None of the vessels used in the JARPA II survey will be ice-breakers, so pack ice areas will be avoided, but some sightings survey work may occur in the marginal ice areas, so long as ice conditions permit the vessels to maintain speeds of 11 knots. This condition will define the ice-edge for these surveys. It is also intended to include sightings data from other expeditions involving ice-breakers working in the pack-ice if these are available. The issue of collaboration with CCAMLR was also brought up, as the removal of 850 Antarctic minke whales might impact

ongoing CCAMLR studies of the Antarctic ecosystem, so it was questioned whether or not collaboration with CCAMLR had been sought. It was stated in response that under JARPA, meso-scale surveys had included the participation of a Japanese CCAMLR scientist, and that collaboration with CCAMLR was therefore already happening.

In answer to the question of whether or not an ethical review process had been implemented it was stated that Japanese domestic legislation on animal welfare had recently been updated, and that although there was no formal process in terms of inter-agency consultation, the Fisheries Agency of Japan had considered the JARPA II plan in relation to the revised legislation and no conflict had been found between the planned research and the revised legislation. In response to a question on the issue of humane killing, it was stated that in previous JARPA surveys the time-to-death had been recorded, and that this practice would be continued.

Regarding the rationale for having an allowable error of 10% of the sample size of 850 animals, it was stated that tracklines are set according to previously observed densities, taking account of catchability by area, but it was not always possible to guarantee that the target would be attained.

Following these points of clarification, the proposal was reviewed by the Committee in accordance with the relevant guidelines for reviewing proposals for scientific permits. However a group of 63 members objected to a review of the JARPA II proposal because the Committee has had no opportunity to conduct a formal review of the results of the original JARPA programme, these members submitted a statement to this effect (SC/57/O22). This statement is included in Annex O, Appendix 2. These members further stated that they had substantial concerns about all aspects of the JARPA II proposal, but that it would be inappropriate to provide a detailed critique until after a JARPA review had been conducted by the IWC.

Accordingly, they stated that the lack of comments and criticisms of JARPA II in the Scientific Committee report should in no way be construed as consensus within the Committee regarding the objectives and methodology proposed by the JARPA II programme.

In response to this, the proponents tabled a working paper (Annex O, Appendix 3) that rebutted the assertions of SC/57/O22. Specifically these members stressed that the Scientific Committee was obliged to review the JARPA II proposal, according to paragraph 30 of the Schedule. These members also asserted that Japan was not trying to abandon the RMP, but rather was trying to strengthen it by addressing a multi-species approach. Concerning the lack of peer-reviewed results in international journals, it was stated that there has been a number of publications but that many western journals refuse to publish results from JARPA for ethical reasons. It was also asserted that the proposed sample sizes would not have an adverse impact on the recovery or status of any whale populations.

Following this exchange of views, the Committee continued to review the research plan in accordance with the relevant guidelines, but without the participation of the authors of SC/57/O22.

A. The Proposal

The current relevant guidelines for review are as follows:

1. A statement as to whether the permit proposal adequately specifies the four sets of information required under paragraph 30 of the Schedule (IWC, 1986, p.133).
2. Objective of the research (Schedule Paragraph 30).
3. Number, sex, size and stock of the animals to be taken (Schedule Paragraph 30).

Summary of proposal

The proposal provides the information required under Paragraph 30 of the Schedule.

Comments and discussion

Some members expressed the opinion that the JARPA research programme had made a major contribution to the knowledge of the biology of Antarctic minke whales, and that in the face of changing environmental conditions the value of this work would increase. They stressed the importance of preserving the continuity of the research programme, provided the research does not hamper the development of the stocks. Some other members stressed the importance of JARPA II as an approach towards ecosystem management of the Antarctic.

One member also expressed the view that many of the important results of JARPA have been presented to the Scientific Committee during the past few meetings, and that large parts of the proposed JARPA II have objectives that are virtually independent of the JARPA objectives and results. For these reasons he felt that the Committee has more than sufficient information to conduct a review of the JARPA II research plan. He also stated that it was reasonable to expect a continuation of scientific whaling in Antarctica, because of the need to keep ships and personnel employed with the task, and also the need to maintain markets for the whale meat, which helped to fund the entire programme. In reply it was noted that these logistical and economic considerations should be outside the purview of the Scientific Committee, and that the validity and necessity of such research programmes should be considered on their scientific merits alone.

B. Objectives

The current relevant guidelines for review are as follows:

1. comments on the objectives of the research to be carried out under the proposed scientific permit, including in particular how they might relate to research needs identified by the Scientific Committee (IWC, 1986, p.133).
2. the proposed research is intended and structured accordingly to contribute information essential for rational management of the stock (IWC, 1987, p.25);
3. is required for the purposes of management of the species or stock being researched (IWC, 2000a);
4. the research addresses a question or questions that should be answered in order to conduct the comprehensive assessment or to meet other critically important research needs (IWC, 1988, pp.27-8); and
5. the number, age and sex of whales to be taken are necessary to complete the research and will facilitate the conduct of the comprehensive assessment (IWC, 1987, p.25).

Summary of proposal

The proponents stated that JARPA has revealed evidence that the Antarctic ecosystem is changing and therefore, it is necessary to understand the dynamics of interactions between whale species in order to achieve rational management and sustainable use of whale resources. Based on the results of JARPA, JARPA II was planned with the following four objectives:

- (a) monitoring of the Antarctic ecosystem;
- (b) obtaining competition among whale species and future management objectives;

- (c) elucidation of temporal and spatial changes in stock structure; and
- (d) improving the management procedure for Antarctic minke whale stocks.

JARPA II will provide information on abundance trends, biological parameters and stock structure, which will contribute to comprehensive/in-depth assessments of Antarctic whale stocks. An ecosystem model will be developed based on data collected under JARPA II, which will contribute to the testing of hypotheses concerning changes in the Antarctic ecosystem as well as the establishment of an ecosystem-based management scheme for whale resources.

Comments and discussion

Responses from the Committee to the listed objectives were limited in view of the opinions expressed in SC/57/O22. Some members stressed the importance of continued monitoring of biological parameters of Antarctic minke whales, not least in the light of global environmental changes, but also to supplement other ongoing research into Antarctic ecosystem dynamics. The failure of several baleen whale stocks to recover was also a matter that required an ecosystem level analysis, and while JARPA represented a significant step in addressing this question, JARPA II would provide a framework for multi-species modelling of the Antarctic marine environment. Other members also stressed the need to develop an ecosystem-based approach to managing the Antarctic marine environment and commended the objectives of JARPA II in this respect.

One member questioned the assumption expressed in SC/57/O1 that the population of Antarctic minke whales had increased after the cessation of whaling on the larger baleen whale species and in response to the depletion of these whale populations, noting that there had been no assessments of Antarctic minke whale stocks in the early 20th century.

C. Methodology

The current relevant guidelines are as follows:

1. 'comments on the methodology of the proposed research and an evaluation of the likelihood that the methodology will lead to achievement of the scientific objectives. These comments may also include evaluation of the methodology in terms of current scientific knowledge' (IWC, 1986, p.133).
2. 'the objectives of the research are not practically and scientifically feasible through non-lethal research techniques' (IWC, 1987, p.25).
3. '... whether the information sought could be obtained by non-lethal means' (IWC, 2000a, p.51);
4. 'the research addresses a question or questions that can not be answered by analysis of existing data and/or use of non-lethal research techniques' (IWC, 1988, pp.27-8);
5. 'whales will be killed in a manner consistent with the provisions of Section III of the Schedule, due regard being had to whether there are compelling scientific reasons to the contrary' (IWC, 1987, p.25); and
6. 'the research is likely to yield results leading to reliable answers to the questions being addressed' (IWC, 1988, pp.27-8).

Summary of proposal

The proponents stated that JARPA II will involve both lethal and non-lethal sampling. In general the research methods established by JARPA will be used in JARPA II. Monitoring of food consumption, blubber thickness, and age at maturity are important because these parameters are indicators of food availability and competition for a major food species in the Antarctic, krill. These data cannot be obtained through non-lethal sampling. Age, which can only be obtained by lethal sampling, is essential for detecting

recruitment trends by VPA and for studies of pollution on whales. All whales are taken using explosive grenades. If instantaneous death is not achieved, a suitable secondary method is applied.

Comments and discussion

Again, responses from the Committee were limited. Some members agreed that lethal sampling was the only way to collect the necessary data to achieve the stated research objectives and suggested furthermore that in order to elucidate ecosystem interactions sampling should be expanded to include other krill predators such as penguins and seals. Other members also noted the two-year feasibility phase and suggested that this would be valuable in refining the methodology. They agreed that while some biological data could be collected using non-lethal methods, the overall objectives would require lethal sampling.

Polachek noted, in relation to guideline C1, and not withstanding the concerns raised in SC/57/O22 concerning the difficulty and validity of reviewing the JARPA II proposal prior to the completion of the review of JARPA, three additional general concerns with methodological aspects of the proposal, as listed below.

- (1) The level of details in the proposed survey and sampling designs is insufficient to adequately review the proposal – particularly with respect to the consideration of sample size, the relative effort devoted to sighting activities and the representativeness of coverage and sampling.
- (2) Monitoring of the Antarctic ecosystem and testing of hypotheses for changes in whale abundance through ecosystem modelling are two of the stated primary objectives of JARPA II. As noted in the proposal, krill play a central role in the Antarctic ecosystem and is a critical hypothesis underlying the proposal is that 'the carrying capacity of the whale species depends on available biomass of krill'. The abundance of krill is seen as the dominant factor controlling changes in whale abundance. As such, estimation of the abundance of krill, monitoring trends in their abundance and understanding krill dynamics are critical for achieving the above two primary objectives of the proposal and would have been expected to have been a central component in the proposal. However, the proposal appears to recognise this but contains no commitment or specific survey plans for such work.
- (3) Monitoring of Antarctic minke whale abundance and biological parameters are a central focus of the proposed research programme. Substantial numbers of Antarctic minke whales appear to occur within the pack ice and the pack-ice is a potentially important habitat for this species. The current Scientific Committee review of Antarctic minke whale abundance and trends has found that lack of information on the abundance of Antarctic minke whales within the pack-ice, possible differential distributions with age and/or sex is an important uncertainty that confounds the interpretation of past research efforts (including those of JARPA). In designing a future research programme, it is critical to learn from the past results. JARPA II contains no plans to survey within the pack-ice, but will simply repeat this past deficiency of previous research. Similarly, as in (2), addressing the question of Antarctic minke whales in the pack-ice through direct monitoring would have been expected to be a central component of the

research if the proposal were serious about achieving its objective. The lack of this will likely compromise the interpretation of the Antarctic minke whale results and the likelihood of the programme achieving its stated objectives.

In response to these criticisms, the proponents of JARPA II stated firstly that the sampling design is still not finalised, but that the same approach as was used in JARPA will be used to lay down the specific tracklines that will be used in JARPA II. Secondly, and with respect to the issue of krill sampling, acoustic survey methods will be used to determine krill abundance, as was the case in JARPA, whilst simultaneously surveying cetacean distribution. Data collected in this way will promote the development of an ecosystem-modelling framework for the Antarctic marine environment. Finally, and with respect to Antarctic minke whales in the pack-ice, data on Antarctic minke whale distribution in the pack-ice have been collected gradually using ice-breakers, and this data collection will continue. Previous pack-ice work under JARPA has shown, for example, that there was a high proportion of mature females in the pack-ice and if enough time is spent collecting such data in future years, then these issues will be investigated.

Polachek responded that he would still expect both krill sampling and Antarctic minke whale sampling in the pack-ice to be central components of any research projects with the stated objectives of JARPA II, rather than the adjunct exercises they appeared to be from both the proposal and the explanation given. Hatamika replied that krill abundance estimates would certainly be carried out routinely every year.

D. Effects on stocks

The current relevant guidelines are:

1. a review of the most recent information on the stock or stocks concerned, including information on any exploitation, stock analysis and recommendations by the Scientific Committee so date (including, where appropriate, alternative analyses and conclusions and points of controversy) (IWC, 1986, p.133);
2. an evaluation of the specification in the permit proposal of 'possible effect on conservation of the stock'. As appropriate, the Scientific Committee may carry out its own analysis of the possible effects (IWC, 1986, p.133); and
3. the research can be conducted without adversely affecting the overall status and trends of the stock in question or the success of the comprehensive assessment of such stocks (IWC, 1988, pp.27-8).

Summary of proposal

Based on the most recent information on stock structure and abundance in the Antarctic minke and humpback whale as well historical information in the case of the fin whale, the effect of JARPA II catches on the stocks has been evaluated by the proponents. They reported that the FITTER methodology used for Antarctic minke whales showed no negative effect on the stocks. In the case of humpback whales, they had applied the population dynamics model developed by Johnston and Butterworth (SC/57/SH16). The results showed that the proposed take of 50 animals per year would probably not delay the recovery of stocks to pristine level. The abundance estimate of fin whales does not cover their entire range and therefore is greatly underestimated. The planned sample size of fin whale is less than 1% of the underestimated abundance, and therefore the planned catch was considered by the proponents to have no adverse effect on the stocks.

Comments and discussion

Some members believed that the takes of Antarctic minke whales would not pose any threat to the population. They also asserted that sample sizes of the larger whale species were also small and unlikely to affect the stocks involved. The proposed takes of humpback whales in particular, are well below recruitment levels judging from recent evidence of a population growth of at least 10%. Abundance of fin whales has also increased so that the proposed catches should not have a negative effect on these stocks.

Leaper reminded the Committee that when the effect of research programme time-scales on catch quotas had been addressed at the 2000 meeting, the Scientific Committee had expressed concerns that open-ended special permit programmes initially proposed as feasibility studies had become ongoing programmes. Consequently the Committee agreed that when addressing the effects of special permit catches on stocks it would examine such effects as if the takes were ongoing. The continued increase in special permit takes since that time would seem to make that agreement in 2000 (IWC, 2001d, pp.57-8) even more pertinent for the present discussions.

In response, Hakamada pointed out that in Appendix 9 of SC/57/O1, simulation trials had been run in which continued catches at the levels proposed in JARPA II had little effect on the populations of Antarctic minke or humpback whales even when extended for as long as 30 years. However, the duration of the research programme is independent from the period of the research assumed in the trial.

E. Research co-operation

The current relevant guideline is:

1. comments on the adequacy and implications of specific arrangements for participation by scientists of other nations (IWC, 1986, p.133).

The proponents offered the usual invitation for suitably qualified foreign scientists to join the cruises.

16.2.2 JARPN II

Last year a revised JARPN II plan had been submitted, and the research in 2004 had been conducted according to those plans. There were no changes to the current research plans, on which the Committee had divided views. The Committee therefore refers back to previous statements made by proponents and critics of this research programme (IWC, 2003a, pp.66-77; IWC, 2005c, pp.47-9).

16.2.3 Iceland

The initial Icelandic proposal has been changed with respect to the rate of sampling, and this year's sample size has yet to be determined, although the Marine Research Institute's proposal was for 39 common minke whales. Once again, in the absence of any significant change to the planned research, the Committee refers back to previous statements by members (IWC, 2004b, pp.40-7; IWC, 2005c, p.49).

16.3 Proposals to facilitate the review process of scientific permits

Last year, (IWC, 2005c, pp.44-5; Bjørge and DeMaster, 2004) efforts were made to prepare a proposal to the Commission on restructuring the guidelines for scientific permits but no agreement was reached on any proposal for changes. This included a proposal to use independent reviewers, as had been done for the Southern Ocean Sanctuary review. Therefore, the Committee agreed at last year's meeting that, lacking further guidance from the

Commission, the Committee would not be able to agree any recommended changes and that this item should be removed from the agenda. Following a short discussion of several aspects of scientific permit whaling the Committee agreed that little had changed regarding the two disparate positions described in last year's Committee Report and the disparate positions described in Annex O (SC/57/O22 and Appendix 2). For example, some members again questioned whether the scientific content of the proposal was sufficient to justify taking whales, while others believed it was. When reviewing scientific permit proposals, the Committee recognises the chronic difficulties it faces in separating purely scientific issues from those issues that are more appropriate for discussion in other fora and notably the Commission. However, it draws to the Commission's attention the fact that the integral nature of the scientific and non-scientific issues surrounding expanding scientific permit programmes makes it extremely difficult for the review process within the Committee to function effectively, since it wishes to limit its discussions to purely scientific aspects of the proposals.

Nonetheless, two specific proposals were raised concerning the review process.

Holders of special permits provide annual progress reports on the activities conducted under the special permit during the previous year. The Scientific Committee is required to review these reports and provide advice to the Commission. This year, the Committee was required to review reports from two Japanese permits (JARPA and JARPN II), the Icelandic permit and a new permit proposal by Japan (JARPA II). In all cases the scientific merit and value of the programs are highly controversial with entirely polarised views being expressed.

Some members believe that a major problem with the review process in the Scientific Committee is its lack of independence. They pointed at the proponents defending their own reports and proposals, participating in the review of these and in the drafting of the resulting reports. This is in contrast to a process that leads to the review being undertaken by scientists without conflict of interest, and they felt that this has created a scientific deadlock and an ineffective review process within the Committee. They suggested that an external, transparent review of these progress/mid-term/final reports and proposals should take place by submitting these for review to an international body representing independent scientists with marine mammal expertise e.g. the Society of Marine Mammalogy (SMM). The Journal of this Society publishes peer-reviewed scientific reports irrespective of lethal or non-lethal sampling protocols. They believed that by submitting the reports to the board of SMM, the IWC can expect an external independent review of the science of the work conducted under special permits.

Other members doubted that any independent and objective review of such proposals would be possible, as the issue of scientific whaling has polarised opinions in the wider scientific community as well as in the Scientific Committee. It was also noted by some members that a review of scientific permits is a mandated responsibility of the Committee under the Convention, the Schedule, and the Rules of Procedure. Therefore, it did not seem appropriate for the Committee to abrogate this responsibility to another organisation.

A second proposal for an alternate approach to how the Committee reviews scientific permits was to require the

Annex OI

Report of the Standing Working Group on Scientific Permits

Members: An, Baba, Barido, Bass, Berggren, Bjørge, Brownell, Butterworth, Childerhouse, Clapham, Cozzi, Danielsdottir, DeMaster, Fortuna, Fujise, Funahashi, Gales, Gedamke, Gong, Goto, Grenvik, Gunnlaugsson, Hakamada, Hatanaka, Hayashi, Hester, Ilyashenko, Iñiguez, Iwasaki, Jung Youn, Kanda, Kasuya, Kato, Kawahara, Kell, Kim, Kitakado, Koh, Lawrence, Leaper, Lams, Lovell, Mae, Magloire, Matsuoka, Miyashita, Morishita, Murase, Nishiwaki, Nishiyama, Northridge, Ohsuami, Ohta, Oien, Okamura, Olafsdottir, Palazzo, Palka, Panigada, Pastene, Pinto de Lima, Polachek, Rambally, Reijnders, Ridoux, Rogan, Rojas Bracho, Rose, Sadler, Secchi, Shimada, Simmonds, M., Soh, Sohn, Song, Tanaka, Tomimaga, Van Waerebeek, Vikingsson, Wade, Walloe, Walters, Weirich, Williams, Yamakage, Yasokawa, Yoshida, Zenitani, Zhu.

1. CONVENOR'S OPENING REMARKS

Bjørge opened the meeting and welcomed the participants.

2. ELECTION OF CHAIR

Bjørge was elected to the Chair.

3. APPOINTMENT OF RAPORTEURS

Northridge agreed to act as rapporteur with assistance from Grenvik.

4. ADOPTION OF AGENDA

The agenda was adopted as shown in Appendix L.

5. DOCUMENTS AVAILABLE

Documents to be considered were SC/57/O1-6 and O14-16.

6. REVIEW OF RESULTS FROM EXISTING PERMITS

The Working Group reviewed the results from two Japanese programmes (on Antarctic minke whales and on North Pacific common minke, sei, Bryde's and sperm whales), and one Icelandic programme on North Atlantic common minke whales.

Further, the Working Group considered a report from a non-IWC meeting on JARPA results, and a progress report from the Planning Steering Group on Preparations for JARPA review.

The entire review of results from existing proposals is found under Item 16.1 of the Scientific Committee plenary report.

7. REVIEW OF NEW OR CONTINUING PROPOSALS

The Working Group reviewed the new proposal (JARPA II) submitted by the Government of Japan for takes of Antarctic minke, fin and humpback whales in the Antarctic (SC/57/O1). The discussion is given under Item 16.2 of the Scientific Committee plenary report. The Working Group did not reach consensus on this programme, and the opposing views are presented in their entirety here in Appendix 2 and Appendix 3.

Further, the Working Group considered the continuing proposals of Japan (JARN II) and Iceland. There were no substantial changes in these proposals since the previous review by the Scientific Committee. The Working Group therefore referred to its comments made at earlier reviews. The entire review of new or continuing proposals is to be found under Item 16.2 of the Scientific Committee plenary report.

8. PROPOSALS TO FACILITATE THE REVIEW PROCESS OF SCIENTIFIC PERMITS

A discussion in the Working Group on possible approaches to improve the review process of scientific permit proposals is reflected under Scientific Committee plenary report Item 16.3.

9. ADOPTION OF REPORT

The report was adopted on the 6 June at 18:15.

Appendix 1

AGENDA

- | | |
|--|---|
| 1. Convenor's opening remarks | 6.3 Iceland – North Atlantic common minke whales |
| 2. Election of Chair | 6.4 Review report from non-IWC meeting on JARPA results |
| 3. Appointment of Rapporteurs | 6.5 Preparations for JARPA review |
| 4. Adoption of Agenda | 7. Review of new or continuing proposals |
| 5. Documents available | 7.1 JARPA II |
| | 7.2 JARPN II |
| | 7.3 Iceland |
| 6. Review results from existing permits | 8. Proposals to facilitate the review process of Scientific Permits |
| 6.1 Japan – Antarctic minke whales | |
| 6.2 Japan – North Pacific common minke, Bryde's and sperm whales | 9. Adoption of report |

Appendix 2

COMMENTS ON THE GOVERNMENT OF JAPAN'S PROPOSAL FOR A SECOND PHASE OF SPECIAL PERMIT WHALING IN ANTARCTICA (JARPA II)

S. Childerhouse (New Zealand), N. Gales (Australia), C.S. Baker (New Zealand), C. Bass (UK), P. Berggren (Sweden), J. Bickham (USA), J. Breiwick (USA), R. Brownell (USA), C. Carlson (USA), J.-B. Charrassin (France), F. Cipriano (IP), P. Clapham (USA), T. Collins (IP), J. Cooke (IUCN), B. Cozzi (Italy), W. Dinter (Germany), M. Engel (Brazil), K. Findlay (IP), C. Fortuna (Italy), N. Funahashi (IP), J. Gedamke (Australia), K. Groch (Brazil), M. Iniguez (Argentina), T. Kasuya (IP), L. Kell (UK), K.-H. Kock (Germany), M. Krahn (USA), R. Leaper (UK), R. LeDuc (USA), D. Mattila (IP), S. Moore (USA), S. Northridge (UK), C. Olavarria (IP), J. Palazzo (Brazil), S. Panigada (Italy), C. Parsons (UK), W. Perrin (USA), C. Pomilla (IP), L. Porter (IP), P. Reijnders (Netherlands), V. Ridoux (France), F. Ritter (Germany), J. Robbins (USA), E. Rogan (Ireland), L. Rojas (Mexico), N. Rose (IP), H. Rosenbaum (USA), T. Rowles (USA), L. Sadler (UK), E. Secchi (IP), D. Senn (Switzerland), M. Simmonds (UK), M. Sironi (IP), M. Stachowitsch (Austria), D. Thiele (Australia), J. Urban (Mexico), P. Wade (USA), K. Van Waerebeek (Belgium), R. Waples (USA), M. Weirich (IP), R. Williams (IP), B. Wilson (UK) and A. Zerbini (IP). [IP=Invited Participant].

Earlier this year the Government of Japan concluded an 18-year programme of whaling under special permit in Antarctic waters (the JARPA programme). During the years of its operation, JARPA killed more than 6,800 minke whales (almost all *Balaenoptera bonaerensis*). Because the data collection of JARPA ended in early 2005, the results of that programme cannot be reviewed by the Scientific Committee (SC) until 2006 or 2007, and JARPA has published very little in the international peer-reviewed literature with which to judge the quality of its research and its relevance to the management of whales by IWC. Despite this, Japan now proposes a second phase of special permit whaling (JARPA II) to commence during the austral summer of 2005/06. JARPA II will more than double the annual catch of minke whales and also take 50 fin (*B. physalus*) and 50 humpback whales (*Megaptera novaeangliae*) each year. Furthermore, the proposal indicates that Japan intends to abandon the accepted IWC method of managing whale stocks, the Revised Management Procedure (RMP), in favour of a speculative 'multi-species' approach which essentially proposes the selected culling of more abundant whales (e.g. minke whales) in order to promote recovery of depleted large whales (e.g. blue whales).

With the new proposal Japan will increase its annual take of whales under special permit to a level where, in each year, it will take almost half the number of all whales ever taken under special permit by all other nations combined. These

levels are also approaching the annual commercial quotas for Antarctic minke whales that were in place prior to the moratorium. This is clearly far beyond the intention envisaged when Article 8 of the Convention was developed, and means that the SC has a serious responsibility to ensure that any current and proposed programmes for special permit whaling are reviewed in a transparent and thorough scientific manner that can stand the scrutiny of the international scientific community. Such levels of take should also be subject to the same regulatory measures as commercial whaling, i.e. the full RMP process.

First and foremost, it is scientifically invalid to review the JARPA II proposal before the IWC has had a chance to conduct a full review of the results of the original 18 year JARPA programme. If JARPA II goes forward, it will have already been in operation for two years (and will have taken almost 2,000 whales) before this review can be conducted, and without such an in-depth review the SC cannot make a meaningful assessment of the relevance of the proposed research, or the need for the proposed catches.

By bringing this proposal forward at this time the Government of Japan has substantially compromised the capacity of the SC to perform its task as designated by the Commission in its 'Guidelines for the Review of Scientific Permit Proposals' (Donovan, 2001) and puts at stake the capacity of the SC to provide objective and representative scientific advice to the Commission.

Consequently, we 63 scientists, (including representatives from 16 national delegations and 16 other participants), attending the IWC SC/57 meeting feel unable to engage in a scientifically defensible process of review of the JARPA II proposal. To do so would substantially undermine the scientific credibility of this organisation. Instead we submit the following brief comments on serious concerns and issues that are raised by the proposal, and we feel that this proposal can be addressed by the SC only when the JARPA review is complete. Our comments are structured in accordance with the Commission's guidelines.

1. Objectives

- (a) Under the RMP, the management procedure currently accepted by the IWC, most of the data requested in the JARPA II proposal are not required.
- (b) The objectives in the proposal are based on several unsubstantiated or incorrect assumptions:
 - (i) That whales are directly competing with each other. Whilst overlap of prey (Antarctic krill) is well established for most of the Antarctic baleen whales, there are no accepted models to indicate any level of competition between whales, nor, indeed, that krill production is controlled by top-down influences, such as predation by whales.
 - (ii) That the reduction of one species (minke whales) will result in an increase of another species (blue whales). Current evidence refutes this.
 - (iii) That minke whales are top predators. While minke whales are a high predator, they are a component of a wide clade of predators at the same level which include whales, seals, birds and fish.
 - (iv) That blue whale low abundance and recovery is due to minke and humpback whale populations. This hypothesis fails to include the other major biomass krill predator species such as seals and sea birds.
- (c) The proposal is open ended and has no time limit by which it can be assessed.
- (d) CCAMLR expertise is necessary to evaluate ecosystem interactions such as competition assumptions.
- (e) Even if the IWC decided to move to a multi-species management procedure, the proposal does not have well-defined hypotheses and performance criteria.

2. Methodology

- (a) The proposed research is supposed to address questions that cannot be answered by analysis of existing data. However, without a review of the data already collected in the previous 18 years it is not possible to evaluate this critical issue, especially as the new proposal provides an undefended rationale to more than double the take of minke whales.

- (b) The research claims to address a question or questions that cannot be practically or scientifically achieved by non-lethal means. In this case, the use of non-lethal means (biopsy) has been clearly demonstrated to address temporal and spatial changes in stock structuring, which is an important component of the RMP.
- (c) The research is supposed to yield results leading to reliable answers to the questions being addressed. However, the research methodologies specified in the proposal are very poorly developed and presented, and they thus negate the possibility of a reasonable review.

3. Effects of catches on stocks

- (a) This analysis is difficult or impossible to do without recent in-depth assessments of minke, humpbacks and fin whales. No current agreed abundance estimates exist for any of these species in the area where JARPA II takes will occur. Similarly, stock structuring remains poorly defined in all species.
- (b) Particular concerns on this issue are:
 - (i) The determination of the extent and possible reasons for an apparent substantial decline in abundance of Antarctic minke whales.
 - (ii) The targeting of species that were subject to massive over-exploitation during earlier whaling, whose populations were taken to dangerously low levels and which remain well below their pre-exploitation abundance.
 - (iii) A lack of any agreed estimates of fin whale abundance, population trend or stock structure.
 - (iv) The potential impact of take of humpback whales from small, poorly understood and highly threatened populations in the South Pacific (e.g. Fiji, Samoa, Cook Islands, etc.)
 - (v) The potential impact of takes of humpback whales on existing, non-lethal research programmes in Australia, New Zealand and elsewhere in the South Pacific.
- (c) Given the dramatic increase in the take of minke whales to levels that may exceed any RMP-derived catch limits, and notwithstanding our lack of agreed abundance data, the SC has no capacity to determine potential sustainability of takes because it has been instructed by the Commission 'not to consider Southern Hemisphere minke whales in the context of implementation of the RMP unless advised to do so by the Commission'.

REFERENCE

- Donovan, G. 2001. Report of the Scientific Committee, Annex Y. Guidelines for the Review of Scientific Permit Proposals. *J. Cetacean Res. Manage.* 15(suppl.) 3:371-2.

Appendix 3

RESPONSE TO APPENDIX 2

H. Hatunaka, J. Morishita, D. Goodman, L.A. Pastene and Y. Fujise

It is regrettable that Appendix 2 concludes that 'the Government of Japan has substantially compromised the capacity of the Scientific Committee (SC) to perform its tasks and puts at stake the capacity of the SC to provide objective and representative scientific advice to the Commission' on the basis of the false premise that 'without a full review (of the original 18 year JARPA programme) the SC cannot make a meaningful assessment of the relevance of the proposed research (JARPA II), or the need for the proposed catches'.

It is the use of this false premise as the basis for saying that the SC cannot review the proposed research that compromises the SC's ability to meet its obligations under paragraph 30 of the Schedule and the Commission's Rules of Procedure. Paragraph 30 of the Schedule to the ICRW says that: 'Proposed permits shall (emphasis added) be reviewed and commented on by the Scientific Committee at Annual Meetings when possible'. Further, under the Commission's Rule of Procedure M.4, the SC 'shall (emphasis added) review the scientific permits and scientific programmes for which Contracting Governments plan to issue scientific permits'. It is also a denial of the fundamental principle that science based policy and rulemaking must be the basis for the management of resources and the requirements for such under Articles V and VIII of the ICRW.

The primary objective of the JARPA II which is clearly stated in the proposed plan (SC/S7/O1) and summarised in the report of the Standing Working Group on Scientific Permits, has been ignored by the authors of Appendix 2.

Appendix 2 also says that 'Japan intends to abandon the accepted... (RMP), in favour of a speculative approach which proposes that selected culling be conducted...'. This is an erroneous interpretation of Japan's intention to improve the RMP as a tool for managing commercial whaling on a sustainable basis. It is now more than 10 years since the RMP was adopted and it is a normal process of the advancement of science that improvements to the RMP can be made with substantial data accumulated by JARPA together with data from JARPA II.

Appendix 2 makes several references to the size of catches taken under JARPA and proposed under JARPA II in terms of RMP and the intention of Article VIII. It also mistakenly describes the proposed increase in minke whale catches as having 'an undefended rationale'. Catches under JARPA II have been calculated as the minimum required to obtain statistically significant data. Given that the stocks to be sampled are abundant and, for humpback and fin whales, increasing rapidly, it is quite logical that the sample size is correspondingly large. These calculations and their rationale together with an examination of the effects of these catches on the stocks are clearly presented in the research plan (SC/S7/O1).

It must be noted that quotas under the RMP are calculated such that catches for a period of 100 years would not negatively affect the stock and that it is not envisaged that JARPA II would be carried out for that period of time. Comparing catches under JARPA II with quotas that would be calculated under the RMP is therefore not appropriate.

The comments in Appendix 2 relating the JARPA II sample sizes to the RMP also ignore the fact that the RMP is for commercial whaling – it does not apply to Article VIII research whaling. It is however interesting to note that if the RMP were implemented, it would regulate the total take including research whaling catches.

With regard to the premise in Appendix 2 that JARPA II cannot be reviewed until the original 18 year programme has been reviewed, it should be noted that at its half way point in 1997, the SC did review the results of JARPA (IWC, 1998). The SC noted that the programme had made a major contribution to understanding of certain biological parameters and provided considerable data which could be directly relevant for management (IWC, 1998). The SC also noted that non-lethal means to obtain some of this information were unlikely to be successful particularly in the Antarctic (IWC, 1998).

Further, in January 2005, the Government of Japan held a meeting to review 17 years of data from the 18 year programme. This meeting was open to any interested scientists and the report of that meeting was submitted to SC/S7 (SC/S7/O6). It is unreasonable and unacceptable for those scientists who decided for political reasons not to attend that meeting to now blame Japan for undermining SC credibility. Data from 17 of the 18 year JARPA programme has been reviewed and was used in the development of JARPA II.

Appendix 2 also uses the excuse that 'JARPA has published very little in the international peer-reviewed literature with which to judge the quality of its research and its relevance to the management of whales by IWC' as a reason for the inability of scientists in the SC to review the programme. This statement is simply untrue and ignores the fact that Japan has submitted data and reports from JARPA to the SC every year. Japan has made more than 150 scientific papers available to the Scientific Committee and had a further 79 papers published in peer-reviewed scientific journals. Japan has also provided data through the SC data availability protocol. The excuse also ignores the fact that many journals that publish in English have refused to accept papers with data from lethal research. This refusal has nothing to do with the scientific quality of the research.

Responses to 'serious concerns and issues' that are raised in Appendix 2. (Numbering below corresponds to the numbering in that Appendix).

I. Objectives

- (a) JARPA II provides abundance estimates for calculating catch limits under the RMP, and also provides biological parameters for in-depth assessment and information on stock structure for implementation of the RMP.
- (b) Objectives of JARPA II are based on scientific evidence and important hypotheses. JARPA revealed that the Antarctic ecosystem is changing. Some hypotheses for understanding changes in biological parameters of minke whales and changes in the balance among baleen whales are proposed in JARPA II. These will be developed further through the JARPA II programme.
 - (i) There are intra- and inter-species relationships among whales for their major food resource, krill.

Modelling of the Antarctic ecosystem has been developed in IWC (e.g. SC/57/O21) and CCAMLR. However, the advance is rather slow due to the lack of sufficient information. JARPA and JARPA II will provide a wide variety of data and accelerate the development of ecosystem studies.

- (ii) It was hypothesised broadly that the depletion of large baleen whales (blue, fin and humpback) resulted in the increase of minke whales, seals and sea birds. It is plausible that the reduction of one species (e.g. minke) would have some potential direct and indirect effect on other species (e.g. blue whales).
- (iii) JARPA II will start to define inter-species relationships among whale species in the ecosystem model, and it will incorporate other krill predators (seals, sea birds and so on).
- (iv) Blue whales were depleted by over hunting, and their recovery will be examined through ecosystem models incorporating other predators including seals and sea birds to the extent possible.
- (c) JARPA II will be reviewed at the end of the first six years of the research, and results will be evaluated. Revisions will be made to the programme if required.
- (d) Information from CCAMLR is used for modelling inter-species relationships in JARPA II and the contribution by CCAMLR to the JARPA II programme is welcomed.
- (e) JARPA II provides a wide variety of data useful to developing a multi-species management procedure. Hypotheses will be developed and their performance tested based on time series data obtained through JARPA and JARPA II. Performance of the various components of the research programme will be judged on the basis of the contribution of results to the improved understanding of the Antarctic ecosystem.

2. Methodology

- (a) A review meeting for results from JARPA was conducted in January 2005 (SC/57/O6). Participants from eight countries agreed on the following, 'JARPA has revealed that changes have occurred in the ecosystem since the 1970s, suggesting competition among minke and other large whales'. Sample sizes were determined as minimum numbers of samples required to achieve the research objectives. Details of calculation for the sample sizes are described in Appendices 4, 6, 7 and 8 of the research plan (SC/57/O1).
- (b) Non-lethal means are not satisfactory to address all objectives of the planned JARPA II. For example, age of whale, nutritional condition of the whale, food consumption, and heavy metal load cannot be obtained by the current non-lethal methods. As for the former JARPA, JARPA II will be conducted as a comprehensive research plan using lethal and non-lethal methods allocated properly for each research objective.
- (c) Most of the research methods used in JARPA II were established through a research period of 18 years in JARPA. These methods were reviewed and evaluated as appropriate in the review meeting of JARPA held by the Government of Japan in January 2005 (SC/57/O6).

3. Effects of catches on stocks

- (a) Abundance estimates used in the analyses on effects of catches on minke whale stocks, were obtained through the JARPA and SOWER programmes. It is reasonable to

use more than one estimate; the effects of catches were evaluated mainly by considering the case of the smaller estimate. For humpback whales, abundance trends and increase rates were consistent between results from JARPA and Australian surveys. Therefore the reliability of these abundance estimates will be high. Distribution of the fin whale extends further north beyond the JARPA survey area. Therefore the abundance estimates used for analyses are underestimated. Catches will not negatively affect these stocks as described in SC/57/O1 and b(i) and (ii) below. Information on stock structure for fin whales is poor but not for Antarctic minke and humpback whales. Samples taken by JARPA between 1987/88-2003/04 were used in a comprehensive analysis to investigate stock structure in the Antarctic minke whales, and a new hypothesis based on large sample sizes and results of different techniques has been now proposed (Pastene *et al.*, 2005a). Regarding humpback whales, the SC suggested putative breeding grounds, feeding grounds and migratory corridors for this species in 2000 (IWC, 2001). These feeding grounds were tested using genetic data obtained from JARPA and significant differences were obtained among C, D, E and F supporting the conclusion of the SC in 2000 (Pastene *et al.*, 2005b).

- (b) (i) JARPA showed a consistent trend of minke whale abundance and no statistically significant decreasing or increasing trend during 16 years. The apparent abrupt decline in abundance from SOWER estimates is not biologically plausible given the biological and age data from JARPA.
- (ii) JARPA and Australian survey showed rapid recovery and high increasing rates of humpback whales. The population dynamics model used in JARPA showed no delay of recovery for the take proposed in JARPA II. It is clear that targeted stocks of humpback whales are not at dangerously low levels.
- (iii) The recovery of fin whales was also shown in JARPA surveys. Extrapolation of these underestimated estimates for unsurveyed areas suggests large stock sizes that could easily tolerate the small take planned in JARPA II. Historical information based on historical catch analyses suggested a stock structure based on oceanic basin (Mackintosh, 1965). Information on stock structure will be improved through the JARPA II programme.
- (iv) Genetic and photo-ID analyses of humpback whales being conducted in the South Pacific are not conclusive yet. For example genetic analysis for different breeding grounds has not included the Eastern Australia samples yet. Furthermore, if whales show some degree of site fidelity to feeding areas, some differences should be detected among small sectors in Area V. This has not been observed. Further research is necessary to examine this issue, possibly incorporating DNA sequences from low and high latitudes in a single analysis.
- (v) Planned take of humpback whales is far less than 1% of estimated abundance therefore the impact on existing non-lethal research programmes will be negligible. On the contrary, information from JARPA II will contribute to existing non-lethal research programmes because it can provide data not possible in non-lethal sampling.

- (c) The RMP was developed for commercial whaling and it should not be applied to the scientific permit research. The results of FITTER calculations showed an increasing trend or maintaining abundance near the carrying capacity under the planned take of JARPA II. This means that stocks will be sustained.

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- Pastene, L., Goto, M., Kanda, N. and Nishiwaki, S. 2005b. Genetic analyses on stock identification in the Antarctic humpback and fin whales based on samples collected under the JARPA. Paper JA/R05/R16 presented to the JARPA Review meeting called by the Government of Japan, January 2005, Tokyo (unpublished). 12pp. [Available from: www.icrwahale.org/eng-index.html].

Annex 53: IWC Circular Communication RG/EE/4613, "Amendments to the Schedule adopted at the 34th Annual Meeting and an Objection by the Government of Japan", 5 November 1982 enclosing Note from the Ambassador of Japan to the United Kingdom to the Secretary of the International Whaling Commission, 4 November 1982



**International
Whaling
Commission**

Your Ref:

Chairman
Mr S H Iglesias (Argentina)
Vice-Chairman
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5 November 1982

CIRCULAR COMMUNICATION TO CONTRACTING GOVERNMENTS

Amendments to the Schedule adopted at the 34th Annual Meeting
and an Objection by the Government of Japan

1. The Secretary refers to his Circular Communications dated 29 October (ref: RG/EE/4607) and 3 November 1982 (ref: RG/EE/4611) notifying the objections by the Governments of Peru, Norway and the USSR to the Schedule amendment adopted at the 34th Annual Meeting of the Commission by the addition to paragraph 10 of the Schedule of the sub-paragraph (e):

"Notwithstanding the other provisions of paragraph 10, catch limits for the killing for commercial purposes of whales from all stocks for the 1986 coastal and the 1985/86 pelagic seasons and thereafter shall be zero. This provision will be kept under review, based upon the best scientific advice, and by 1990 at the latest the Commission will undertake a comprehensive assessment of the effects of this decision on whale stocks and consider modification of this provision and the establishment of other catch limits."
2. The Government of Japan has also lodged an objection to this amendment of the Schedule, and has provided the text attached as Annex 1 setting out its reasons for this action.
3. All the objections identified above, together with those presented by the Governments of Peru and Chile to the Bryde's whale catch limits for the Peruvian and Eastern South Pacific stocks respectively in the Southern Hemisphere 1982/83 pelagic and 1983 coastal seasons (Circular Communication dated 29 October 1982, ref: RG/EE/4607) were received within the 90 days period following notification of the amendments to the Schedule (Circular Communication of 6 August 1982, ref: RG/VC/4529). The time frame for further action under the procedure specified in Article V paragraph 3 of the Convention thus remains the same as that set out in the Circular Communication dated 29 October 1982 (ref: RG/EE/4607).

That is, none of these amendments shall become effective with respect to any Contracting Government for an additional 90 days.

During this period any other Contracting Government may present objection to these amendments at any time prior to the expiration of the additional 90 day period, that is until 2 February 1983, or before the expiration of 30 days from the date of receipt by the Commission of the last objection received during the additional 90 day period, whichever date shall be the later. Thereafter, the amendment shall become effective with respect to all Contracting Governments which have not presented objection but shall not become effective with respect to any government which has so objected until such date as the objection is withdrawn.

The Commission will notify each Contracting Government immediately upon receipt of such objection and withdrawal and each Contracting Government should acknowledge receipt of all notifications of amendments, objections and withdrawals.

4. No objections have been received to any other amendments adopted at the 34th Annual Meeting (set out in Circular Communications dated 6 August and 2 September 1982; refs: RG/VC/4529 and RG/EE/4555). These therefore become binding on all Contracting Governments from 5 November 1982.
5. The Secretary requests an acknowledgement of this Communication, a copy of which is also being sent to all Commissioners.



Dr. R. Gambell
Secretary to the Commission

Annex 1

The Ambassador of Japan presents his compliments to the Secretary of the International Whaling Commission (hereinafter referred to as IWC) and has the honour, under instructions from the Government of Japan, to inform the Secretary that, in accordance with the provisions of paragraph 3 of Article V of the International Convention for the Regulation of Whaling, 1946, the Government of Japan presents its objection to the following amendment of the Schedule to the above-mentioned Convention which was decided at the 34th Annual Meeting of the IWC.

The insertion of new sub-paragraph 10(e) of the Schedule which reads as follows:

"10. (e) Notwithstanding the other provisions of paragraph 19, catch limits for the killing for commercial purposes of whales from all stocks for the 1986 coastal and the 1985/86 pelagic seasons and thereafter shall be zero. This provision will be kept under review, based upon the best scientific advice, and by 1990 at the latest the Commission will undertake a comprehensive assessment of the effects of this decision on whale stocks and consider modification of this provision and the establishment of other catch limits."

The Ambassador of Japan has further the honour to inform the Secretary of the reasons for the above-mentioned objection which are as follows:

(1) The subject amendment has no scientific basis as required under the preamble and Article V, paragraph 2 of the

Convention, in that it provides for a blanket moratorium on all commercial whaling regardless of the conditions of individual whale stocks.

(2) The subject amendment does not take into account, as required under the Convention, the important role played by the whale products and the whaling industry in the Japanese traditional diet and in the socio-economy of certain local communities in Japan.

(3) The subject amendment calls for a comprehensive review by 1990, but the belief of the Government of Japan is that such a review should and could be carried out by the 1985 IWC Annual Meeting. However, the present situation of the IWC does not warrant optimism that such a review would in fact be pursued seriously leading to a fair and equitable conclusion by the 1985 IWC Annual Meeting.

In filing the objection, the Ambassador of Japan has further the honour to state that the present objection is made for the purpose of reserving the right on the part of the Government of Japan to make an appropriate decision at an appropriate time taking into account all relevant factors.

On this occasion the Ambassador of Japan would like to reiterate that the Government of Japan earnestly desires that the IWC conduct a comprehensive assessment within the coming three years to draw a rational conclusion.

The detailed views of the Government of Japan on the matter are attached herewith as Appendix.

London, 4 November 1982

Appendix

1. The objectives of the Convention as set out in its preamble are to provide for the proper conservation and the rational utilization of whale resources. Article V, paragraph 2 of the Convention, stipulates that any regulations (a) shall be such as are necessary to carry out the objectives and purposes of this Convention and to provide for the conservation, development, and optimum utilization of whale resources; (b) shall be based on scientific findings; (c) shall take into consideration the interests of the consumers of whale products and the whaling industry.

The Government of Japan, for the following reasons, does not consider that the subject amendment fulfills the conditions set forth in Article V, paragraph 2 of the Convention as well as its objectives.

(1) The Government of Japan believes that the whale resources should be managed stock by stock on the basis of best available scientific evidence and in such manner as to ensure the proper conservation. This is the approach that has been followed also by the IWC.

As a matter of fact the extensive and detailed assessment of the status of stocks are being carried out annually at the Scientific Committee of the IWC. The Scientific Committee is entrusted with the task of recommending necessary regulatory measures to achieve the objectives of the Convention on the basis of available scientific evidence, and it is an irrefutable fact that at the last Annual Meeting as did in the previous meetings they recommended catch limits for a number of stocks.

It also has recommended, as the necessity arises, the complete protection for those stocks which are found to be below the optimum levels.

The Government of Japan wishes to point out that the said Schedule amendment is in contradiction to the views of the Scientific Committee. The Committee did not recommend the moratorium or cessation of all commercial whaling. Instead, it recommended catch limits for a number of stocks. The Report of the Committee indicates that not a single scientist saw the scientific or biological need for such moratorium or cessation.

A delegate from a non-whaling country raised this point at the plenary and stated that the proposal for blanket moratorium is not in conformity with the provisions of Article V.

The observer from the Food and Agriculture Organization (FAO) of the United Nations was more elaborate in expressing its basic viewpoint on this issue in its opening statement at the Annual Meeting of the IWC this year. It stated that:

"... Given the differing status of the various stocks and the fact that virtually all those species or stocks that are seriously depleted are already receiving complete protection, there seems to be no scientific justification for a global moratorium. A justification for a complete cessation of whaling can be put forward on aesthetic or moral grounds, but these seem outside the terms of reference of the Commission."

(2) One of the reasons given for the proposal for a blanket moratorium on commercial whaling was insufficiency of knowledge on the status of whale stocks. The observer from the FAO in the same opening statement, expressed the following view on this matter:

"Another justification for a moratorium is that not enough is known about the dynamics of whale populations, and that no catches should be taken until adequate knowledge is obtained. The objection to this is that

the best, if not the only way, to determine the sustainable yield of a whale stock is carefully monitored harvesting ... These doubts are no reason for not taking moderate and carefully monitored catches from stocks which appear to be in a healthy condition."

In furtherance of scientific knowledge, the Scientific Committee had organized various international research programmes, including the scientific surveys by use of research vessels on the minke whale resource in the Antarctic with the participation of scientists from Japan, the U.S., the U.K., South Africa, Australia, New Zealand, Peru, the U.S.S.R. and Brazil. This resource is the only stock which Japanese pelagic fleet is permitted to utilize under the current IWC regulations. The Government of Japan has contributed annually an amount of over US\$2,000,000 to the implementation of this programme.

This programme has so far established a number of indispensable knowledge on the distribution, population size, age and sex composition of the minke whale population. Upon examining the results obtained from this study, the Scientific Committee concluded at the 1960 Annual Meeting by unanimity that this population is in "a robust condition". As more knowledge is accumulated the estimated size of adult population of this stock has been revised upward from 100,000 at the 1978 Annual Meeting to "at least 300,000" at the 1982 Annual Meeting.

With respect to the question of uncertainty, the Government of Japan shares its view with the FAO and is fully aware of the responsibility that it carries for the rational utilization of whale resources, and intends to strengthen as much as feasible our scientific research to monitor and safeguard the stocks it utilizes in collaboration

with other member countries.

(3) The Government of Japan finds it pertinent to refer to the bowhead issue as discussed at the last Annual Meeting of the IWC. Needless to say the Scientific Committee has repeatedly advised the complete protection of this stock which has been reduced to only a few thousand whales, mature and immature whales inclusive.

Many delegations of the IWC, however, claimed that the continued exploitation should be compatible with the recovery of the stock. The Government of Japan could not see any consistency with the position of those delegations which claimed at the same time that the cessation of commercial whaling is the only recourse to ensure conservation of whale resources with much larger population. The size of the population of sperm whales of 30 feet and larger in the western division of the North Pacific which is utilized by the Japanese coastal whalers is estimated at least to be 200,000, while that of adult minke whales in the Antarctic at least 300,000.

(4) Japan's whaling has a history of nearly a thousand years, and is deeply rooted in Japanese diet and other cultural and traditional backgrounds. Furthermore it plays an important socio-economic role in certain local communities, and provides employment for many persons. It is unreasonable to eliminate such an industry without scientific grounds and deprive those who have been engaged in whaling for many years and still depend on whaling for their livelihood and occupations, and such action also causes economic and social dislocation to the communities.

2. The Government of Japan wishes to turn upon the question of the new management procedures.

In the process of deliberation of the moratorium not a

few delegations pointed to the deficiencies of the current management system resulting in split recommendation of the Scientific Committee on the classification and catch limits of many stocks. One of the major reasons for the split decision is obviously attributable to the system requiring in all cases to establish an initial stock size, say the population in 1910 in the case of Japan's coastal whaling or at a time when there were no reliable scientific data available.

By way of resolving this problem, the Government of Japan has proposed a new procedure in an attempt to improve the U.S. proposal as advanced at the 1981 Annual Meeting. The U.S. proposal continues to make pre-requisite the accurate knowledge of initial population size for the classification and determination of catch limits for all stocks. The IWC this year agreed that efforts should be continued to revise the current management procedure and Japan is prepared to cooperate to this end with all countries concerned.



Annex 54: IWC Circular Communication RG/VJH/16129, "Withdrawal of Objection to Schedule Paragraph 10(e) by Japan", 1 July 1986 enclosing Note from the Ambassador of Japan to the United Kingdom to the Secretary of the International Whaling Commission, 1 July 1986



**International
Whaling
Commission**

Your Ref

Chairman
Mr I. G. Stewart (New Zealand)
Vice-Chairman
Mr M. T. Haddon (United Kingdom)
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Dur Ref: RG/VJH/16129

1 July 1986

CIRCULAR COMMUNICATION TO CONTRACTING GOVERNMENTS

Withdrawal of Objection to Schedule Paragraph 10(e) by Japan

The Government of Japan has given notice of withdrawal of its objection to Paragraph 10(e) of the Schedule. The dates of the coming into effect of this withdrawal, and the conditions attached, are shown in the formal letter of notification copied overleaf.

Article V paragraph 3 requires that the Commission shall notify each Contracting Government immediately upon receipt of each withdrawal of an objection, and each Contracting Government shall acknowledge receipt of such notifications.

A copy of this letter is also being sent to each Commissioner.

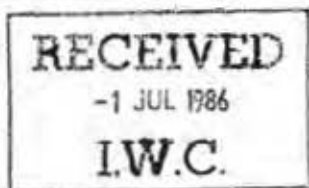
Dr R. Gambell
Secretary to the Commission



EMBASSY OF JAPAN
40, Whitehall, London, W1B 5AL

The Ambassador of Japan presents his compliments to the Secretary of the International Whaling Commission and has the honour, under instructions from the Government of Japan, to inform the Secretary, in accordance with the provisions of paragraph 3 of Article V of the International Convention for the Regulation of Whaling, 1946, of its withdrawal of the objection lodged November 4, 1982, to sub-paragraph 10(e) of the Schedule to the Convention, which withdrawal shall take effect on May 1, 1987 with respect to the commercial pelagic whaling, on October 1, 1987 with respect to the commercial coastal minke and Bryde's whaling and on April 1, 1988 with respect to the commercial coastal sperm whaling, but shall lapse by its own terms only if at any time before April 1, 1988, the United States Secretary of Commerce receives a final, unappealable order from any United States court of competent jurisdiction requiring certification under United States legislation (The Pelly and Packwood-Magnuson Amendments) of Japanese commercial whaling.

London, July 1st 1986



Annex 55: IWC Circular Communication RG/VJH/25435, "Japanese Objection to the Southern Ocean Sanctuary", 15 August 1994, enclosing Note from the Embassy of Japan to the Secretary of the International Whaling Commission, 12 August 1994



**International
Whaling
Commission**

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Our Ref. RG/VJH/25435

15 August 1994

**CIRCULAR COMMUNICATION TO COMMISSIONERS
AND CONTRACTING GOVERNMENTS**

Japanese Objection to the Southern Ocean Sanctuary

The Government of Japan has presented its objection to new sub-paragraph 7(b) of the Schedule to the International Convention for the Regulation of Whaling adopted at the 46th Annual Meeting held in Mexico. A copy of the notification and explanation received from Japan is enclosed.

This objection is lodged in accordance with Article V, paragraph 3 which states:

"Each of such amendments shall become effective with respect to the Contracting Governments ninety days following notification of the amendment by the Commission to each of the Contracting Governments, except that (a) if any Government presents to the Commission objection to any amendment prior to the expiration of this ninety-day period, the amendment shall not become effective with respect to any of the Governments for an additional ninety days; (b) thereupon, any other Contracting Government may present objection to the amendment at any time prior to the expiration of the additional ninety-day period, or before the expiration of thirty days from the date of receipt of the last objection received during such additional ninety-day period, whichever date shall be the later; and (c) thereafter, the amendment shall become effective with respect to all Contracting Governments which have not presented objection but shall not become effective with respect to any Government which has so objected until such date as the objection is withdrawn. The Commission shall notify each Contracting Government immediately upon receipt of each objection and withdrawal and each Contracting Government shall acknowledge receipt of all notifications of amendments, objections, and withdrawals.

The Circular Communication dated 9 June 1994 (ref: RG/JAC/00424) giving notification of the Schedule amendments adopted at the 46th Annual Meeting established 7 September 1994 as the expiration of the ninety-day period. Then the additional ninety-day period during which any other Contracting Government may present objection to this amendment expires on **6 December 1994**.

Commissioners are reminded that the Convention requires each Contracting Government to acknowledge this notification of the objection.

Dr R. Gambell
Secretary to the Commission

Enc

EMBASSY OF JAPAN
LONDON

The Embassy of Japan presents its compliments to the Secretary of the International Whaling Commission (hereinafter referred to as the IWC) and with reference to its Circular RG/JAC/00424 concerning amendments to the Schedule to the International Convention for the Regulation of Whaling, 1946 (hereinafter referred to as the Convention), has the honour, under instructions from the Government of Japan, to inform the Secretary that, in accordance with the provisions of paragraph 3 of Article V of the Convention, the Government of Japan presents its objection to the new sub-paragraph 7 (b) of the Schedule, which is to be added by the said amendments, to the extent that this new sub-paragraph 7 (b) applies the prohibition of commercial whaling in the Southern Ocean Sanctuary to the Antarctic Minke whale stocks.

The new sub-paragraph 7 (b) reads as follows:

"7 (b) In accordance with Article V (1) (c) of the Convention, commercial whaling, whether by pelagic operations or from land stations, is prohibited in a region designated as the Southern Ocean Sanctuary. This Sanctuary comprises the water of the Southern Hemisphere southwards of the following line: starting from 40 degrees S, 50 degrees W; thence due east to 20 degrees E; thence due south to 55 degrees S; thence due east to 130 degrees E; thence due north to 40 degrees S; thence due east to 130 degrees W; thence due south to 60 degrees S; thence due east to 50 degrees W; thence due north to the point of beginning. This prohibition applies irrespective of the conservation status of baleen and toothed whale stocks in this Sanctuary, as may from time to time be determined by the Commission. However, this prohibition shall be reviewed ten years after its initial adoption and at succeeding ten year intervals, and could be revised at such times by the Commission. Nothing in this sub-paragraph is intended to prejudice the special legal and political status of Antarctica."

2/...

The Embassy of Japan has further the honour to inform the Secretary that the reasons for the above-mentioned objection by the Government of Japan are as follows:

The preamble of the Convention sets out that the objectives of the Convention are the proper conservation and rational utilization of whale resources, and paragraph 2 of Article V of the Convention stipulates that any amendments to the Schedule (a) shall be such as are necessary to carry out the objectives and purposes of this Convention and to provide for the conservations, development, and optimum utilization of the whale resources, and (b) shall be based on scientific findings.

In this respect, however, in adopting the said amendment concerning the establishment of the Southern Ocean Sanctuary, the IWC disregarded the following points:

- (1) The Scientific Committee of the IWC (hereinafter referred to as the Committee), at its 42nd meeting in 1990, confirmed that over 760,000 Minke whales are in existence in the Antarctic and recognized that their conditions are robust.
- (2) In 1992, the Committee estimated that, if the Revised Management Procedure, which was elaborated by the Committee for the sustainable utilization of whale resources, was applied, annual take of no less than 2,000 animals would be attainable with no risk of depletion of the Minke whales in the Antarctic over the period of 100 years.
- (3) This year the Committee has failed to address a number of outstanding issues, on which the Sanctuary Working Group recommended the Committee to make further studies. Those issues include interactions among whale species in the proposed Sanctuary and the question whether the establishment of the Sanctuary has advantage over the application of the Revised

Management Procedure. The Committee also failed to address the question raised by the Japanese Delegation: which proposal was scientifically justifiable, the Japanese proposal to exempt the Minke whales from the prohibition of commercial whaling in the proposed Sanctuary, or the nineteen-country joint proposal to prohibit commercial whaling of all the species in that Sanctuary.

The foregoing shows that the amendment to apply the prohibition of commercial whaling to the Minke whales in the Antarctic has no scientific basis, and thus it does not conform to the objectives and provisions of the Convention.

Furthermore, the introduction of such prohibition, which lacks scientific basis and contradicts the principle of the sustainable utilization of whale resources, may have adverse effects to the management of other marine living resources.

The Embassy of Japan avails itself of this opportunity to renew to the Secretary of the IWC the assurances of its highest consideration.

12th August 1994



Annex 56 IWC Circular Communication RG/VJH/25479, "Objection by Japan to new Schedule sub-paragraph 7(b)", 12 September 1994 enclosing Letter from the Counsellor, Agriculture, Forestry and Fisheries, Embassy of Japan, London, to the Secretary of the International Whaling Commission, 7 September 1994



**International
Whaling
Commission**

Your Ref.

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12 September 1994

**CIRCULAR COMMUNICATION TO COMMISSIONERS
AND CONTRACTING GOVERNMENTS**

Objection by Japan to new Schedule sub-paragraph 7(b)

Following distribution of the notification by Japan of its objection to new sub-paragraph 7(b) of the Schedule (Circular Communication dated 15 August 1994; ref: RG/VJH/25435), the Government of the UK asked the Secretary for clarification of this objection.

The Secretary has now received the clarification requested from Japan, in that its objection applies only to the Antarctic minke whale stocks and not any other species of baleen or toothed whale within the prescribed area.

Copies of the relevant correspondence are enclosed.

Dr R. Gambell
Secretary to the Commission

Encs

071-485 6500

EMBASSY OF JAPAN
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7th September 1994

Dr R Gambell
Secretary to the
International Whaling Commission
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Dear Dr Gambell,

Thank you for your letter dated 24 August 1994.

I write to clarify the objection, dated 12 August 1994, by the Government of Japan to new sub-paragraph 7(b) of the Schedule to the International Convention for the Regulation of Whaling.

The objection is presented to new sub-paragraph 7(b), to the extent that this sub-paragraph applies to the Antarctic Minke whale stocks and does not dispute that this sub-paragraph will apply to any stock of other species of baleen and toothed whales within the prescribed area.

I hope that this clarification will meet your needs.

Yours sincerely,

Hiroyuki Takeya

Hiroyuki Takeya
Counsellor
Agriculture, Forestry and Fisheries



Annex 57: Nishiwaki, Shigetoshi et al, *Cruise Report of the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) in 2005/2006 – Feasibility Study, SC/58/O7*

SC/58/O7

Cruise Report of the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) in 2005/2006 -Feasibility study-

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5) Department of fisheries, Faculty of Oceanography, Tokai University, 3-20-1 Orido, Shimizu ward, Shimizu-city Shizuoka, 424-0902 Japan

ABSTRACT

The research plan for the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) was presented to the 2005 meeting of the International Whaling Commission's Scientific Committee (IWC/SC). The research program involves both non-lethal and lethal research techniques. The first two JARPA II surveys, to be conducted in the 2005/06 and 2006/07 austral summer seasons, were planned as feasibility studies with the following objectives: 1) to examine the practicability and appropriateness of sighting methods considering the enlarged research area, 2) to examine the practicability and appropriateness of sampling procedure considering the increased sample size for Antarctic minke whale and 3) to examine the practicability of methods of hunting, hauling, flensing and biological sampling of large-sized whales. For the feasibility surveys a total of 850±10% Antarctic minke whales and 10 fin whales were planned for sampling. The first feasibility survey of the JARPA II was carried out between 3 December 2005 and 20 March 2006 (108 days) in Areas III E, IV and part of Area V. The total searching distance was 16,372.7n.miles (8,836.2n.miles covered by the two dedicated Sighting Vessels (SVs) and 7,536.5n.miles covered by the three Sighting and Sampling Vessels (SSVs). The following species managed by the IWC were sighted: Antarctic minke, blue, fin, sei, humpback, southern right, sperm and southern bottlenose whales. The Antarctic minke and humpback whales were the dominant species. Out of 821 schools (1,959 individuals) in the primary sightings of Antarctic minke whales by SSVs, 779 schools (1,879 individuals) were targeted for sampling. A total of 853 individuals were sampled. Out of 37 schools (245 individuals) in the primary sightings of fin whales by SSVs, 11 schools (112 individuals) were targeted for sampling. A total of 10 animals were sampled. The maximum body length for the sampled fin whales was 20.22m (female, 61.52tons). Photo-id experiments were conducted on blue, humpback and southern right whales and a total of 85 animals were photographed. A total of 46 skin biopsy samples were collected from seven species. CTD, XCTD and XBT castings were conducted at 86, 123 and 22 locations, respectively. EPCS (Electric Particle Counting and Sizing System) survey was conducted for 94 and 99 days by each SV, respectively. One of SV conducted the quantitative echo sounder survey for 94 days in the whole research area. The main results of this feasibility survey were as follows: 1) Antarctic minke and the humpback whales were the dominant species observed in similar numbers in the research area, 2) fin whales were widely distributed in the south strata from 80°E to 135°E, 3) large baleen whales intermingled in the south strata throughout the whole research area. Regarding the objectives of the feasibility survey, the following results were obtained: 1) the sighting methods used were practical and appropriate for the enlarged research area, 2) sampling procedures were appropriate for covering the increased sample size of the Antarctic minke whales of 850±10%, 3) method of hunting, hauling, flensing and biological sampling of large-sized whales was checked and found to be adequately done. Therefore it can be concluded that the first feasibility survey of JARPA II was conducted satisfactorily and that the objectives of the survey had been covered adequately.

KEYWORDS: ANTARCTIC MINKE WHALES, FIN WHALES, HUMPBACK WHALES, BALEEN WHALES, ANTARCTIC, SOUTHERN HEMISPHERE, SCIENTIFIC PERMITS.

INTRODUCTION

The Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) was conducted between 1987/88 and 2004/05 austral summer seasons, under Article VIII of the International Convention for the Regulation of Whaling. The IWC Scientific Committee conducted an interim review of JARPA results in 1997. In January 2005, a JARPA review meeting called by the Government of Japan was held.

JARPA provided a wide variety of information on biological parameters of Antarctic minke whale such as the natural mortality coefficient and changes over time in the age at maturity as well as narrowing down the parameters of relevance for stock management. JARPA also elucidated that there were two stocks in the research area but their geographical boundaries were different from those used by the IWC (Pastene *et al.* 2005). Further, JARPA found that pollutant concentration in whale's tissues, such as heavy metals and PCBs, was extremely low (Yasunaga *et al.* 2005). JARPA has thus successfully obtained data related to the initially proposed objectives. The review meeting conducted in January 2005 agreed that results from JARPA were consistent with the behavior to be expected of baleen whale populations competing for a dominant single food resource, krill. The meeting also agreed that the results obtained provide clear support for the need to take species-interaction (ecosystem) effects into account in understanding the dynamics of the baleen whale species in the Antarctic ecosystem, and predicting future trends in their abundance and population structure (Government of Japan, 2005).

Based on these considerations, the Government of Japan launched a new comprehensive study, the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II), combining lethal and non-lethal methods, starting from the 2005/06 austral summer season. The first two seasons (2005/06 and 2006/07) are dedicated to feasibility studies.

The full-scale JARPA II will start from the 2007/08 season. It will be a long-term research program with the following objectives 1) Monitoring of the Antarctic ecosystem, 2) Modeling competition among whale species and developing future management objectives, 3) Elucidation of temporal and spatial changes in stock structure and 4) Improving the management procedure for the Antarctic minke whale stocks. JARPA II will focus on Antarctic minke, humpback and fin whales and possibly other species in the Antarctic ecosystem that are major predators of Antarctic krill. Annual sample sizes for the full-scale research (lethal sampling) are 850 (with 10% of allowance) Antarctic minke whales (Eastern Indian Ocean and Western South Pacific Stocks), 50 humpback whales (D and E-Stocks) and 50 fin whales (Indian Ocean and the Western South Pacific Stocks). During the feasibility study, a maximum annual sample size of 850±10% Antarctic minke whales will be sampled. A maximum of ten fin whales will be sampled in each season. Humpback whales will not be taken during the feasibility study.

The research methods for the JARPA II are basically the same as the previous JARPA with some modifications. The program involves both non-lethal research techniques such as sighting surveys, biopsy sampling, acoustic surveys for prey species and the collection of oceanographic data and lethal sampling since collection of certain information, of vital importance to the overall study, requires examination of internal organs such as ovaries, earplugs and stomachs. A comprehensive review will be conducted following completion of the first 6 years of the research (Government of Japan, 2005).

This is the first cruise report in JARPA II. This season was dedicated to feasibility studies. The practicability and appropriateness of sighting methods in the enlarged area and sampling procedures for the increased sample size were examined. Methods for catching, flensing and taking biological measurements of large body-sized fin whales were also tested.

RESEARCH METHODS

Research vessels

The whale research unit was composed of two dedicated sighting vessels (*Kyoshin Maru No.2*: KS2 and *Kaikoh Maru No.1*: KK1), three sighting and sampling vessels (*Yushin Maru No.2*: YS2, *Yushin Maru*: YS1, and *Kyo Maru No.1*: KO1) and one research base vessel (*Nisshin Maru*: NM).

Two sighting vessels (SVs) were dedicated to sighting survey and most of the experiments were conducted by these vessels. Three sighting and sampling vessels (SSVs) vessels were engaged in sighting and sampling surveys. NM served as a research base on which all biological examinations of collected samples were conducted.

Research area

JARPA began with surveys in Areas IV (70°-130°E) and V (130°E-170°W). From the austral summer season 1995/96, the research area was extended to include the eastern part of Area III (35°-70°E) and the western part of Area VI (170°-145°W). The stock structure of Antarctic minke whales was therefore investigated in an area spanning 180 degrees in longitude.

With regard to the Antarctic minke whales, it was found that there were two independent stocks in the research area and a soft boundary at 165°E (middle of Area V) was proposed for management purposes (Pastene *et al.*, 2005a). To the west of this boundary line, but especially in Area IV, humpback whales have shown a rapid increase in recent years, and have surpassed the Antarctic minke whales in biomass. Fin whales have also shown a rapid increase with an abundance estimate of about 9,000 animals in Area IV+III. On the other hand, there has been significant decrease in blubber thickness of the

minke whales and a reversal in the trend of age at maturity toward younger ages (Bando *et al.*, 2005; Konishi and Tamura, 2005; Zenitani and Kato, 2005), which strongly indicates competition among the whale species in the area. Comparative studies of both areas will be useful to understand the pattern of competition among whale species.

The area to be covered by JARPA II is basically same as JARPA: the eastern part of Area III, Areas IV and V, and the western part of Area VI (35°E - 145°W). In the first year, JARPA II surveyed the East Indian Ocean Stock of Antarctic minke whales in a longitudinal span of 140° on the western side of the research area (35°E - 175°E). Fig.1 shows geographic location of the research area for the 2005/2006 JARPA II surveys

Survey track line design

The minimum unit of the longitudinal width is 10 degrees in principle. The number of units was allocated to correspond with the longitudinal width of each stratum. However, the width of the units was changed based on the planned research days within the stratum. Track lines were constructed for SVs and SSVs, separately. Vessels made sightings alternately in the north and south strata. In the case of SV, two vessels crossed each other. Three SSVs conducted sighting and samplings simultaneously in the interval of 7 n.miles. The schematic figures are shown in Fig. 2 for SVs and Fig. 3 for SSVs, respectively.

The survey track line is systematically designed in the 10 degree longitudinal width interval in principle from the survey starting point. The survey starting point was randomly selected on the longitudinal border of the research area. Details are shown under the heading "The longitudinal interval and number of the survey track line in the sub-research area" on pages 4 and 5.

Sighting method

Sighting procedures were the same as in the previous JARPA surveys (Nishiwaki *et al.* 1999, Ishikawa *et al.* 2000). The sighting survey using SSVs was conducted under limited closing mode (when a sighting of Antarctic minke whales was made on the predetermined track line, the vessel approached the whales and species and school size confirmed). Three SSVs advanced along parallel track lines 7 n.miles apart, at a standard speed of 11.5 knots. The sighting survey by SV was conducted under limited closing mode and passing mode (even if sighting was made on the predetermined track line, the vessel did not approach the whales directly and searching from the barrel was uninterrupted).

The survey was operated under optimal research conditions (when the wind speed was below 25 knots in the south strata and 20 knots in the north strata and visibility was more than two n.miles). In addition to the sighting of Antarctic minke and fin whales or whales suspected to be those species, the SV approached blue (*B. musculus*), humpback (*Megaptera novaeangliae*), southern right (*Eubalaena australis*), pigmy right (*Caperea marginata*), sei (*B. borealis*), sperm (*Physeter macrocephalus*) and southern bottlenose (*Hyperoodon planifrons*) whales for conducting some experiments. The SSVs also approached the same whale species as experiments in SV while they engaged in the sighting survey.

Sampling method

Three sampling/sighting vessels were engaged in the sampling survey. 850 Antarctic minke whales (with 10 % Allowance) and ten fin whales were planned to be taken in the research area south of 62°S.

One or two Antarctic minke whale was sampled randomly from each primary sighted school within 3n.miles of the track line. The dwarf form minke whales were not a target for sampling. Sampling of fin whales was restricted to an estimated body length less than 20m, because of limitation of the research base ship (NM) facility for dissection.

Low and middle latitudinal sighting survey

During transit cruises, sighting surveys were conducted in the area between 30°S and 60°S except for Areas within national EEZs. The results of these surveys are not shown in this report.

Biological research

Non-lethal means are not satisfactory to address all objectives of the planned in JARPA II. For example, age of whale, nutrition condition of the whale, food consumption, and heavy metal load can not be obtained by the current non-lethal methods. As well as the former JARPA, JARPA II will be conducted as a comprehensive research plan using lethal and non-lethal methods allocated properly for each research objective. Most of the research methods used in JARPA II were established through a research period of 18 years in JARPA.

Biological research on all sampled whales were conducted on the NM

Experiments

Sighting distance and angle experiment

This experiment was conducted in order to evaluate the accuracy of the information on sighting distance and sighting angle given by observers of the SV and SSVs.

Photo-identification experiment

The following species were targeted for photographic record of natural markings by SV and SSVs: blue, humpback and

southern right whales.

Biopsy sampling

In addition to the species targeted for the photo-identification experiment, pygmy right, fin, sei, sperm, southern bottlenose whales were targeted for biopsy skin sampling by the SV and SSVs using compound-crossbow. All collected sample were preserved at -80°C .

Oceanographic and acoustic survey

SVs conducted the following oceanographic survey.

- 1) Consecutive measuring of water surface temperature, conductivity, surface chlorophyll, dissolved oxygen, surface particle and surface flow by Electric Particle Counting and Sizing System (EPCS)
- 2) XCTD and CTD survey
- 3) Marine debris recording in the research area by KK1 and KS2. All marine debris found in the stomach of Antarctic minke whales was recorded and collected on NM.
- 4) Hydro-acoustic survey using a scientific echo sounder (EK500 with operating frequencies at 38kHz, 120kHz, 200kHz, SIMRAD, Norway) to elucidate distribution and abundance of prey species of baleen whales. Hydro-acoustic survey was conducted by KS2. This survey was conducted with sighting survey throughout the whole research area.

In addition to these surveys mentioned above, SVs deployed Argo profiling floats (profiling devices), which collected high quality oceanographic data of upper and middle layers of the world ocean almost simultaneously with very high space-time resolution, during this cruise in cooperation with Japan Marine Science and Technology Center (JAMSTEC) (See http://w3.jamstec.go.jp/ARGO/J_ARGOe.html).

During the 57th SC, three concerns were raised (IWC/57/Rep1, P58-59).

- 1) The level of details in proposed survey and sampling designs is insufficient to adequately review the proposal.
- 2) As noted in the proposal, krill plays a central role in the Antarctic ecosystem. However, the proposal appears to recognize this but contains no commitment or specific survey plans for such work.
- 3) Substantial numbers of Antarctic minke whales appear to occur within the pack ice and the pack ice is a potentially important habitat for this species. JARPA II contains no plans to surveys within the pack ice.

For sighting and sampling design, we considered the discussions and established a new design of track line in Figs. 2 and 3. These designs could assure the randomness and representativeness of sighting and sampling of whales.

With respect to krill survey, acoustic krill abundance survey using a scientific echo sounder (EK500) was planned. KS2 conducted this survey in the whole research area.

The survey of whales within the pack ice is very important. However, it is difficult and dangerous for the research unit NM. We conducted a survey using the Shirase (ice-breaker vessel) in 2004/05 season and will make efforts to continue such surveys within pack ice.

RESULTS

Outline of the research activities

Table 1 shows an outline of the research activities. The research period in the 2005/06 JARPA II was 108 days from 3 December 2005 to 20 March 2006. The whale research unit (WRU) encountered a Greenpeace (GP) vessel during the research activity on 21 December 2005 and, the Sea Shepherd (SS) vessel together with GP on 25 December 2005. The WRU interrupted research activities from 25 December 2005 to 2 January 2006 to ensure safe refueling. The attempted obstruction and violent activities of GP occurred from 21 December 2005 to 19 January 2006.

The longitudinal interval and number of the survey track lines in the sub-research area

The track lines by the SVs and the SSVs are shown in figures 4 and 5. The longitudinal interval and number in the unit of survey track line in each sub research area were as follows:

- 1) The eastern part of Area V

The research area in the eastern part of Area V is a range from 60°S to 69°S and from 175°E to 165°E . The research starting point of SVs and SSVs were provided on the 175°E longitudinal line. The survey track line was set zigzag in north and south to westward. The longitudinal interval of each tooth of the survey track line was $1^{\circ} 15'$ for SSVs in both north and south strata, and $2^{\circ} 30'$ in north stratum and $1^{\circ} 15'$ of south stratum for SVs. Allocated survey track line of the research area is one tooth in the north stratum and 3 teeth in the south stratum for SSVs. SVs surveyed two teeth in the north stratum and four teeth in the south stratum. The pack ice line was estimated based on the latest ice-edge information from near real time DMSP SSM/I daily polar gridded sea ice concentration data set available from the National Snow and Ice Data Center (NSIDC, Cavalieri *et al.* 1999). However, the actual pack ice line projected remarkably to the north because of the developed low atmospheric pressure. Therefore, the northern boundary of south

stratum in the research area ranged from 175°E to 165°E was fixed at the 62°S and SSVs only surveyed the south stratum.

2) The western part of Area V

The research area in the western part of Area V was south of 60°S and from 165°E to 130°E. The research starting points of SVs and SSVs were the 165°E. The survey track line was set zigzag in north and south to westward. The survey track line was continued from that of the eastern part of Area V. SSVs surveyed 3 teeth in the north stratum and 9 teeth in the south stratum. SVs surveyed six teeth in the north stratum and twelve teeth in the south stratum. The research activity was planned from 9 to 28 December for the convenience of refueling. The entire research activities were interrupted on 23 December to evade interference by the GP and SS. The range surveyed in this period was from 165°E to 139°E.

Un-surveyed range in the research area from 130°E to 139°E was covered later (in March). The research starting point of SVs and SSVs were set on the 130°E. The survey track line was set zigzag in north and south to eastward. The same design of survey track line was continued from that of the eastern part of Area IV again. For the longitudinal interval of one tooth of the survey track line, the SSVs made 3° 20' in the north and south strata, the SVs adopted 5° in the north stratum and 2.5° in the south stratum. Because of limitation of research period due to the harassment by GP and SS, survey effort of SSVs was concentrated in the south stratum and the north stratum in this area was not surveyed.

3) The eastern part of Area IV

The range of the eastern part of Area IV is south of 60°S and from 100°E to 130°E. The same design of survey track line was continued from the western part of Area IV. The research starting point of SVs and SSVs was on the 100°E latitudinal line. The track line of the SSVs was set zigzag in north and south to eastward. In the case of SVs, the research area was divided into two areas at 117° 38'. The survey was implemented zigzag in north and south to westward in western half and to eastward on eastern half from this longitude. For the longitudinal interval of one tooth of the survey track line, the SSVs had 3° 20' in both north and south strata, the SVs adopted 5° in the north stratum and 2°30' in the south stratum. The teeth in the survey track line of this area were composed of four and a half teeth in the south stratum in SSVs and three teeth in the north stratum and six teeth in the south stratum in SVs. Because of limitation of research period due to the harassment by GP and SS, survey effort of SSVs was concentrated the south stratum and the north stratum in this area was not surveyed.

4) The western part of Area IV

The range of the western part of Area IV is south of 60°S and from 70°E to 100°E. The research starting point of SVs and SSVs was on the 70°E longitude line. The track line was surveyed zigzag in north and south to eastward except to westward from west of 75° east longitude. For the longitudinal interval of one tooth of survey track line, the SSVs had 1°40' in both north and south strata, the SVs adopted 5° of the north stratum and 2°30' in the south stratum. The survey track line in this area for the SSVs was composed of two and half teeth in the north stratum and eight and half units in the south stratum. SV track lines were composed of three teeth in the north stratum and five and half teeth in the south stratum. In east of 95E, because of limitation of research period due to the harassment by GP and SS, survey effort of SSVs was concentrated the south stratum and the north stratum in this area was not surveyed.

5) The Prydz Bay (the western part of Area IV)

The range of the Prydz Bay is from south of 66°S from 70°E to 80°E. A tongue-shape ice field projected to the west side from 66°S to 67°S and from 80°E to 73°E. The entrance to the bay was blockaded in the neighborhood of 73°E and 67°S. The research area was divided into north and south at the 67°S. The research starting point of SVs and SSVs was on the 80°E. For the longitudinal interval of one tooth of survey track line, the SSVs had 3°20' and the 2°30' for the SVs. The survey track line of the research area was composed one and half teeth for the SSVs and two teeth for the SVs.

6) The eastern part of Area III

The research area in the eastern part of Area III is a range from south of 60° and from 55°E to 70°E. The research starting point of SVs and SSVs provided on the 55°E. The survey track line was set zigzag in north and south to eastward. For the longitudinal interval of one tooth of the track line, the SSVs had 1°40' in both north and south strata. The SVs had 5° of the north stratum and 2°30' of the south stratum. The survey track line of the research area was composed of one and a half teeth in the north stratum and three and a half teeth in the south stratum for SSVs and one and a half teeth for the north stratum and three teeth in the south stratum for the SVs.

Searching distance

The searching distances of the SVs and the SSVs were shown in table 2. The research period was 108 days but 9 days were not surveyed because of harassment of GP and SS. The total searching distance was 16,372.7 n.miles consist of 8,836.2 n.miles in the two SVs and 7,536.5 n.miles in the three SSVs.

Whale species sighted

Fourteen species were identified during the research period. Table 3 shows eight whale species number of sightings by SV and SSVs. The following six species of baleen whales were confirmed: Antarctic minke, blue, fin, sei, humpback and southern right whales, and two toothed whales were confirmed: sperm and southern bottlenose whales.

The number of the primary sightings was; humpback whales (1702 schools and 3200 individuals), Antarctic minke whales (1658 schools and 4383 individuals) and fin whales (188 schools and 748 individuals). These account for 76.2% in the sighting composition with 36.6% for the humpback, 35.6% for the Antarctic minke and 4.0% for the fin whales in schools. The Antarctic minke and the humpback whales were equally dominant species. When considering biomass, it is suggested that the humpback whales exceeds that of fin whales which were the same as Antarctic minke whales.

Distributions of confirmed whale species in the research areas

1) Antarctic minke whales

The distribution of sightings of the Antarctic minke whales by SVs is shown in figure 6 and SSVs in figure 7. The Antarctic minke whales were widely distributed throughout the research areas. The density and distribution of sightings seemed to be different between east and west of 115 degrees of east longitude. In the east of this line, high density area was found only near the ice-edge, and density was low in the north strata and offshore in the south strata. In the west side of the line, high density and concentrated areas were observed from east of 55°E to the Prydz Bay and around the Drygarsky Island in the south strata of the Area IVW. Antarctic minke whales were low density in the north stratum but were widely distributed.

2) Humpback whales

The distribution of sightings of the humpback whales by SVs is shown in figure 8 and SSVs in figure 9. The humpback whales were widely distributed throughout the research areas. The density and distribution of sightings seemed to be different between east and west of 130 °E. In the east of this latitudinal line, humpback whales were concentrated near the ice-edge. In the west of 130°E latitudinal line, high concentrated areas were confirmed in the south strata of Area IV except the Prydz Bay and around the Drygarsky Island where Antarctic minke whales were dominant. They were medium density in the north strata and offshore in the south strata.

3) Fin whales

The distribution of sightings of the fin whales by SVs is shown in figure 10 and SSVs in figure 11. Fin whales were widely distributed in the research areas throughout the research periods. High concentrated areas were confirmed in the south strata of Area IV, while they were rare in the Prydz Bay and around the Drygarsky Island. Sightings of fin whales in Areas IIIE and IV in the north strata were low.

3) Blue, sei and southern right whales

The distribution of sightings of blue, sei and southern right whales by SVs is shown in figure 12 and SSVs in figure 13. Sightings of blue whales were widely spread in the entire research area. Southern right whales were concentrated in the limited area in the south strata of the Area IV. Sei whales were sighted in the north stratum in the eastern part of Area IV.

Density index and mean school size

1) Antarctic minke whales

Table 4 shows density indices (DI; number of schools sighted/100 n.miles searching distance) and mean school size (MSS) of primary sightings of Antarctic minke whales by vessels and stratum. For the whole research area the DI was 12.7 schools and the MSS was 2.8 individuals for the SVs. For the SSVs, DI was 10.9 schools and MSS was 2.4 individuals.

In the case of the SVs, there is no difference in the DI within south and the north strata of the Areas VW (18.1 on north and 18.4 on south strata) and IIIE (15.0 on north and 11.7 on south strata). MSS was also nearly same (2.8 in the north and 2.3 in the south strata in Area VW and 2.3 in the north and 2.1 in the south strata in the Area IIIE). There is no difference in the DI and MSS within the south stratum of Area IIIE (DI 11.7 and MSS 2.1) and the Prydz Bay (DI 12.3 and MSS 1.9). However, there was a large difference of DI between north and south strata in the Area IV. These were 1.4 in eastern to 7.1 in western in the north stratum and 10.7 in eastern to 29.0 in western in the south stratum. The MSS also showed a similar tendency. These were 1.5 in eastern to 3.8 in western in the north stratum and 2.4 in eastern to 4.4 in western in the south stratum. The MSS for the south and north strata in the Area IVW was a maximum through the whole research area.

2) Humpback whales

Table 5 shows DI and MSS of primary sightings of humpback whales by vessels and stratum. In the whole research area, DI was 17.8 schools and the MSS was 1.9 individuals for the SVs. For the SSVs DI was 8.2 schools and MSS was 1.9 individuals. The MSS was the same level through the whole research areas.

In the case of the SVs, the DI was remarkably high in the south stratum of eastern and western part of Area IV. The south

stratum of Area IVE (50.0) was a maximum through the whole research area and was remarkable high density compared with other strata. There is not a difference in the DI within south and the north strata in the western part of Area VW (22.2 on north and 22.6 on south strata).

3) Fin whales

Table 6 shows DI and MSS of primary sightings of fin whales by vessels and stratum. In the whole research area DI was 2.7 schools and MSS was 3.1 individuals for the SVs. For the SSVs DI was 0.5 schools and MSS was 6.6 individuals. In the case of the SVs, the DI in the north was remarkably lower than in the south stratum in the Area VE (0.5 in the north and 8.4 in the south strata) and in the Area IV (1.2 in the north and 8.9 in the south strata of eastern part, 1.8 in the north and 4.2 in the south strata of western part) except for the Prydz Bay. The range of the MSS was from 2.3 to 4.8 and there was no remarkable fluctuation by the research strata.

Sampling of Antarctic minke whales and fin whales

1) Antarctic minke whales

Out of 821 schools (1959 individuals) in the primary sightings of Antarctic minke whales by SSVs, 779 schools (1,879 individuals) were targeted for sampling. A total of 853 individuals were sampled (2 from Area VE, 148 from Area VW, 74 from Area IVE, 499 from Area IVW and 130 from Area IIIE). Sampling efficiency (the rate of successful sampling for targeted individuals) was 95.6%. This value was the highest level during the previous JARPA surveys. Struck and lost occurred in only three cases.

2) Fin whales

Out of 37 schools (245 individuals) in the primary sightings of fin whales by SSVs, 11 schools and 112 individuals (6 schools and 90 individuals in the south stratum of Area IVW, 5 schools and 22 individuals in the south stratum of Area IVE) were targeted for sampling. A total of 10 individuals were sampled (6 from Area IVW-S and 4 from Area IVE-S). Sampling efficiency was 90.16%. No struck and lost occurred.

Biological research

Biological research was conducted on the research base ship for all whales sampled. Table 6 summarizes biological data and samples collected from the Antarctic minke whales. Table 7 summarizes biological data and samples collected from the fin whales.

Preliminary analyses of biological information

1) Antarctic minke whales

Table 8 shows the reproductive status of samples by stratum in Antarctic minke whales. Mature females were dominant in Prydz Bay, whereas mature males were dominant in most of other strata. In the south stratum of Area IVE, both immature males and females were dominant. Pregnancy rate in mature females was 93.8% (227 individuals) in the whole research areas and two twins were observed.

Table 10 shows mean body length of Antarctic minke whales collected in each stratum. Maximum length of the sample was 9.58m for males and 10.47m for females. Minimum length was 4.85m and 4.73m, respectively.

2) Fin whales

The biological data of the collected fin whales is shown in Table 9. The maximum body length was 20.22 m with body weight of a 61.52t for a female. The minimum body length of the mature female was 19.47 m with weight of 51.80 t.

Experiments

1) Sighting distance and angle experiment

A sighting distance and angle experiment was performed on 30 December 2005 by SSVs, 3 and 4 January 2006 by the KS2 and 6 January 2006 by KK1. The results of this experiment will be used in calculation of abundance estimates.

2) The results of photo-ID

Table 10 summarizes the results of photo-ID. The photo-ID experiment was conducted within the entire research area. A total of 85 targeted individuals were photographed (13 blue, 34 humpback and 38 southern right whales).

3) The results of biopsy sampling

Table 11 summarizes the results of biopsy sampling. A total of 46 skin biopsy samples were collected from blue whales (n=5), fin whales (n=9), sei whales (n=1), humpback whales (n=13), southern right whales (n=15), carcass of sperm whale (n=1), carcass of southern bottlenose whale (n=1) and long-finned pilot whale (n=1).

4) The attachment of the satellite tags

YS1 tried to attach satellite tags to two individuals of one school of Antarctic minke whales on 14 February 2006. The body lengths were estimated at 8.2 m and 8.5 m. Both tags hit but one was omitted from the body because of trouble with the discharge. The other was attached to the body in the position behind the dorsal fin. However, the transmission antenna was ineffective and did not operate.

5) The Oceanographic and acoustic surveys

Table 12 shows the summary of oceanographic and acoustic surveys. CTD, XCTD and XBT castings which were conducted at 86, 123 and 22 locations, respectively. EPCS survey was conducted for 94 days by KS2 and 99 days by YS2 in total. KS2 conducted the quantitative echo sounder survey which ranged over 94 days in the whole research area.

6) The marine debris

The marine debris survey was carried out concomitant with the sighting survey of the SVs in all research areas. A total of fifteen debris (thirteen buoys, one wad of fishing net and one lump of styrol were confirmed. Eight sheets, feathers as alien substances from the stomach content were confirmed in eight of the collected Antarctic minke whales.

Products

All the whales collected were processed on NM after biological sampling was completed, according to the provisions of Article VIII of the Convention. A total of 3441.4 tons (268.9 tons of fin and 3171.5 tons of Antarctic minke whales) of meat, blubber, viscera, etc. was produced.

DISCUSSION

This paper describes research methods and reports results from the first feasibility survey of the JARPA II. The objectives of this feasibility survey were the following: 1) to examine the practicability and appropriateness of sighting methods considering the enlarged research area, 2) to examine the practicability and appropriateness of sampling procedure considering the increased sample size for Antarctic minke whale and 3) to examine the practicability of methods of hunting, hauling, flensing and biological sampling of large-sized whales. For the feasibility surveys a total of 850 \pm 10% Antarctic minke whales and 10 fin whales were planned for sampling, and this target was met in this first feasibility survey.

The main results of the first feasibility survey can be summarized as follows:

- 1) Antarctic minke and humpback whales were the dominant species observed in similar numbers in the research area. Both species were highly concentrated in the south strata. However, some segregation was observed as high density for one species did not coincide with the high density of the other species in a same stratum. Antarctic minke whale was dominant in the western part of Area IVW while the humpback whale was dominant in the eastern part of Area IVE. In terms of biomass it can be suggested that the humpback whale is the dominant species in the research area.
- 2) Fin whales were widely distributed in the south strata from 80°E to 135°E. In the past it was suggested that fin whales do not distribute in large number in the south strata compared with Antarctic minke and humpback whales. However, it was observed during this survey that fin whales distributed in the south strata presenting large mean school sizes (MSS) compared with that of other baleen whale species. It is clear that the biomass of fin whales is similar to that of Antarctic minke whales.
- 3) Large baleen whales intermingled in the south strata through whole research area. Blue whales were widely observed in the entire research area. Southern right whales were concentrated in the south strata of Area IV. Sightings of both species were few compared with those of Antarctic minke, humpback and fin whales. However increasing in sighting composition of large baleen whales is important for studies of inter-species relationships of whales.

Regarding the objectives of the first feasibility survey, the following results were obtained:

- 1) The practicability and appropriateness of sighting methods in the enlarged area. This cruise was planned to cover a longitudinal span of 140° from 35°E to 175°E through early December to late March. It was planned that the search effort would be distributed mainly in Area IV, in the peak feeding season of baleen whales. The only un-surveyed areas were those from 35°E to 55°E and 135°E to 139°E, due to external disturbances. Despite these disturbances, sighting was conducted in the peak season from early January to early March in the main research area from 55°E to 130°E which included Area IV. The practicability and appropriateness of the planned sighting methods were confirmed.

2) Sampling procedures given the increased sample size and additional species.

A total of 779 schools (1,879) individuals of Antarctic minke whales were targeted for sampling. A total of 853 individuals were sampled from 4 December to 20 March. Sampling efficiency was 95.6%. A total of 11 schools (112 individuals) of the fin whales were targeted for sampling. A total of 10 individuals were sampled from 3 February to 13 March. Sampling efficiency was 90.16%. These results showed that sampling procedure were appropriate for the increased sample size of Antarctic minke whale and for additional species.

3) Methods for catching, flensing and taking biological measurements of large body-sized fin whales

Although it took more time to catch, transport, measure and dissect the fin whales than is the case for the Antarctic minke whales, the process from catching to biological sampling of fin whales was successfully conducted. Therefore the method of hunting, hauling, flensing and biological sampling of large-sized whales was checked and confirmed as adequate for whales of body length of at least 20.22m.

Therefore it can be concluded that the first feasibility survey of JARPA II was conducted satisfactorily and that the objectives of the feasibility survey were covered adequately.

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Table1. Outline of the research activities

| Event | Date | RBV | SSVs | SV | |
|--|---------------------------------|-----|------|-----|-----|
| | | | | KKI | KS2 |
| Departure from Shimonosaki-city in Yamaguchi prefecture Japan | 8/ Nov./ 2005 | ○ | ○ | ○ | ○ |
| Low and middle latitudinal sighting survey in transit area | 24/ Nov./ 2005 ~ 2/ Dec./ 2005 | | ○ | ○ | ○ |
| Starting of the sighting and sampling survey in the Antarctic Ocean | 3/ Dec./ 2005 | | | ○ | ○ |
| | 4/ Dec./ 2005 | ○ | ○ | | |
| Sighting and sampling survey in the eastern part of Area V from 175E to 165E | 3/ Dec./ 2005 ~ 8/ Dec./ 2005 | ○ | ○ | ○ | ○ |
| Sighting and sampling survey in the Western part of Area V from 165E to 155E | 9/ Dec./ 2005 ~ 11/ Dec./ 2005 | ○ | ○ | ○ | ○ |
| Sighting and sampling survey in the Western part of Area V from 155E to 145E | 12/ Dec./ 2005 ~ 22/ Dec./ 2005 | ○ | ○ | ○ | ○ |
| Sighting and sampling survey in the Western part of Area V on west of 130E | 24/ Dec./ 2005 | ○ | ○ | | ○ |
| Sighting and sampling survey in the Western part of Area IV from 75E to 70E | 3/ Jan./ 2006 ~ 6/ Jan./ 2006 | | | ○ | ○ |
| Sighting and sampling survey in the Western part of Area IV from 75E to 70E | 3/ Jan./ 2006 ~ 7/ Jan./ 2006 | ○ | ○ | | |
| Sighting and sampling survey in the Eastern part of Area III from 70E to 55E | 7/ Jan./ 2006 | | | ○ | ○ |
| Sighting and sampling survey in the Eastern part of Area III from 70E to 55E | 10/ Jan./ 2006 ~ 20/ Jan./ 2006 | ○ | ○ | | |
| Sighting and sampling survey in the Eastern part of Area III from 70E to 55E | 10/ Jan./ 2006 ~ 13/ Jan./ 2006 | | | ○ | ○ |
| Sighting and sampling survey in the Eastern part of Area III from 70E to 55E | 14/ Jan./ 2006 ~ 19/ Jan./ 2006 | | | | ○ |
| Sighting and sampling survey in the Western part of Area IV from 75E to 80E | 14/ Jan./ 2006 ~ 20/ Jan./ 2006 | | | ○ | |
| Sighting and sampling survey on the Prydz Bay in the Western part of Area IV | 20/ Jan./ 2006 ~ 31/ Jan./ 2006 | | | | ○ |
| Sighting and sampling survey on the Prydz Bay in the Western part of Area IV | 21/ Jan./ 2006 ~ 3/ Feb./ 2006 | ○ | ○ | | |
| Sighting and sampling survey on the Prydz Bay in the Western part of Area IV | 21/ Jan./ 2006 ~ 30/ Jan./ 2006 | | | ○ | |
| Sighting and sampling survey in the Western part of Area IV from 75E to 100E | 1/ Feb./ 2006 ~ 14/ Feb./ 2006 | | | | ○ |
| Sighting and sampling survey in the Western part of Area IV from 80E to 100E | 1/ Feb./ 2006 ~ 15/ Feb./ 2006 | | | ○ | |
| Sighting and sampling survey in the Western part of Area IV from 75E to 80E | 3/ Feb./ 2006 ~ 4/ Feb./ 2006 | ○ | ○ | | |
| Sighting and sampling survey on the Prydz Bay in the Western part of Area IV | 5/ Feb./ 2006 ~ 6/ Feb./ 2006 | ○ | ○ | | |
| Sighting and sampling survey in the Western part of Area IV from 80E to 100E | 7/ Feb./ 2006 ~ 4/ Mar./ 2006 | ○ | ○ | | |
| Sighting and sampling survey in the Eastern part of Area IV from 117-38E to 100E | 17/ Feb./ 2006 ~ 24/ Feb./ 2006 | | | | ○ |
| Sighting and sampling survey in the Eastern part of Area IV from 117-38E to 100E | 18/ Feb./ 2006 ~ 24/ Feb./ 2006 | | | ○ | |
| Sighting and sampling survey in the Eastern part of Area IV from 100E to 130E | 4/ Mar./ 2006 ~ 16/ Mar./ 2006 | ○ | ○ | | |
| Sighting and sampling survey in the Eastern part of Area IV from 117-38E to 130E | 5/ Mar./ 2006 ~ 11/ Mar./ 2006 | | | | ○ |
| Sighting and sampling survey in the Eastern part of Area IV from 117-38E to 130E | 5/ Mar./ 2006 ~ 12/ Mar./ 2006 | | | ○ | |
| Sighting and sampling survey in the Western part of Area V from 130E to 135E | 17/ Mar./ 2006 ~ 20/ Mar./ 2006 | ○ | ○ | | |
| Sighting and sampling survey in the Western part of Area V from 130E to 132-38E | 11/ Mar./ 2006 ~ 13/ Mar./ 2006 | | | | ○ |
| Sighting and sampling survey in the Western part of Area V on east of 130E | 12/ Mar./ 2006 | | | ○ | |
| Sighting and sampling survey in the Western part of Area V from 131E to 135E | 17/ Mar./ 2006 ~ 20/ Mar./ 2006 | | | ○ | ○ |
| Ending of the sighting and sampling survey in the Antarctic Ocean | 20/ Mar./ 2006 | ○ | ○ | ○ | ○ |
| Low and middle latitudinal sighting survey in transit area | 23/ Mar./ 2006 ~ 29/ Mar./ 2006 | | ○ | ○ | ○ |
| Arrive on Shimonosaki-city in Yamaguchi prefecture Japan | 13/ Apr./ 2006 | | ○ | | |
| Arrive on Kanazawa-city in Ishikawa prefecture Japan | 14/ Apr./ 2006 | ○ | | | |
| Arrive on Ohi in Tokyo Japan | 15/ Apr./ 2006 | | | | ○ |
| Arrive on Shioyama-city in Miyagi prefecture Japan | 16/ Apr./ 2006 | | | ○ | |

RBV: Research Base Vessel (Nisshin Maru) . SSVs: Sighting and Sampling Vessels. Sighting Vessel (KKI:Kaikoh Maru . KS2:Kyoushin Maru No.2)

Table2. Searching distances (n.miles) of two sighting vessel (SVs) and three sighting / sampling vessels (SSVs) in each stratum.

| Area | Stratum | Block | SVs | | | SSVs | | | Grand total | |
|--------------------|------------------|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|
| | | | Closing | Passing | Sub total | Closing | Passing | Sub total | | |
| V | East | North-North | 21.8 | 75.1 | 96.9 | 0.0 | 0.0 | 0.0 | 96.9 | |
| | | North-South | 50.3 | 103.5 | 153.8 | 803.8 | 0.0 | 803.8 | 957.7 | |
| | West | North | 202.5 | 411.3 | 613.8 | 808.9 | 0.0 | 808.9 | 1422.7 | |
| | | South | 156.5 | 496.2 | 652.7 | 1195.6 | 0.0 | 1195.6 | 1848.3 | |
| | Sub-total | | | 431.1 | 1086.2 | 1517.2 | 2808.4 | 0.0 | 2808.4 | 4325.6 |
| IV | East | North | 462.7 | 987.6 | 1450.3 | 0.0 | 0.0 | 0.0 | 1450.3 | |
| | | North (Transit-KS2) | 0.0 | 134.6 | 134.6 | 0.0 | 0.0 | 0.0 | 134.6 | |
| | | South | 189.6 | 675.9 | 865.5 | 1707.2 | 0.0 | 1707.2 | 2572.7 | |
| | | South (Special-KS2) | 0.0 | 80.3 | 80.3 | 0.0 | 0.0 | 0.0 | 80.3 | |
| | West | South (Ice edge-KK1) | 0.0 | 407.1 | 407.1 | 0.0 | 0.0 | 0.0 | 407.1 | |
| | | North | 297.5 | 827.8 | 1125.3 | 706.9 | 0.0 | 706.9 | 1832.2 | |
| | Prydz Bay | North (Transit-KS2) | 0.0 | 143.3 | 143.3 | 0.0 | 0.0 | 0.0 | 143.3 | |
| | | South | 227.8 | 637.8 | 865.6 | 608.4 | 0.0 | 608.4 | 1474.0 | |
| | Sub-total | | | 95.1 | 285.9 | 381.1 | 672.2 | 0.0 | 672.2 | 1053.3 |
| | Sub-total | | | 0.0 | 53.5 | 53.5 | 0.0 | 0.0 | 0.0 | 53.5 |
| Sub-total | | | 0.0 | 31.9 | 31.9 | 0.0 | 0.0 | 0.0 | 31.9 | |
| Sub-total | | | 0.0 | 431.5 | 431.5 | 0.0 | 0.0 | 0.0 | 431.5 | |
| Sub-total | | | 1272.7 | 4697.2 | 5969.8 | 3694.8 | 0.0 | 3694.8 | 9664.6 | |
| III | East | North | 149.8 | 524.5 | 674.2 | 322.6 | 0.0 | 322.6 | 996.8 | |
| | | South | 238.7 | 436.3 | 675.0 | 664.0 | 46.8 | 710.8 | 1385.8 | |
| | Sub-total | | | 388.4 | 960.8 | 1349.2 | 986.5 | 46.8 | 1033.4 | 2382.6 |
| Grand total | | | 2092.2 | 6744.1 | 8836.2 | 7489.7 | 46.8 | 7536.5 | 16372.7 | |

Table 3. Summary of whale sightings conducted by SV and SSVs in whole research areas.

| Species | Sighting vessels | | Sighting and sampling vessels | | | | | | Total | | | |
|----------------------------|------------------|-------|-------------------------------|------|---------|-------|----------|------|---------|-------|----------|------|
| | Primary | | Secondly | | Primary | | Secondly | | Primary | | Secondly | |
| | Sch. | Ind. | Sch. | Ind. | Sch. | Ind. | Sch. | Ind. | Sch. | Ind. | Sch. | Ind. |
| Antarctic minke whales | 837 | 2,424 | 170 | 470 | 821 | 1,959 | 20 | 64 | 1,658 | 4,383 | 190 | 534 |
| Liked minkewhales | 85 | 138 | 8 | 14 | 12 | 13 | 0 | 0 | 97 | 151 | 8 | 14 |
| Blue whales | 18 | 29 | 2 | 3 | 6 | 9 | 5 | 7 | 24 | 38 | 7 | 10 |
| Fin whales | 151 | 503 | 12 | 40 | 37 | 245 | 24 | 148 | 188 | 748 | 36 | 188 |
| Sei whales | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 |
| Humpback whales | 1,085 | 2,024 | 99 | 161 | 617 | 1,176 | 47 | 93 | 1,702 | 3,200 | 146 | 254 |
| Southern right whales | 33 | 44 | 4 | 4 | 20 | 29 | 4 | 5 | 53 | 73 | 8 | 9 |
| Baleen whales | 226 | 456 | 25 | 71 | 8 | 8 | 11 | 72 | 234 | 464 | 36 | 143 |
| Sperm whales | 138 | 139 | 12 | 12 | 43 | 43 | 6 | 6 | 181 | 182 | 18 | 18 |
| Southern bottlenose whales | 71 | 150 | 3 | 6 | 17 | 29 | 0 | 0 | 88 | 179 | 3 | 6 |

Table 4. Density indices (DI, number of schools per 100 n.miles) and mean school size (MSS) of Antarctic minke whale primary sightings by SV and SSVs.

| Area | Part | Stratum | SVs | | | | SSVs | | | | | | |
|---------------------|------------------|----------------------|-----------------------------|--|-------------|-------------|-----------------------------|--|---------------|-------------|-------------|------------|------------|
| | | | Searching distance (n.mile) | Antarctic minke whale (primary sighting) | | | Searching distance (n.mile) | Antarctic minke whale (primary sighting) | | | | | |
| | | | | Sch. | Ind. | DI | | MSS | Sch. | Ind. | DI | MSS | |
| V | East | North-North | 96.9 | 0 | 0 | 0.0 | 0.0 | - | - | - | - | | |
| | | North-South | 153.8 | 0 | 0 | 0.0 | 0.0 | - | - | - | - | | |
| | West | North | 613.8 | 111 | 311 | 18.1 | 2.8 | 808.9 | 41 | 78 | 5.1 | 1.9 | |
| | | South | 652.7 | 120 | 280 | 18.4 | 2.3 | 1195.6 | 85 | 165 | 7.1 | 1.9 | |
| | Sub-total | | | 1517.2 | 231 | 591 | 15.2 | 2.6 | 2888.4 | 128 | 245 | 4.6 | 1.9 |
| | IV | East | North | 1450.3 | 20 | 30 | 1.4 | 1.5 | - | - | - | - | |
| North (Transit-KS2) | | | 134.6 | 11 | 12 | 8.2 | 1.1 | - | - | - | - | | |
| West | | South | 865.5 | 93 | 224 | 10.7 | 2.4 | 1707.2 | 70 | 126 | 4.1 | 1.8 | |
| | | South (Special-KS2) | 80.3 | 1 | 1 | 1.2 | 1.0 | - | - | - | - | | |
| Prydz Bay | | South (ice edge-KK1) | 407.1 | 28 | 52 | 6.9 | 1.9 | - | - | - | - | | |
| | | North | 1125.3 | 80 | 307 | 7.1 | 3.8 | 706.9 | 112 | 238 | 15.8 | 2.1 | |
| III | East | North (Transit-KS2) | 143.3 | 3 | 3 | 2.1 | 1.0 | - | - | - | - | | |
| | | South | 865.6 | 251 | 1096 | 29.0 | 4.4 | 608.4 | 214 | 732 | 35.2 | 3.5 | |
| | Prydz Bay | Transit-KS2 | 381.1 | 47 | 89 | 12.3 | 1.9 | 672.2 | 155 | 344 | 23.1 | 2.2 | |
| | | Special-KS2 | 53.5 | 20 | 33 | 37.4 | 1.7 | - | - | - | - | | |
| | Prydz Bay | Special-KS2 | 31.9 | 2 | 3 | 6.3 | 1.5 | - | - | - | - | | |
| | | Ice-edge-KK1 | 431.5 | 156 | 280 | 36.2 | 1.8 | - | - | - | - | | |
| Sub-total | | | 5969.8 | 712 | 2130 | 11.9 | 3.0 | 3694.8 | 551 | 1460 | 14.9 | 2.6 | |
| Grand Total | | | 8836.2 | 1123 | 3126 | 12.7 | 2.8 | 7536.5 | 821 | 1959 | 10.9 | 2.4 | |

Table 5. Density indices (DI, number of schools per 100 n.miles) and mean school size (MSS) of humpback whale primary sightings by SV and SSVs.

| Area | Part | Stratum | SVs | | | | SSVs | | | | | | |
|---------------------|------------------|----------------------|-----------------------------|-----------------------------------|-------------|-------------|-----------------------------|-----------------------------------|---------------|-------------|-------------|------------|------------|
| | | | Searching distance (n.mile) | Humpback whale (primary sighting) | | | Searching distance (n.mile) | Humpback whale (primary sighting) | | | | | |
| | | | | Sch. | Ind. | DI | | MSS | Sch. | Ind. | DI | MSS | |
| V | East | North-North | 96.9 | 2 | 3 | 2.1 | 1.5 | - | - | - | - | | |
| | | North-South | 153.8 | 3 | 3 | 2.0 | 1.0 | 803.8 | 18 | 28 | 2.2 | 1.6 | |
| | West | North | 613.8 | 31 | 58 | 5.1 | 1.9 | 808.9 | 42 | 68 | 5.2 | 1.6 | |
| | | South | 652.7 | 87 | 154 | 13.3 | 1.8 | 1195.6 | 45 | 67 | 3.8 | 1.5 | |
| | Sub-total | | | 1517.2 | 123 | 218 | 8.1 | 1.8 | 2888.4 | 105 | 163 | 3.7 | 1.6 |
| | IV | East | North | 1450.3 | 118 | 234 | 8.1 | 2.0 | - | - | - | - | |
| North (Transit-KS2) | | | 134.6 | 96 | 189 | 71.3 | 0.0 | - | - | - | - | | |
| West | | South | 865.5 | 433 | 791 | 80.0 | 1.8 | 1707.2 | 293 | 569 | 17.2 | 1.9 | |
| | | South (Special-KS2) | 80.3 | 0 | 0 | 0.0 | 0.0 | - | - | - | - | | |
| Prydz Bay | | South (ice edge-KK1) | 407.1 | 182 | 298 | 44.7 | 1.6 | - | - | - | - | | |
| | | North | 1125.3 | 250 | 460 | 22.2 | 1.8 | 706.9 | 72 | 155 | 10.2 | 2.2 | |
| III | East | North (Transit-KS2) | 143.3 | 88 | 171 | 61.4 | 1.9 | - | - | - | - | | |
| | | South | 865.6 | 196 | 381 | 22.6 | 1.9 | 608.4 | 129 | 255 | 21.2 | 2.0 | |
| | Prydz Bay | Transit-KS2 | 381.1 | 0 | 0 | 0.0 | 0.0 | 672.2 | 5 | 8 | 0.7 | 1.6 | |
| | | Special-KS2 | 53.5 | 0 | 0 | 0.0 | 0.0 | - | - | - | - | | |
| | Prydz Bay | Special-KS2 | 31.9 | 0 | 0 | 0.0 | 0.0 | - | - | - | - | | |
| | | Ice-edge-KK1 | 431.5 | 2 | 4 | 0.5 | 2.0 | - | - | - | - | | |
| Sub-total | | | 5969.8 | 1365 | 2528 | 22.9 | 1.9 | 3694.8 | 499 | 987 | 13.5 | 2.0 | |
| Grand Total | | | 8836.2 | 1571 | 2917 | 17.8 | 1.9 | 7536.5 | 617 | 1176 | 8.2 | 1.9 | |

Table 6 . Density indices (DI, number of schools per 100 n.miles) and mean school size (MSS) of fin whale primary sightings by SV and SSVs.

| Area | Part | Stratum | SVs | | | | | SSVs | | | | |
|--------------------|------------------|----------------------|-----------------------------|------------------------------|------------|------------|---------------|-----------------------------|------------------------------|------------|------------|------------|
| | | | Searching distance (n.mile) | Fin whale (primary sighting) | | | | Searching distance (n.mile) | Fin whale (primary sighting) | | | |
| | | | | Sch | Ind | DI | MSS | | Sch | Ind | DI | MSS |
| V | East | North-North | 96.9 | 0 | 0 | 0.0 | 0.0 | - | - | - | - | - |
| | | North-South | 153.8 | 0 | 0 | 0.0 | 0.0 | 803.8 | 0 | 0 | 0.0 | 0.0 |
| | West | North | 613.8 | 3 | 14 | 0.5 | 4.7 | 808.9 | 3 | 7 | 0.4 | 2.3 |
| | | South | 652.7 | 55 | 154 | 8.4 | 2.8 | 1195.6 | 1 | 3 | 0.1 | 3.0 |
| | Sub-total | | 1517.2 | 58 | 168 | 3.8 | 2.9 | 2808.4 | 4 | 10 | 0.1 | 2.5 |
| IV | East | North | 1450.3 | 18 | 35 | 1.2 | 1.9 | - | - | - | - | - |
| | | North (Transit-KS2) | 134.6 | 0 | 0 | 0.0 | 0.0 | - | - | - | - | - |
| | | South | 865.5 | 77 | 177 | 8.9 | 2.3 | 1707.2 | 17 | 108 | 1.0 | 6.4 |
| | | South (Special-KS2) | 80.3 | 1 | 25 | 1.2 | 25.0 | - | - | - | - | - |
| | | South (Ice edge-KK1) | 407.1 | 10 | 30 | 2.5 | 3.0 | - | - | - | - | - |
| | West | North | 1125.3 | 20 | 56 | 1.8 | 2.8 | 706.9 | 0 | 0 | 0.0 | 0.0 |
| | | North (Transit-KS2) | 143.3 | 1 | 1 | 0.7 | 1.0 | - | - | - | - | - |
| | | South | 865.6 | 36 | 172 | 4.2 | 4.8 | 608.4 | 10 | 116 | 1.6 | 11.6 |
| | Prydz Bay | Transit-KS2 | 381.1 | 0 | 0 | 0.0 | 0.0 | 672.2 | 1 | 2 | 0.1 | 2.0 |
| | | Special-KS2 | 53.5 | 0 | 0 | 0.0 | 0.0 | - | - | - | - | - |
| Ice-edge-KK1 | | 31.9 | 0 | 0 | 0.0 | 0.0 | - | - | - | - | - | |
| Sub-total | | 5969.8 | 163 | 496 | 2.7 | 3.0 | 3694.8 | 28 | 226 | 0.8 | 8.1 | |
| III | East | North | 674.2 | 16 | 75 | 2.4 | 4.7 | 322.6 | 2 | 4 | 0.6 | 1.0 |
| | | South | 675.0 | 0 | 0 | 0.0 | 0.0 | 710.8 | 3 | 5 | 0.4 | 1.7 |
| | Sub-total | | 1349.2 | 16 | 75 | 1.2 | 4.7 | 1033.4 | 5 | 9 | 0.5 | 1.8 |
| Grand Total | | | 8836.2 | 237 | 739 | 2.7 | 3.1 | 7536.5 | 37 | 245 | 0.5 | 6.6 |

Table 7. Summary of biological data and samples collected from Antarctic minke whales.

| Samples and data | Number of whales | | |
|--|------------------|--------|-------|
| | Male | Female | Total |
| Photographic record of external character | 461 | 389 | 850 |
| Body length and sex identification | 462 | 391 | 853 |
| Measurement of external body proportion | 462 | 391 | 853 |
| Body weight | 12 | 11 | 23 |
| Body weight by total weight of parts | 5 | 6 | 11 |
| Skull measurement (length and breadth) | 437 | 360 | 797 |
| Standard measurement of blubber thickness (two points) | 462 | 391 | 853 |
| Lactation status | - | 391 | 391 |
| Measurement of mammary gland | - | 391 | 391 |
| Testis weight | 462 | - | 462 |
| Weight of stomach content | 440 | 378 | 818 |
| Diatom film observation | 462 | 391 | 853 |
| Blood plasma for physiological study | 459 | 389 | 848 |
| Earplug for age determination | 462 | 391 | 853 |
| Ocular lens for age determination | 107 | 107 | 214 |
| Tympanic bone for chemical analysis | 48 | 27 | 75 |
| Largest baleen plate for chemical analysis | 462 | 390 | 852 |
| Vertebral epiphyses sample | 401 | 308 | 709 |
| Ovary | - | 391 | 391 |
| Histological sample of endometrium | - | 15 | 15 |
| Histological sample of mammary gland | - | 391 | 391 |
| Milk sample for chemical analysis | - | 2 | 2 |
| Histological sample of testis | 462 | - | 462 |
| Skin and liver tissues for genetic study | 462 | 391 | 853 |
| Blubber, muscle and liver tissues for environmental monitoring | 462 | 391 | 853 |
| Lung tissue for air monitoring | 21 | 16 | 37 |
| Macro pathological observation (thyroid, lung, stomach, liver and gonad) | 462 | 391 | 853 |
| Tissues for histopathological study | 110 | 98 | 208 |
| Stomach contents for food and feeding study | 38 | 24 | 62 |
| Stomach contents for environmental monitoring | 15 | 10 | 25 |
| External parasites | 9 | 9 | 18 |
| Internal parasites | 1 | 5 | 6 |
| Photographic record of fetus | 126 | 93 | 227* |
| Fetal length and weight | 126 | 93 | 227* |
| Collection of small fetus | 0 | 0 | 8* |
| Fetal ocular lens for age determination | 16 | 11 | 27 |
| Fetal skin for genetic study | 126 | 93 | 227* |
| Oocyte for <i>in-vitro</i> fertilization (IVF) | - | 132 | 132 |
| Oviductal fluids for <i>in-vitro</i> culture (IVC) | - | 5 | 5 |
| Spermatogenic cell for round spermatid injection (ROSI) | 1 | - | 1 |
| Fetal ovary for <i>in-vitro</i> fertilization (IVF) | - | 16 | 16 |
| Uterus and placenta tissues for histomorphological study | - | 40 | 40 |
| Blubber for sphingolipid analysis | 10 | 10 | 20 |
| Tissues for organogenic study of bone | 5 | 0 | 5 |
| Fetal tissues for organogenic study of bone | 4 | 1 | 5 |
| Fetal tissues for organogenic study of olfactory system | 9 | 3 | 12 |
| Fetal head for organogenic study | 1 | 2 | 3 |
| Various organ tissues for histological study | 17 | 20 | 37 |
| Baleen plates for educational exhibition | 0 | 1 | 1 |

* : including a fetus of sex unidentified.

Table 8. Summary of biological data and samples collected from fin whales.

| Samples and data | Number of whales | | |
|--|------------------|--------|-------|
| | Male | Female | Total |
| Photographic record of external character | 4 | 6 | 10 |
| Body length and sex identification | 4 | 6 | 10 |
| Measurement of external body proportion | 4 | 6 | 10 |
| Body weight by total weight of parts | 3 | 6 | 9 |
| Skull measurement (length and breadth) | 4 | 4 | 8 |
| Detailed measurement of blubber thickness (fourteen points) | 4 | 6 | 10 |
| Lactation status | - | 6 | 6 |
| Measurement of mammary gland | - | 6 | 6 |
| Breadth measurement of uterine horn | - | 6 | 6 |
| Testis weight | 4 | - | 4 |
| Epididymis weight | 4 | - | 4 |
| Weight of stomach content | 4 | 6 | 10 |
| Number of ribs | 4 | 6 | 10 |
| Diatom film observation | 4 | 6 | 10 |
| Diatom film sample | 4 | 6 | 10 |
| Blood plasma for physiological study | 4 | 6 | 10 |
| Earplug for age determination | 4 | 6 | 10 |
| Ocular lens for age determination | 4 | 6 | 10 |
| Tympanic bone for chemical analysis | 4 | 6 | 10 |
| Largest baleen plate for chemical analysis | 3 | 6 | 9 |
| Vertebral epiphyses sample | 4 | 6 | 10 |
| Ovary | - | 6 | 6 |
| Histological sample of endometrium | - | 6 | 6 |
| Histological sample of mammary gland | - | 6 | 6 |
| Milk sample for chemical analysis | - | 0 | 0 |
| Histological sample of testis | 4 | - | 4 |
| Histological sample of epididymis | 3 | - | 3 |
| Skin and liver tissues for genetic study | 4 | 6 | 10 |
| Blubber, muscle and liver tissues for environmental monitoring | 4 | 6 | 10 |
| Lung tissue for air monitoring | 4 | 6 | 10 |
| Macro pathological observation (thyroid, lung, stomach, liver and gonad) | 4 | 6 | 10 |
| Tissues for histopathological study | 4 | 3 | 7 |
| Muscle, liver, kidney, lumbar and blubber tissues for lipid analysis | 4 | 6 | 10 |
| Muscle, liver and blubber tissues for chemical analysis | 4 | 6 | 10 |
| Muscle and blubber tissues for nutritional analysis | 4 | 6 | 10 |
| Stomach contents for food and feeding study | 4 | 5 | 9 |
| Stomach contents for environmental monitoring | 2 | 3 | 5 |
| Stomach contents for lipid analysis | 2 | 4 | 6 |
| External parasites | 3 | 2 | 5 |
| Internal parasites | 1 | 0 | 1 |
| Photographic record of fetus | 1 | 1 | 2 |
| Fetal length and weight | 1 | 1 | 2 |
| External measurements of fetus | 1 | 1 | 2 |
| Collection of whole fetus | 0 | 0 | 0 |
| Fetal ocular lens for age determination | 1 | 1 | 2 |
| Fetal skin for genetic study | 1 | 1 | 2 |
| Baleen plates for educational exhibition | 1 | 0 | 1 |

Table 9. Reproductive status of Antarctic minke whales sampled in 2005/2006 JARPAII. Numbers in parenthesis represent ratio of samples in each stratum (%). Maturity of males was tentatively defined by testis weight according to Kato (1986). "Resting" represents non-pregnant mature female without corpus luteum and "Ovulating" represents female that had corpus luteum but fetus was not observed.

| Stratum | Male | | | Female | | | | | Total | Combined |
|-------------------------------------|---------------|----------------|----------------|----------------|-------------|--------------|----------------|-------------|----------------|----------|
| | Immature | Mature | Total | Immature | No-pregnant | | Pregnant | | | |
| | | | | | Ovulating | Resting | Pregnant | Lactating | | |
| AreaV East-North (Northern part) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 1 (50.0%) | 0 (0.0%) | 0 (0.0%) | 1 (50.0%) | 0 (0.0%) | 2 (100.0%) | 2 |
| AreaV West-North | 2 (3.9%) | 36 (70.6%) | 38 (74.5%) | 7 (13.7%) | 0 (0.0%) | 0 (0.0%) | 6 (11.8%) | 0 (0.0%) | 13 (25.5%) | 51 |
| AreaIV East-North | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AreaIV West-North | 18 (14.5%) | 53 (42.7%) | 71 (57.3%) | 29 (23.4%) | 1 (0.8%) | 1 (0.8%) | 22 (17.7%) | 0 (0.0%) | 53 (42.7%) | 124 |
| AreaIII East-North | 1 (4.5%) | 11 (50.0%) | 12 (54.5%) | 6 (27.3%) | 0 (0.0%) | 0 (0.0%) | 3 (13.6%) | 1 (4.5%) | 10 (45.5%) | 22 |
| Northern Strata (Total) | 21 (16.6%) | 100 (50.3%) | 121 (60.8%) | 43 (21.6%) | 1 (0.5%) | 1 (0.5%) | 32 (16.1%) | 1 (0.5%) | 78 (39.2%) | 199 |
| AreaV East-North (Southern part) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AreaV West-South (First period) | 7 (8.9%) | 30 (38.0%) | 37 (46.8%) | 13 (16.5%) | 0 (0.0%) | 1 (1.3%) | 28 (35.4%) | 0 (0.0%) | 42 (53.2%) | 79 |
| AreaV West-South (Second period) | 7 | 7 | 14 | 1 | 0 | 0 | 3 | 0 | 4 | 18 |
| AreaV West-South (Total) | 14 (14.4%) | 37 (38.1%) | 51 (52.6%) | 14 (14.4%) | 0 (0.0%) | 1 (1.0%) | 31 (32.0%) | 0 (0.0%) | 46 (47.4%) | 97 |
| AreaIV East-South | 12 (16.2%) | 27 (36.5%) | 39 (52.7%) | 22 (29.7%) | 0 (0.0%) | 3 (4.1%) | 10 (13.5%) | 0 (0.0%) | 35 (47.3%) | 74 |
| AreaIV West-South | 28 (12.3%) | 108 (47.4%) | 136 (59.6%) | 33 (14.5%) | 1 (0.4%) | 4 (1.8%) | 54 (23.7%) | 0 (0.0%) | 92 (40.4%) | 228 |
| AreaIV Prydz Bay | 8 (5.4%) | 55 (37.4%) | 63 (42.9%) | 14 (9.5%) | 2 (1.4%) | 1 (0.7%) | 66 (44.9%) | 1 (0.7%) | 84 (57.1%) | 147 |
| AreaIV West-South + Prydz Bay | 36 (9.8%) | 163 (43.5%) | 199 (53.1%) | 47 (12.5%) | 3 (0.8%) | 5 (1.3%) | 120 (32.0%) | 3 (0.3%) | 176 (48.9%) | 375 |
| AreaIII East-South | 15 (13.9%) | 37 (34.3%) | 52 (48.1%) | 23 (21.3%) | 0 (0.0%) | 0 (0.0%) | 31 (28.7%) | 1 (0.9%) | 56 (51.9%) | 108 |
| Southern Strata (Total) | 77 (11.8%) | 264 (40.4%) | 341 (52.1%) | 106 (16.2%) | 3 (0.5%) | 10 (1.5%) | 192 (29.4%) | 2 (0.3%) | 313 (47.9%) | 654 |
| Combined | 98 (11.3%) | 364 (42.7%) | 462 (54.2%) | 149 (17.5%) | 4 (0.5%) | 11 (1.3%) | 224 (26.3%) | 3 (0.4%) | 391 (45.8%) | 853 |

Table 10. Some biological information on fin whales sampled in 2005/2006 JARPAII.

| No. | Date of capture | Body length | Body weight* | Sex | Weight of testis (L/R) | Reproductive information | Remarks |
|-------|-----------------|-------------|--------------|-----|------------------------|--------------------------|-----------------------|
| F-001 | 060203 | 19.17m | — | M | 1.84/2.19kg | | |
| F-002 | 060208 | 20.05m | 53.48t | F | — | Pregnant | Fetal length 127.5cm |
| F-003 | 060209 | 19.47m | 52.05t | F | — | Pregnant | Fetal length 280.7cm |
| F-004 | 060210 | 18.73m | 41.87t | M | 5.36/5.54kg | | |
| F-005 | 060213 | 19.14m | 47.28t | M | 10.10/10.60kg | | Spondylosis deformans |
| F-006 | 060214 | 19.15m | 47.04t | F | — | Immature | |
| F-007 | 060307 | 20.22m | 61.52t | F | — | Mature/Resting | |
| F-008 | 060309 | 18.22m | 41.06t | F | — | Immature | |
| F-009 | 060310 | 18.30m | 42.27t | M | 1.65/1.91kg | | |
| F-010 | 060313 | 19.35m | 47.24t | F | — | Immature | |

* Body weight was represented by total weight of body parts.

Table 11. Average body length (m) with standard deviation (S.D.) and body length range of Antarctic minke whales sampled in each stratum. Maturity of males was defined as Table 8.

| Stratum | Average S.D. | Max Min | N | Average S.D. | Max Min | N | Average S.D. | Max Min | N | Average S.D. | Max Min | N |
|----------------------------------|--------------|---------|-----|--------------|---------|----|--------------|---------|----|--------------|---------|----|
| AreaV East-North (Northern part) | — | — | — | — | — | — | 8.98 | 8.98 | 1 | 6.77 | 6.77 | 1 |
| AreaV West-North | 8.32 | 9.37 | 36 | 7.52 | 7.84 | 2 | 8.75 | 9.41 | 6 | 6.22 | 8.12 | 7 |
| | 0.42 | 7.58 | | 0.46 | 7.19 | | 0.48 | 8.18 | | 1.11 | 4.95 | |
| AreaIV East-North | — | — | — | — | — | — | — | — | — | — | — | — |
| AreaIV West-North | 8.40 | 9.12 | 53 | 6.40 | 7.88 | 18 | 9.01 | 9.75 | 24 | 6.60 | 8.00 | 29 |
| | 0.36 | 7.76 | | 0.85 | 5.13 | | 0.35 | 8.38 | | 0.86 | 4.99 | |
| AreaIII East-North | 8.36 | 9.13 | 11 | 6.68 | 6.68 | 1 | 8.98 | 9.53 | 4 | 7.23 | 8.77 | 6 |
| | 0.39 | 7.72 | | | 6.68 | | 0.43 | 8.49 | | 0.94 | 6.31 | |
| AreaV East-North (Southern part) | — | — | — | — | — | — | — | — | — | — | — | — |
| AreaV West-South (First period) | 8.29 | 9.00 | 30 | 6.92 | 7.61 | 7 | 8.79 | 9.41 | 29 | 6.91 | 8.30 | 13 |
| | 0.32 | 7.75 | | 0.52 | 6.17 | | 0.38 | 8.19 | | 1.01 | 5.16 | |
| AreaV West-South (Second period) | 8.40 | 9.06 | 7 | 6.86 | 7.72 | 7 | 8.92 | 9.14 | 3 | 5.55 | 5.55 | 1 |
| | 0.38 | 8.00 | | 1.04 | 4.85 | | 0.33 | 8.54 | | | 5.55 | |
| AreaIV East-South | 8.55 | 9.03 | 27 | 6.04 | 7.47 | 12 | 8.92 | 9.70 | 13 | 6.39 | 8.22 | 22 |
| | 0.37 | 7.92 | | 0.75 | 5.02 | | 0.39 | 8.28 | | 0.91 | 4.73 | |
| AreaIV West-South | 8.44 | 9.58 | 108 | 6.67 | 8.43 | 28 | 8.90 | 9.54 | 59 | 7.14 | 8.58 | 33 |
| | 0.38 | 7.54 | | 0.97 | 5.02 | | 0.34 | 8.08 | | 0.82 | 5.31 | |
| AreaIV Prydz Bay | 8.37 | 9.35 | 55 | 7.04 | 7.79 | 8 | 8.94 | 10.47 | 70 | 7.67 | 8.80 | 14 |
| | 0.39 | 7.36 | | 0.71 | 5.60 | | 0.42 | 8.15 | | 0.77 | 5.82 | |
| AreaIII East-South | 8.39 | 8.98 | 37 | 8.49 | 7.81 | 15 | 8.92 | 9.71 | 33 | 7.43 | 8.32 | 23 |
| | 0.30 | 7.70 | | 0.88 | 5.16 | | 0.40 | 7.96 | | 0.83 | 5.40 | |

Table12.Summary of photo-ID

| Species | Stratum | | | | | | | | | | Total |
|----------------------|----------|-------|---------|-------|-------|-------|-----------|--------|---|-----------|-------|
| | Area III | | Area IV | | | | Prydz Bay | Area V | | Total | |
| | East | West | East | West | West | | | | | | |
| North | South | North | South | North | South | North | South | | | | |
| Blue whale | | 3 | 1 | 6 | 1 | 2 | | | | 13 | |
| Humpback whale | | | 3 | | 11 | 20 | | | | 34 | |
| Southern right whale | | | 9 | 22 | | 7 | | | | 38 | |
| Total | 0 | 3 | 13 | 28 | 12 | 29 | 0 | 0 | 0 | 85 | |

Table13.Summary of biopsy sampling

| Species | Stratum | | | | | | | | | | Total |
|-------------------------------------|----------|-------|---------|-------|-------|-------|-----------|--------|---|-----------|-------|
| | Area III | | Area IV | | | | Prydz Bay | Area V | | Total | |
| | East | West | East | West | West | | | | | | |
| North | South | North | South | North | South | North | South | | | | |
| Blue whale | | | 1 | 1 | 1 | 2 | | | | 5 | |
| Fin whale | | | | | | 7 | 1 | | | 8 | |
| Sei whale | | | 1 | | | | | | | 1 | |
| Humpback whale | 1 | | 2 | | 4 | 6 | | | | 13 | |
| Southern right whale | | | 2 | 10 | | 3 | | | | 15 | |
| Sperm whale (Carcass) | | | 1 | | | | | | | 1 | |
| Southern bottlenose whale (Carcass) | | | | | | | 1 | | | 1 | |
| Long-finned pilot whale | | | | | 1 | | | | | 1 | |
| Total | 0 | 1 | 7 | 12 | 5 | 18 | 2 | 0 | 0 | 46 | |

Table14 . Summary of oceanographic and acoustic survey.

| Vessel | Area | Direction | CTD (stations) | | XCTD (stations) | | NBT (stations) | | EPCS (days) | | Quantitative echo sounder (days) | |
|---------|-----------|-----------|----------------|-----|-----------------|-----|----------------|-----|-------------|-----|----------------------------------|----|
| | | | KS2 | KK1 | KS2 | KK1 | KS2 | KK1 | KS2 | YS2 | KS2 | |
| Stratum | Area III | East | 7 | 1 | 5 | | 2 | | 7 | 3 | 7 | |
| | | South | 5 | 2 | 2 | 1 | | | 7 | 8 | 7 | |
| | Area IV | East | 10 | 2 | 13 | 10 | 4 | 4 | 14 | | 14 | |
| | | South | 3 | 4 | 6 | 7 | 2 | 1 | 8 | 13 | 8 | |
| | | West | 5 | 5 | 9 | 14 | 3 | 1 | 7 | 11 | 7 | |
| | | South | 8 | 4 | 5 | 1 | | | 11 | 24 | 11 | |
| | Prydz Bay | | 3 | 4 | 18 | | | | 9 | 14 | 9 | |
| | Area V | East | North | 1 | 1 | 1 | 2 | | | 3 | | 3 |
| | | | South | | 2 | | 2 | | | 4 | 6 | 4 |
| | | West | North | 5 | 5 | 11 | 7 | 2 | 1 | 12 | 6 | 12 |
| | | | South | 7 | 2 | 5 | 4 | 1 | 1 | 12 | 14 | 12 |
| | Total | | | 54 | 32 | 75 | 48 | 14 | 8 | 94 | 99 | 94 |

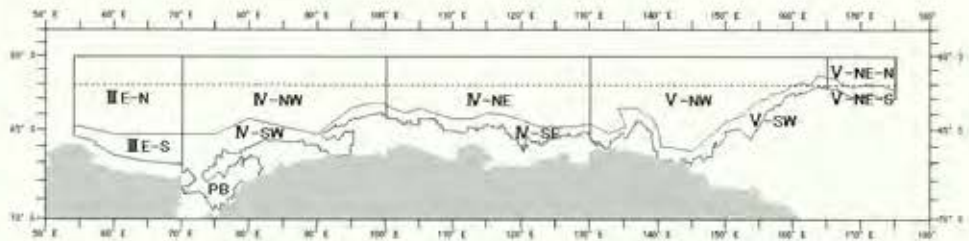


Fig. 1. Geographic location of research area of the 2005/2006 JARPAII surveys.

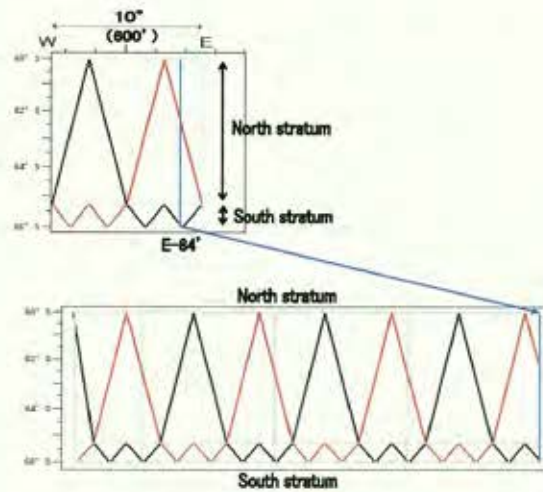


Fig2. The design of survey track line of SVs based on the minimum unit.

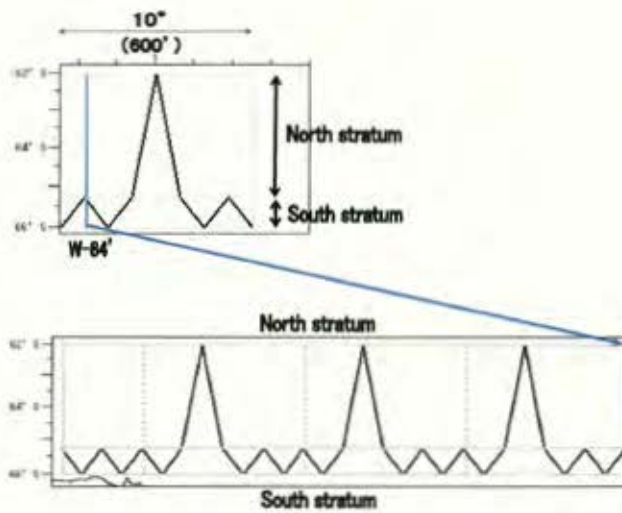


Fig3. The design of survey track line of SSVs from the minimum unit.

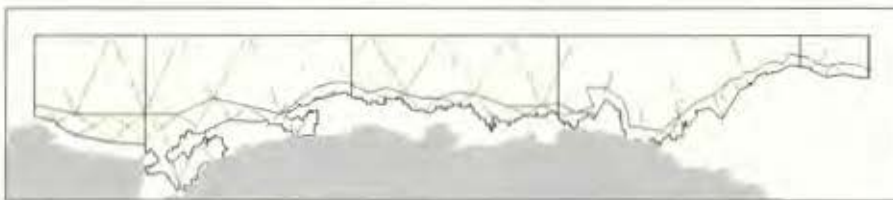


Fig. 4. Survey track line of SVs in 2005/2006 JARPAIL. Pack ice lines are estimated by observation of research vessels and the information from Near real time DMSP SSM / I daily polar gridded sea ice concentration data set available from the National Snow and Center (NSIDC, Cavalieri et al. 1999), US.

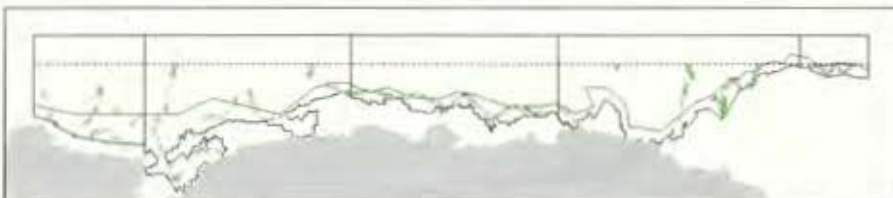


Fig. 5. Survey track line of SSVs in 2005/2006 JARPAIL. Pack ice lines are estimated by observation of research vessels and the information from Near real time DMSP SSM / I daily polar gridded sea ice concentration data set available from the National Snow and Center (NSIDC, Cavalieri et al. 1999), US. Because of limitation of research period due to the harassment by GP and SS, survey effort of SSVs was concentrated the south stratum and un-surveyed the north stratum from 95°E to 135°E.

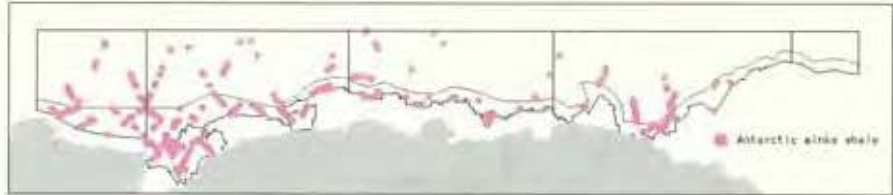


Fig. 6. Distribution of all sightings of Antarctic minke whales sighted by SVs in 2005/2006 JARPAII

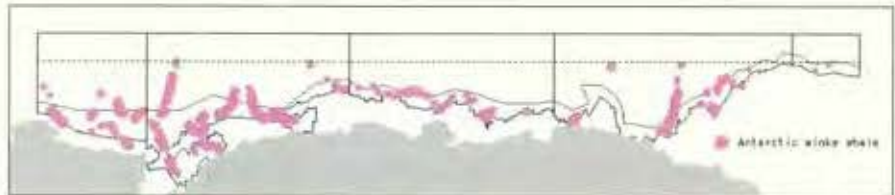


Fig. 7. Distribution of all sightings of Antarctic minke whales sighted by SSVs in 2005/2006 JARPAII



Fig.8. Distribution of all sightings of humpback whales sighted by SVs in 2005/2006 JARPAII.

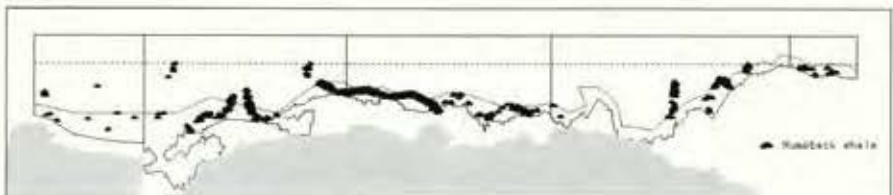


Fig. 9. Distribution of all sightings of humpback whales sighted by SSVs in 2005/2006 JARPAII

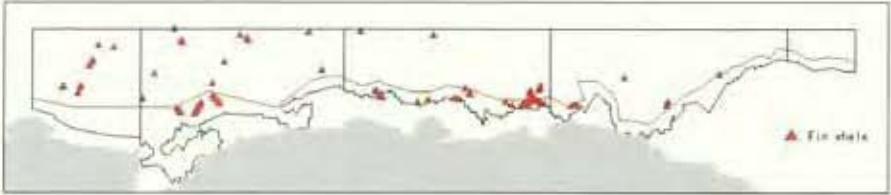


Fig.10. Distribution of all sightings of fin whales sighted by SVs in 2005/2006 JARPAII

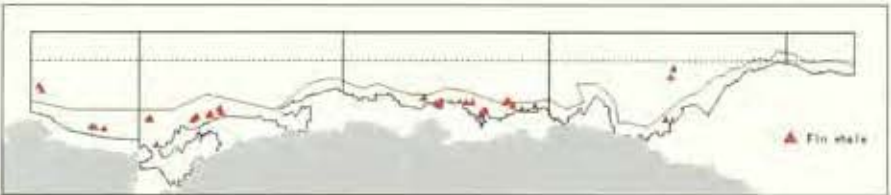


Fig.11. Distribution of all sightings of fin whales sighted by SSVs in 2005/2006 JARPAII

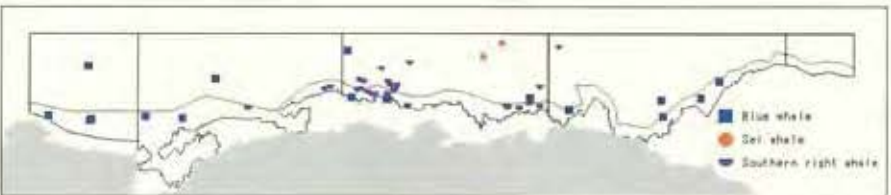


Fig.12. Distribution of all sightings of blue, sei and southern right whales sighted by SVs in 2005/2006 JARPAII

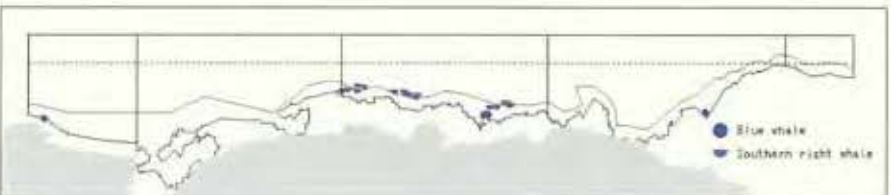


Fig.13. Distribution of all sightings of blue and southern right whales sighted by SSVs in 2005/2006 JARPAII

Annex 58: Nishiwaki, Shigetoshi et al, *Cruise Report of the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) in 2006/2007 – Feasibility Study, SC/59/O4*

SC / 59 / O4

CRUISE REPORT OF THE SECOND PHASE OF THE JAPANESE WHALE RESEARCH PROGRAM UNDER SPECIAL PERMIT IN THE ANTARCTIC (JARPA II) IN 2006/2007 –FEASIBILITY STUDY-

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ABSTRACT

The research plan for the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) was presented to the 2005 meeting of the International Whaling Commission's Scientific Committee (IWC/SC). The research program involves both non-lethal and lethal research techniques. The first two JARPA II surveys, conducted in the 2005/2006 and 2006/2007 austral summer seasons, were planned as feasibility studies with the following objectives: 1) examine the practicability and appropriateness of sighting methods in the enlarged research area, 2) examine the practicability and appropriateness of sampling procedures to the increased sample size for Antarctic minke whales, and 3) examine the practicability of methods of hunting, hauling, flensing and biological sampling of large-sized whales. For the feasibility surveys, a total of 850 +/-10% Antarctic minke whales and 10 fin whales were planned for sampling. The second feasibility survey of the JARPA II was carried out from 15 December 2006 to 28 February 2007 (76 days) in Areas VIW, VE and part of Area VW. The research activity was interrupted for three days due to external interference by the Sea Shepherd and for 10 days due to a fire accident on the research base Nisshin-Maru, then the survey was discontinued. The total searching distance was 11,968.87 n.miles and 6,091.73 n.miles for the two dedicated Sighting Vessels (SVs) and 5,877.14 n.miles for the three Sighting and Sampling Vessels (SSVs). The following species managed by the IWC were sighted: Antarctic minke, blue, fin, humpback, sperm and southern bottlenose whales. Antarctic minke whales were the most dominant species and were widely distributed in the whole research areas except the northern part of the research area. Out of 443 schools (1,043 individuals) of the primary sightings of Antarctic minke whales by SSVs, 438 schools (1,027 individuals) were targeted for sampling. A total of 505 animals were sampled. Out of 19 schools (156 individuals) of the primary sightings of fin whales by SSVs, 3 schools (9 individuals) sighted in Area VNE were targeted for sampling. A total of 3 animals were sampled. The maximum body length of the collected fin whales was 21.15 m with body weight of 65.02 tons. Photo-id experiments were conducted on blue and humpback whales. A total of 27 animals were photographed. Photographs of natural markings were obtained on one mother/calf pair of blue and six pairs of humpback whales. A total of 17 skin biopsy samples were collected from blue, fin and humpback whales. Two sets of humpback whale biopsy samples were taken from the mother/calf pairs. CTD and XCTD castings were conducted at 79 and 88 locations, respectively. EPCS survey was conducted for 62 days by SV and 57 days by SSVs in total. One of the SVs conducted a quantitative echo sounder survey for 62 days in the whole research area. The other of SV conducted prey species sampling (krill) using IKMT at 38 locations in the whole research area. The main findings of this feasibility survey were as follows: 1) the distribution of the Antarctic minke whales in the research area was dependent of their sex and reproductive status, 2) the humpback and fin whales were segregated from the Antarctic minke whales in the research area. Regarding the objectives of the feasibility survey, we confirmed that 1) the sighting methods used in this survey were practical and appropriate for the enlarged research area, 2) the sampling procedures we used were appropriate for the increased sample size of the Antarctic minke whales, and 3) the methods of hunting, hauling, flensing and biological sampling we applied to the large-sized whales were practical.

KEYWORDS: ANTARCTIC MINKE WHALES, FIN WHALES, HUMPBACK WHALES, BALEEN WHALES, ANTARCTIC SOUTHERN HEMI-SPHERE, SCIENTIFIC PERMITS

INTRODUCTION

The Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) was conducted between 1987/88 and 2004/05 austral summer seasons, under Article VIII of the International Convention for the Regulation of Whaling. The IWC Scientific Committee (SC) conducted an interim review of JARPA results in 1997 (IWC, 1998). In January 2005, a JARPA review meeting called by the government of Japan was held (Anonymous, 2005) and, the final JARPA review meeting by the IWC/SC was held in December 2006 (IWC, 2006).

JARPA provided a wide variety of information on biological parameters of Antarctic minke whale such as the natural mortality coefficient and changes over time in the age at maturity as well as narrowing down the parameters of relevance for stock management. JARPA also elucidated that there were at least two stocks in the research area but their geographical boundaries were different from those used for the IWC Areas (Pastene, 2006). Further, JARPA found that pollutant concentration in whale's tissues, such as heavy metals and PCBs, was extremely low (Yasunaga *et al.*, 2006). JARPA has thus successfully obtained data related to the initially proposed objectives. The review meeting conducted in January 2005 agreed that results from JARPA were consistent with the behavior to be expected of baleen whales populations competing for a dominant single food resource, the krill. The meeting also agreed that the results obtained provide clear support for the need to take species-interactions (ecosystem) effects into account in understanding the dynamics of the baleen whale species in the Antarctic ecosystem, and predicting future trends in their abundance and population structure (Anon., 2005).

Based on these considerations, the Government of Japan launched a new comprehensive study under the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II), combining lethal and non-lethal methods, starting from the 2005/2006 austral summer season. The first two seasons (2005/2006 and 2006/2007) were dedicated to feasibility studies.

The full-scale JARPA II will start from the 2007/08 season. It will be a long-term research program with the following objectives: 1) Monitor changes occurring in the Antarctic ecosystem, 2) Model competition among whale species to develop future management objectives, 3) Elucidate temporal and spatial changes in stock structure, and 4) Improve the management procedure for the Antarctic minke whale stocks. JARPA II will focus on species such as Antarctic minke, humpback, fin whales and possibly some other species, all of which are major predators of Antarctic krill in the Antarctic ecosystem. Annual sample sizes for the full-scale research (lethal sampling) are 850 (with 10% of allowance) Antarctic minke whales (Eastern Indian Ocean and Western South Pacific Stocks), 50 humpback whales (D and E-Stocks) and 50 fin whales (Indian Ocean and the Western South Pacific Stocks). During the feasibility study, the annual sample size was 850–10% Antarctic minke and ten fin whales. Humpback whales are not sampled during the feasibility study.

The research methods for the JARPA II are basically the same as the previous JARPA with some modifications. The program involves both non-lethal research techniques such as sighting surveys, biopsy sampling, acoustic surveys for prey species and the collection of oceanographic data, and lethal sampling since collection of certain information, of vital importance to the overall study, requires examination of internal organs such as ovaries, earplugs and stomachs. A comprehensive review will be conducted following completion of the first 6 years of the research (Government of Japan, 2005).

This paper reports the results of the second JARPA II feasibility survey in the 2006/07 austral summer season. The practicability and appropriateness of sighting methods in the enlarged area and sampling procedures for the increased sample size were examined. Methods for catching, flensing and taking biological measurements of large body-sized fin whales were also tested.

RESEARCH METHODS

Research vessels

The whale research unit was composed of two dedicated sighting vessels *Kyoshin Maru No.2* (KS2) and *Kaiko Maru* (KK1), three sighting and sampling vessels *Yushin Maru* (YS1), *Yushin Maru No.2* (YS2) and *Kyo Maru No.1* (K01), and one research base vessel *Nisshin Maru* (NM).

Two vessels were dedicated to sighting surveys and to conduct most of the experiments (SVs). Three sighting and sampling vessels were engaged in sighting and sampling surveys (SSVs). NM served as a research base on which all biological examinations of collected samples were conducted.

Research area

The area to be covered by JARPA II is basically same as in JARPA: the eastern part of Area III, Areas IV and V, and the western part of Area VI (35°E - 145°W). In this season, JARPA II surveyed the Eastern Indian Ocean Stock and the Western South Pacific Ocean Stock of Antarctic minke whales (Pastene, 2006) in a longitudinal span of 85° on the eastern side of the JARPA II research area (130°E - 145°W). Figure.1 shows geographic location of research area for the 2006/2007 JARPA II survey.

Survey track line design

The minimum longitudinal unit is 10 degrees width in principle. The number of units that were allocated depended on the longitudinal width of each stratum. However, width of the units was changed based on the number of planned research days within the stratum. Track lines were constructed for SVs and SSVs separately. Vessels conducted sighting surveys simultaneously in the north and south strata. In the case of SVs, track lines of the two vessels crossed each other. Three SSVs conducted sighting and samplings simultaneously at intervals of 7 n.miles. The principle design of survey track-lines are shown in Figure 2 for SVs and Figure 3 for SSVs, respectively.

The survey track-lines were systematically designed in the 10 degree longitudinal width intervals in principle from the survey starting point. The survey starting point was randomly selected on the longitudinal border of the research area. Details are shown in the item below titled "The longitudinal intervals and number of the survey track lines in the sub-research area".

Sighting method

Sighting procedures were the same as in the previous JARPA surveys (Nishiwaki *et al.* 1999, Ishikawa *et al.* 2000). The sighting surveys by SSVs were conducted under limited closing mode (when a sighting of Antarctic minke and fin whales were made on the predetermined track line, the vessel approached the whales and confirmed species and school size). Three SSVs advanced along parallel track lines 7 n.miles apart, at a standard speed of 11.5 knots. The sighting surveys by SVs were conducted under limited closing mode and passing mode (even if sighting was made on the predetermined track line, the vessel did not approach the whales directly and searching from the barrel was uninterrupted) at a standard speed of 10.5 knots.

The survey was operated under optimal research conditions (i.e., the wind speed below 25 knot in the south strata and 20 knot in the north strata, and visibility further than 1.5 n.miles). In addition to the sighting of Antarctic minke and fin whales or whales suspected to be those species, the SVs approached blue (*B. musculus*), humpback (*Megaptera novaeangliae*), southern right (*Eubalaena australis*), pigmy right (*Coperea marginata*), sei (*B. borealis*), sperm (*Physeter macrocephalus*) and southern bottlenose (*Hyperoodon planifrons*) whales for conducting some experiments. The SSVs also approached the same whale species for experiments while they engaged in sighting survey.

Sampling method

Three SSVs were engaged in sampling survey. Sampling of 850 Antarctic minke whales (with 10 % allowance) and ten fin whales was planned in the research area south of 62°S. One to two Antarctic minke whales were sampled randomly from each primary sighted school within 3 n.miles of the track line. The dwarf form minke whales were not a target for sampling. Sampling of fin whales was restricted to those animals with an estimated body length less than 20m (this was revised downward to less than 19m during the research period) due to the limitation of NM facility for pulling up the animal onboard. One fin whale was sampled randomly from each primary sighted school within 3 n.miles of the track line and animal smaller than 20m (or 19m) was selected in the school. If two or more animals smaller than 20m were found in the single school, then only one of them was randomly selected.

Low and middle latitudinal sighting survey

During transit, sighting surveys were conducted in the area between 30°S and 60°S except for the areas within national EEZs. The results of these surveys are not shown in this report.

Biological research

Most of the biological research methods used in this JARPA II survey were developed and improved during the JARPA 18 years research period. Biological research on all sampled whales was conducted on the NM.

Experiments

Sighting distance and angle experiment

This experiment was conducted in order to evaluate the accuracy of the information on sighting distance and sighting angle given by observers of the SVs and SSVs.

Photo-identification experiment

The following species were targeted for photographic record of natural markings by SVs and SSVs: blue, humpback and southern right whales.

Biopsy sampling

In addition to the species targeted for the photo-identification experiment, pygmy right, fin, sei, sperm, southern bottlenose whales were targeted for biopsy skin sampling by the SVs and SSVs using compound-crossbows. All collected sample were preserved at -80°C .

Satellite tagging

The YS1 and the YS2 attempted satellite tag attachment on Antarctic minke whales.

Preliminary prey species survey

Prey species (krill) samples were collected using the Isaacs-Kidd Mid water trawl (IKMT) on the KK1.

Oceanographic and acoustic survey

SVs and SSVs conducted the following oceanographic surveys:

- 1) Consecutive measurements of surface temperature, conductivity, surface chlorophyll, dissolved oxygen, surface particle using the Electric Particle Counting and Sizing System (EPCS) on KS2 and YS2.
- 2) XCTD and CTD casting by KK1 and KS2.
- 3) Record of marine debris in the research area by KK1 and KS2. In addition all marine debris found in the stomach of Antarctic minke whales was recorded and collected on NM.
- 4) Hydro-acoustic survey using a scientific echo sounder (EK500 with operating frequencies at 38kHz, 120kHz, 200kHz, SIMRAD, Norway) to study distribution and abundance of prey species of baleen whales. Hydro-acoustic survey was conducted by KS2 along sighting survey through the whole research area.

In addition to these surveys, KK1 deployed Argo profiling floats (profiling devices) to collect high quality oceanographic data of upper and middle layers of the world ocean simultaneously with very high space-time resolution. This was done in cooperation with Japan Marine Science and Technology Center (JAMSTEC) (See http://w3.jamstec.go.jp/ARGO/J_ARGOe.html).

RESULTS

Outline of the research activities

Table 1 shows an outline of the research activities. The research period of the 2006/2007 JARPAII was 76 days from 15 December 2006 to 28 February 2007. The research activity was interrupted for three days due to external interference by the Sea Shepherd for 10 days due to a fire accident at NM, then the survey was discontinued. It was decided to stop the research earlier than planned because equipment for the survey was damaged by the fire.

The longitudinal interval and number of the survey track line in the sub-research area

The design of track lines of the SVs and SSVs are shown in Figures 4 and 5. The longitudinal interval and number of teeth in the unit of survey track line in each sub research area were as following:

1) The western part of Area VI

The research area was south of 60°S and from 145°W to 170°W . The starting points of the SVs and SSVs were at 145°W . The survey track line was set zigzag in north and south to westward. The longitudinal interval of one tooth of survey track line was $3^{\circ}20'$ for the SSVs in both north and south strata, and 10° in north stratum and 5° of south stratum for the SVs. Allocated survey track line in one minimum unit is one tooth in the north stratum and two teeth in the south stratum for the SSVs. SVs surveyed one tooth in the north stratum and two teeth in the south stratum. The pack ice line was estimated based on the latest ice-edge information from near real time DMSP SSM/I daily polar gridded sea ice concentration data set available from the National Snow and Ice Data Center (NSIDC, Cavalieri *et al.* 1999).

2) The Eastern part of Area V

East-North stratum

The research area ranged from 60°S to 69°S and from 170°W to 165°E (a latitudinal range was divided into two parts, from 60°S to 66°S and from 66°S to 69°S). The starting points of the SVs and SSVs were at 170°W . The survey track line was set zigzag in north and south to westward between 170°W to 170°E . The longitudinal interval of each tooth of the survey track line was $12^{\circ}30'$ for SSVs and $10^{\circ}00'$ for SVs for each planned research day. In the range between 170°E and

165°E, the same design of survey track line was continued from that of the western part of Area V. The SSVs surveyed each one and a half tooth in the northern part and in the southern part from the fluctuation of the ice edge line. The SVs surveyed four teeth in the northern part and two teeth in the southern part.

East-South stratum (Ross Sea)

The research area was south of 69°S between 165°E to 170°W (including east of 170°W in the inner part of the Ross Sea). The latitudinal range was divided from 69°S to 74°S and from 74°S to the ice edge. The starting and ending points of SVs and SSVs were at 69°S. The survey track line was set zigzag in north and south to westward or eastward in the Ross Sea. The longitudinal interval of the survey track line for SSVs and SVs was 5°00'. The start point of the longitudinal line in the survey track line was set by the random selection. This longitudinal interval of survey track line was adjusted corresponding to the ice edge line which was remarkably changed through the research period.

3) The western part of Area V (including west of 170°E in the eastern part of Area V)

The research area was south of 60°S and from 165°E to 130°E. The starting points of SVs were at 170°E. The survey track line was set zigzag in north and south to westward. The longitudinal interval of one tooth of survey track line was 3° 20' for SSVs in both north and south strata, and 10° in north stratum and 5° in south stratum for SVs. Allocated survey track line of the research area is one tooth in the north stratum and two teeth in the south stratum for SSVs. SVs surveyed one tooth in the north stratum and two teeth in the south stratum. The SVs surveyed two teeth in the north stratum and three teeth in the south stratum. The actual range surveyed in this area was from 170°E to 159°E, and SSVs could not survey in this sub research area due to the fire accident of NM on 15 February. The entire research activities were interrupted on 15 February due to fire accident on the NM.

Searching distance

The searching distances of the SVs and the SSVs are shown in Table 2. The total searching distances were 11,968.87 n.miles consisting of 6,091.73 n.miles for the two SVs and 5,877.14 n.miles for the three SSVs.

Whale species sighted

Eight species including dwarf form minke whales were identified during the research period. Table 3 shows the number of sightings by the SV and SSVs for seven species managed by the IWC. The following five species of baleen whales were confirmed; Antarctic minke, dwarf form minke, blue, fin and humpback whales, and two toothed whale species were confirmed; sperm and southern bottlenose whales.

Antarctic minke whales were the most abundant species in the whole research area. The number of total sightings of Antarctic minke whales by five research vessels was 1,023 schools (2,340 individuals). In addition 171 schools (308 individuals) of humpback whales, 41 schools (267 individuals) of fin whales, 63 schools (63 individuals) of sperm whales and 52 schools (81 individuals) of southern bottlenose whales were observed.

Geographical distribution

1) Antarctic minke whales

The distribution of sightings of the Antarctic minke whales by SVs and SSVs is shown in Figures 6 and 7, respectively. The Antarctic minke whales were widely distributed in the entire research area. A high concentration area was confirmed in the East-South stratum (Ross Sea). Few Antarctic minke whales distributed in the northern part of the research area compared in the southern part of the research area (Ross Sea).

2) Humpback whales

The distribution of sightings of humpback whales by SVs and SSVs is shown in Figures 8 and 9, respectively. Humpback whales were distributed in the northern part of the research area. These sightings overlapped with those of Antarctic minke whales in the northern part of the research area but humpback whales were not observed in the East-South stratum (Ross Sea) where Antarctic minke whales were highly concentrated.

3) Fin whales

The distribution of sightings of the fin whales by SVs and SSVs is shown in Figures 10 and 11, respectively. The fin whale had a similar distribution pattern with the humpback whale. These were widely distributed through the research areas except in the southern part. These sightings overlapped with those of Antarctic minke whales in the northern part of the research area but fin whales were not observed in the East-South stratum (Ross Sea) where Antarctic minke whales were highly concentrated.

4) Blue whales

The distribution of sightings of blue whales by SVs and SSVs is shown in Figures 12 and 13, respectively. The total sightings of blue whales in the research area were only eight schools.

Density index and mean school size

1) Antarctic minke whales

Table 4 shows density indices (DI; number of schools sighted/ 100 n.miles searching distance) and mean school size (MSS) of primary sightings of Antarctic minke whales by vessel type and stratum. In the whole research area DI and MSS for SVs were 8.6 and 2.1, respectively. In the case of the SSVs, DI and MSS were 7.5 and 2.4, respectively. No remarkable differences were observed between vessels type. The MSS was similar throughout the whole research areas. The DI of Antarctic minke whales in the northern part of the research area was lower compared with that in the southern part of the research area (Ross Sea). The DI was remarkably high in the eastern part of Area V. This result indicated that the Ross Sea is an important feeding area for Antarctic minke whales.

2) Humpback whales

Table 5 shows DI and MSS of primary sightings of humpback whales by vessel type and stratum. In the whole research area, DI and MSS for SVs were 1.5 and 1.9, respectively. For the SSVs these were 1.2 and 1.6, respectively. The MSS was similar through the whole research areas. The DI was remarkably high in the north strata.

3) Fin whales

Table 6 shows density indices DI and MSS of primary sightings of fin whales by kind of vessels and stratum. In the For SVs the DI and MSS were 0.3 and 5.4, respectively. For SSVs these were 0.3 and 8.2, respectively. The MSS was similar throughout the whole research area. The DI was remarkably high in the north strata.

Sampling of Antarctic minke whales and fin whales

1) Antarctic minke whales

Out of 443 schools (1,043 individuals) primarily sighted by SSVs, 438 schools (1,027 individuals) were targeted for sampling. A total of 505 animals were sampled (101 in Area VIW, 70 in Area VNE, 334 in Area VSE (Ross Sea)). Sampling efficiency was 93.8 %. This value was the highest in comparison with those obtained in previous JARPA surveys. Struck and lost occurred in only three cases.

2) Fin whales

Out of 19 schools (156 individuals) primarily sighted by SSVs, 3 schools (9 individuals) in Area VNE were targeted for sampling. A total of 3 individuals were sampled. Sampling efficiency was 100.0 %. No struck and lost occurred.

Biological research

Biological research was conducted on the research base ship for all whales sampled. Table 7 summarizes biological data and samples collected from the Antarctic minke whales. Table 8 summarizes biological data and samples collected from the fin whales. The head and part of the body of one fin whale was torn off and sank into the sea during the pulling onboard the NM. Therefore only partial information was obtained for this animal. The gender was determined by molecular genetic analysis.

Preliminary analyses of biological information

1) Antarctic minke whales

Table 9 shows the reproductive status of samples, by stratum. Figure 14 shows the sighted position of sampled whales, by sex and reproductive status. The collected samples were 171 individuals in the western part of Area VI and the East-North stratum in Area V and 334 individuals in the East-South stratum (Ross Sea) in Area V. The ratio of males, in the East-South stratum (Ross Sea) in Area V was 12.0 % and 66.7 % in the East-North stratum in Area V. The mature males were widely distributed throughout the whole research areas. Mature males were dominant in the entire research areas other than the East-South stratum (Ross Sea) in Area V. Immature males were not sampled in the East-South stratum (Ross Sea) in Area V. Females were widely distributed throughout the whole research area. Mature females were dominant in the East-South stratum (Ross Sea) in Area V. Females constituted 69.4 % of the collected samples and the pregnancy rate of mature females was 75.1 % in the whole research areas. 92.3% of the pregnant females were concentrated in the East-South stratum (Ross Sea) in Area V. Table 11 shows the mean body length of Antarctic minke whales collected in each stratum. Maximum length was 9.45 m for males and 9.86 m for females; minimum length was 4.74m and 4.97m, respectively.

2) Fin whales

Biological data collected for fin whales is shown in Table 10. The maximum body length of the collected fin whales was 21.15 m with body weight of 65.02 tons. This animal was a pregnant female.

Experiments

1) Sighting distance and angle experiment

A sighting distance and angle experiment was performed on 31 December 2006 by SSVs. The results of this experiment will be used in estimating abundance. KS2 conducted a similar experiment on 31 December 2006 but it was interrupted due to unsuitable sea conditions. KK1 could not conduct a similar experiment during the survey period.

2) The results of photo-ID

Table 12 summarizes the results of the photo-ID experiment. It was conducted throughout the entire research areas. A total of 27 targeted individuals were photographed (2 blue whales and 25 humpback whales), from one school of blue whales and 12 schools of humpback whales. Photographs of natural markings were successfully taken from one mother/calf pair of blue and six pairs of humpback whales.

3) The results of biopsy sampling

Table 13 summarizes the results of biopsy sampling. A total of 17 skin biopsy samples were collected from blue whales (n=1), fin whales (n=3) and humpback whales (n=13). Two sets of biopsy samples were taken from mother and calf pairs of humpback whales.

4) Satellite tags

YS2 attempted the attachment of a satellite tag on one school of Antarctic minke whales (8 animals) on 23 January 2007. A satellite tag was attached to one animal around its dorsal fin. The body length of this animal was estimated at 8.4 m. However, technical problems were found with the transmission antenna. YS1 attempted unsuccessfully to attach a satellite tag to one school of Antarctic minke whales (5 animals) on 23 January 2007.

5) The oceanographic and acoustic surveys

Table 14 shows a summary of oceanographic and acoustic surveys. CTD and XCTD castings conducted at 79 and 88 locations, respectively (Figure 15). EPCS survey was conducted for 62 days by KS2 and 57 days by YS2 in total. KS2 conducted a quantitative echo sounder survey which ranges over 62 days in the whole research area. KK1 conducted sampling of prey species (Krill) by the IKMT at 38 locations in the whole research area (Figure 16).

6) The marine debris

The marine debris survey was carried out concomitant with the sighting survey of the SVs in all research areas. A total of seven fishing buoys were found. All of these buoys were observed in the East-North stratum of Area V. In this Area, more than one Antarctic toothfish long-line fishing vessels were observed. The same kind of fishing buoys were onboard these fishing vessels as the fishing gear.

DISCUSSION

The present paper reported the results of the second feasibility survey of the JARPA II. The main results of the second feasibility survey can be summarized as follows:

1) The Antarctic minke whales were widely distributed in the entire research area although segregation by sex and reproductive status was observed. The DI shows that Antarctic minke whales were concentrated in larger numbers in the East-South stratum (Ross Sea) compared to the East-North stratum in Area V and the western part of Area VI (Table 4). Females were dominant in the East-South stratum (Ross Sea) of Area V and males in the East-North stratum of Area V and the western part of Area VI. Mature males were dominant in all the research areas other than the East-South stratum (Ross Sea) of Area V. No immature males were sampled in the East-South stratum (Ross Sea) of Area V. The females were widely distributed through the whole research areas. The concentration of pregnant females was high in the East-South stratum (Ross Sea) in Area V.

2) Humpback and fin whales were segregated from the Antarctic minke whales in the research area.

Humpback and fin whales were dominant in the northern part of the research area but not in the southern part (such as the Ross Sea) where Antarctic minke whales were highly concentrated. It is suggested that biomass of humpback and fin whales is similar to that of Antarctic minke whales.

The objectives of this feasibility survey were 1) to examine the practicability and appropriateness of sighting methods in the enlarged research area, 2) to examine the practicability and appropriateness of sampling procedures for the increased sample size of Antarctic minke whales, and 3) to examine the practicability of methods of hunting, hauling, flensing and biological sampling applied to the large-sized whales. For the feasibility surveys a total of 850 \pm 10% Antarctic minke whales and 10 fin whales were planned for sampling. In relation to these objectives of the second feasibility survey, the following results were obtained:

1) The practicability and appropriateness of sighting methods in the enlarged area

This cruise was planned to cover a longitudinal span of 85° from 130°E to 145°W through early December to late March and to provide search effort mainly in Area VE during the peak feeding season of baleen whales. We successfully covered all of the areas except those from 130°E to 159°E in the case of the SVs and from 130°E to 170°E in the case of the SSVs. This was due to external interference and a fire accident on the NM. If this accident had not occurred, all of the research area could have been covered sufficiently. The practicability and appropriateness of the sighting methods was therefore confirmed.

2) Sampling procedures given the increased sample size and additional species.

Out of 443 schools of primarily sighted Antarctic minke whales by SSVs, 438 schools were targeted for sampling. A total of 505 individuals were sampled with sampling efficiency of 93.8 %. Out of 20 schools (157 individuals) primarily sighted fin whales by SSVs, 3 schools (9 individuals) were targeted for sampling. A total of 3 individuals were sampled with sampling efficiency of 100.0 %. Considering this high sampling efficiency and high concentration of the targeted whale species in the research area, we concluded that the sampling procedures used were practical and appropriate for the increased number of samples.

3) Methods for catching, flensing and taking biological measurements of large body-sized fin whales

Although it took longer to catch, transport, measure and dissect fin whales than in the case of the Antarctic minke whales, the entire process was conducted smoothly and successfully. It appeared, however, that improvement of the methods would be required in future for sampling fin whales larger than 21 m in body length or heavier than 65 tons in body weight.

We conclude that the current survey proved the feasibility of the JARPAH.

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Table 1. Outline of the 2006/2007 JARPAII research activities.

| Event | Date | RBV | SSVs | SVs | |
|--|---------------------------------|-----|------|----------------|-----|
| | | | | KK1 | KS2 |
| Departure from Shimane-city in Yamaguchi prefecture Japan | 15/ Nov / 2006 | | # | # | |
| Departure from Sendai-city in Miyagi prefecture Japan | 17/ Nov / 2006 | | | | # |
| Low and middle latitudinal sighting survey in transit area | 6/ Dec / 2006 ~ 7/ Dec / 2006 | ~ | ~ | 14/ Dec / 2006 | # |
| Sighting and sampling survey in the western part of Area VI from 145W to 170W | 16/ Dec / 2006 ~ 15/ Dec / 2006 | ~ | ~ | 30/ Dec / 2006 | # |
| Refueling and experiments | 31/ Dec / 2006 ~ 2/ Jan / 2007 | ~ | ~ | 7/ Jan / 2007 | # |
| Sighting and sampling survey in the East-North stratum in Area V from 66S to 66S | 2/ Jan / 2007 ~ 3/ Jan / 2007 | ~ | ~ | 10/ Jan / 2007 | # |
| Sighting and sampling survey in East-South stratum in Area V (Ross Sea) | 13/ Jan / 2007 ~ 13/ Jan / 2007 | ~ | ~ | 26/ Jan / 2007 | # |
| Sighting and sampling survey in the East-North stratum in Area V from 66S to 69S | 31/ Jan / 2007 ~ 2/ Feb / 2007 | ~ | ~ | 31/ Jan / 2007 | # |
| The terrorism attack by Seap Shepherd | 9/ Feb / 2007 | ~ | ~ | 1/ Feb / 2007 | # |
| The avoidance from the terrorism attack by Seap Shepherd | 9/ Feb / 2007 ~ 9/ Feb / 2007 | ~ | ~ | 11/ Feb / 2007 | # |
| Sighting survey in the Western strata and East-North stratum in Area V from 170E to 170E | 10/ Feb / 2007 ~ 10/ Feb / 2007 | ~ | ~ | 13/ Feb / 2007 | # |
| The terrorism attack from Seap Shepherd, and restoration works | 11/ Feb / 2007 ~ 11/ Feb / 2007 | ~ | ~ | 13/ Feb / 2007 | # |
| Sighting and sampling survey in the East-South stratum in Area V (Ross Sea) | 12/ Feb / 2007 ~ 12/ Feb / 2007 | ~ | ~ | 14/ Feb / 2007 | # |
| The fire accident generation by the RBV | 13/ Feb / 2007 | ~ | ~ | 14/ Feb / 2007 | # |
| The restoration from the fire accident on RBV and the rescue | 15/ Feb / 2007 ~ 18/ Feb / 2007 | ~ | ~ | 24/ Feb / 2007 | # |
| Starting of the avoided navigation by Nissho-Maru and escort transit by SVs and SSVs | 20/ Feb / 2007 ~ 24/ Feb / 2007 | ~ | ~ | 20/ Feb / 2007 | # |
| Ending of the sighting and sampling survey in the Antarctic Ocean | 28/ Feb / 2007 | ~ | ~ | 20/ Feb / 2007 | # |
| Arrive on Shimane-waku in Tokyo, Japan | 21/ Mar / 2007 | | | | # |
| Arrive on Shimane-waku in Tokyo, Japan | 23/ Mar / 2007 | | | | # |
| Arrive on Shimane-city in Yamaguchi Prefecture Japan | 24/ Mar / 2007 | | | | # |
| Arrive on Shimane-waku in Tokyo, Japan | 25/ Mar / 2007 | | | | # |

RBV: Research Base Vessel (Nissho Maru) - SSVs: Sighting and Sampling Vessels - SVs: Sighting Vessels (KK1, Kaku Maru, KS2, Kyoshin Maru No.2)

Table 2. Searching distances (n.miles) of two sighting vessel (SVs) and three sighting / sampling vessels (SSVs) in each stratum.

| Area | E/W | Stratum | SVs | | | SSVs | | | Grand total |
|-------------|------|-----------|----------|----------|-----------|----------|-------|-----------|-------------|
| | | | NSP | ASP | Sub total | NSC | ASP | Sub total | |
| VI | West | North | 561.95 | 194.42 | 756.37 | 1,009.29 | 0.00 | 1,009.29 | 1,765.66 |
| | | South | 531.68 | 189.57 | 721.25 | 1,534.85 | 0.00 | 1,534.85 | 2,256.10 |
| | | Sub-total | 1,093.63 | 383.99 | 1,477.62 | 2,544.14 | 0.00 | 2,544.14 | 4,021.76 |
| V | East | North | 1,547.47 | 560.26 | 2,107.73 | 1,661.31 | 29.55 | 1,690.86 | 3,798.59 |
| | | South | 1,665.00 | 607.88 | 2,272.88 | 1,642.14 | 0.00 | 1,642.14 | 3,915.02 |
| | | Sub-total | 3,212.47 | 1,168.14 | 4,380.61 | 3,303.45 | 29.55 | 3,333.00 | 7,713.61 |
| | West | North | 74.36 | 22.89 | 97.25 | 0.00 | 0.00 | 0.00 | 97.25 |
| | | South | 123.89 | 12.36 | 136.25 | 0.00 | 0.00 | 0.00 | 136.25 |
| | | Sub-total | 198.25 | 35.25 | 233.50 | 0.00 | 0.00 | 0.00 | 233.50 |
| Grand total | | | 4,504.35 | 1,587.38 | 6,091.73 | 5,847.59 | 29.55 | 5,877.14 | 11,968.87 |

Table 3. Summary of whale sightings conducted by SVs and SSVs in whole research areas.

| Type of the vessels | SVs | | | | | | SSVs | | | | | | Grand total | | | | | | |
|---------------------------|---------|-------|----------|-----|-----------|-------|---------|-------|----------|-----|-----------|-------|-------------|-------|----------|-----|-----------|-------|--|
| | Primary | | Secondly | | Sub total | | Primary | | Secondly | | Sub total | | Primary | | Secondly | | Continued | | |
| Type of the sightings | Sch | Ind | Sch | Ind | Sch | Ind | Sch | Ind | Sch | Ind | Sch | Ind | Sch | Ind | Sch | Ind | Sch | Ind | |
| Whale species | | | | | | | | | | | | | | | | | | | |
| Antarctic minke whale | 520 | 1,126 | 41 | 105 | 567 | 1,231 | 443 | 1,043 | 13 | 66 | 456 | 1,109 | 969 | 2,169 | 54 | 171 | 1,023 | 2,340 | |
| Dwarf-furred minke whale | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | |
| Like minke whale | 20 | 32 | 2 | 4 | 22 | 36 | 8 | 8 | 2 | 4 | 10 | 12 | 28 | 40 | 4 | 8 | 32 | 48 | |
| Blue whale | 5 | 8 | 0 | 0 | 5 | 8 | 2 | 4 | 1 | 3 | 3 | 7 | 7 | 12 | 1 | 3 | 8 | 15 | |
| Fin whale | 18 | 97 | 0 | 0 | 18 | 97 | 19 | 150 | 4 | 14 | 23 | 170 | 37 | 253 | 4 | 14 | 41 | 267 | |
| Humpback whale | 91 | 171 | 8 | 16 | 99 | 187 | 69 | 142 | 3 | 9 | 72 | 121 | 160 | 283 | 11 | 25 | 171 | 308 | |
| Baleen whales | 33 | 50 | 2 | 4 | 35 | 54 | 0 | 3 | 7 | 3 | 7 | 23 | 50 | 5 | 11 | 38 | 61 | | |
| Sperm whale | 33 | 33 | 0 | 0 | 33 | 33 | 30 | 30 | 0 | 0 | 30 | 30 | 63 | 63 | 0 | 0 | 63 | 63 | |
| Southern bottlenose whale | 25 | 41 | 0 | 0 | 25 | 41 | 26 | 39 | 1 | 1 | 27 | 40 | 31 | 40 | 1 | 1 | 52 | 81 | |

Table 4. Density indices (DI, number of schools per 100 n.miles) and mean school size (MSS) of Antarctic minke whale primary sightings by SV and SSVs.

| Area | E/W | Stratum | SVs | | | | | SSVs | | | | |
|-------------|--------|-----------|------------------------------|---|-------|------|-----|------------------------------|---|-------|------|-----|
| | | | Searching distance (n.miles) | Antarctic minke whales (Primary sighting) | | | | Searching distance (n.miles) | Antarctic minke whales (Primary sighting) | | | |
| | | | | Sch. | Ind. | DI | MSS | | Sch. | Ind. | DI | MSS |
| VI | West | North | 756.37 | 15 | 21 | 2.0 | 1.4 | 1,009.29 | 35 | 186 | 3.5 | 5.3 |
| | | South | 721.25 | 30 | 111 | 4.2 | 3.7 | 1,534.85 | 49 | 112 | 3.2 | 2.3 |
| | | Sub total | 1,477.62 | 45 | 132 | 3.0 | 2.9 | 2,544.14 | 84 | 298 | 3.3 | 3.5 |
| V | East | North | 2,107.73 | 40 | 96 | 1.9 | 2.4 | 1,690.86 | 66 | 142 | 3.9 | 2.2 |
| | | South | 2,272.88 | 409 | 837 | 18.0 | 2.0 | 1,642.14 | 293 | 605 | 17.8 | 2.1 |
| | | Sub total | 4,380.61 | 449 | 933 | 10.2 | 2.1 | 3,333.00 | 359 | 745 | 10.8 | 2.1 |
| | West | North | 97.25 | 12 | 18 | 12.3 | 1.5 | - | - | - | - | - |
| | | South | 136.25 | 20 | 43 | 14.7 | 2.2 | - | - | - | - | - |
| Sub total | 233.50 | 32 | 61 | 13.7 | 1.9 | - | - | - | - | - | | |
| Grand total | | | 6,091.73 | 526 | 1,126 | 8.6 | 2.1 | 5,877.14 | 443 | 1,043 | 7.5 | 2.4 |

Table 5. Density indices (DI, number of schools per 100 n.miles) and mean school size (MSS) of humpback whale primary sightings by SVs and SSVs.

| Area | E/W | Stratum | SVs | | | | | SSVs | | | | |
|-------------|--------|-----------|------------------------------|------------------------------------|------|-----|-----|------------------------------|------------------------------------|------|-----|-----|
| | | | Searching distance (n.miles) | Humpback whales (Primary sighting) | | | | Searching distance (n.miles) | Humpback whales (Primary sighting) | | | |
| | | | | Sch. | Ind. | DI | MSS | | Sch. | Ind. | DI | MSS |
| VI | West | North | 756.37 | 20 | 42 | 2.6 | 2.1 | 1,009.29 | 11 | 16 | 1.1 | 1.5 |
| | | South | 721.25 | 7 | 13 | 1.0 | 1.9 | 1,534.85 | 1 | 1 | 0.1 | 1.0 |
| | | Sub total | 1,477.62 | 27 | 55 | 1.8 | 2.0 | 2,544.14 | 12 | 17 | 0.5 | 1.4 |
| V | East | North | 2,107.73 | 49 | 89 | 2.3 | 1.8 | 1,690.86 | 52 | 88 | 3.1 | 1.7 |
| | | South | 2,272.88 | 0 | 0 | 0.0 | - | 1,642.14 | 5 | 7 | 0.3 | 1.4 |
| | | Sub total | 4,380.61 | 49 | 89 | 1.1 | 1.8 | 3,333.00 | 57 | 95 | 1.7 | 1.7 |
| | West | North | 97.25 | 6 | 10 | 6.2 | 1.7 | - | - | - | - | - |
| | | South | 136.25 | 9 | 17 | 6.6 | 1.9 | - | - | - | - | - |
| Sub total | 233.50 | 15 | 27 | 6.4 | 1.8 | - | - | - | - | - | | |
| Grand total | | | 6,091.73 | 91 | 171 | 1.5 | 1.9 | 5,877.14 | 69 | 112 | 1.2 | 1.6 |

Table 6. Density indices (DI, number of schools per 100 n.miles) and mean school size (MSS) of fin whale primary sightings by SVs and SSVs.

| Area | E/W | Stratum | SVs | | | | | SSVs | | | | |
|-------------|--------|-----------|------------------------------|-------------------------------|------|-----|-----|------------------------------|-------------------------------|------|-----|-----|
| | | | Searching distance (n.miles) | Fin whales (Primary sighting) | | | | Searching distance (n.miles) | Fin whales (Primary sighting) | | | |
| | | | | Sch. | Ind. | DI | MSS | | Sch. | Ind. | DI | MSS |
| VI | West | North | 756.37 | 7 | 17 | 0.9 | 2.4 | 1,009.29 | 4 | 25 | 0.4 | 6.3 |
| | | South | 721.25 | 0 | 0 | 0.0 | - | 1,534.85 | 1 | 1 | 0.1 | 1.0 |
| | | Sub total | 1,477.62 | 7 | 17 | 0.5 | 2.4 | 2,544.14 | 5 | 26 | 0.2 | 5.2 |
| V | East | North | 2,107.73 | 11 | 80 | 0.5 | 7.3 | 1,690.86 | 14 | 130 | 0.8 | 9.3 |
| | | South | 2,272.88 | 0 | 0 | 0.0 | - | 1,642.14 | 0 | 0 | 0.0 | - |
| | | Sub total | 4,380.61 | 11 | 80 | 0.3 | 7.3 | 3,333.00 | 14 | 130 | 0.4 | 9.3 |
| | West | North | 97.25 | 0 | 0 | 0.0 | - | - | - | - | - | - |
| | | South | 136.25 | 0 | 0 | 0.0 | - | - | - | - | - | - |
| Sub total | 233.50 | 0 | 0 | 0.0 | - | - | - | - | - | - | | |
| Grand total | | | 6,091.73 | 18 | 97 | 0.3 | 5.4 | 5,877.14 | 19 | 156 | 0.3 | 8.2 |

Table 7. Summary of biological data and samples collected from Antarctic minke whales.

| Samples and data | Number of whales | | |
|--|------------------|--------|-------|
| | Male | Female | Total |
| Photographic record of external character | 154 | 351 | 505 |
| Body length and sex identification | 153 | 350 | 503 |
| Measurement of external body proportion | 154 | 351 | 505 |
| Body weight | 65 | 54 | 119 |
| Body weight by total weight of parts | 13 | 15 | 28 |
| Skull measurement (length and breadth) | 151 | 346 | 497 |
| Standard measurement of blubber thickness (two points) | 154 | 351 | 505 |
| Lactation status | - | 351 | 351 |
| Measurement of mammary gland | - | 350 | 350 |
| Testis weight | 154 | - | 154 |
| Weight of stomach content | 142 | 327 | 469 |
| Photographic record of fetus | 139 | 113 | 258* |
| Fetal length and weight | 137 | 111 | 255* |
| Diatom film observation | 154 | 348 | 502 |
| Blood plasma for physiological study | 151 | 349 | 500 |
| Earplug for age determination | 154 | 351 | 505 |
| Ocular lens for age determination | 66 | 114 | 180 |
| Tympanic bone for chemical analysis | 18 | 28 | 46 |
| Largest baleen plate for chemical analysis | 154 | 351 | 505 |
| Vertebral epiphyses sample | 139 | 327 | 466 |
| Ovary | - | 351 | 351 |
| Histological sample of endometrium | - | 29 | 29 |
| Histological sample of mammary gland | - | 351 | 351 |
| Milk sample for chemical analysis | - | 0 | 0 |
| Histological sample of testis | 154 | - | 154 |
| Skin and liver tissues for genetic study | 154 | 351 | 505 |
| Blubber, muscle and liver tissues for environmental monitoring | 154 | 351 | 505 |
| Lung and liver tissues for air monitoring | 22 | 25 | 47 |
| Macro pathological observation (thyroid, lung, stomach, gonad and liver) | 154 | 351 | 505 |
| Tissues for histopathological study | 82 | 160 | 242 |
| Tissues for various studies (muscle, blubber) | 3 | 3 | 6 |
| Tissues for food study (muscle, blubber, ventral groove) | 0 | 0 | 0 |
| Stomach contents for food and feeding study | 24 | 66 | 90 |
| Stomach contents for environmental monitoring | 4 | 20 | 24 |
| External parasites | 0 | 1 | 1 |
| Internal parasites | 1 | 6 | 7 |
| Fetus | 1 | 1 | 7* |
| Fetus ocular lens for age determination | 64 | 45 | 109 |
| Fetal skin for genetic study | 137 | 108 | 252* |
| Spermatogenic cell for round spermatid injection | 1 | - | 1 |
| Blood samples for genetic study | 6 | 4 | 10 |
| Placenta | 0 | 0 | 0 |

* including a fetus of sex unidentified.

Table 8. Summary of biological data and samples collected from fin whales.

| Samples and data | Number of whales (fin whale) | | |
|--|------------------------------|--------|--------|
| | Male | Female | Total* |
| Photographic record of external character | 1 | 1 | 2 |
| Body length and sex identification | 1 | 1 | 2 |
| Measurement of external body proportion | 1 | 2 | 3 |
| Body weight by total weight of parts | 1 | 1 | 2 |
| Skull measurement (length and breadth) | 1 | 1 | 2 |
| Detailed measurement of blubber thickness (fourteen points) | 1 | 1 | 2 |
| Lactation status | - | 1 | 1 |
| Measurement of mammary gland | - | 1 | 1 |
| Breadth measurement of uterine horn | - | 1 | 1 |
| Testis weight | 1 | - | 1 |
| Epididymis weight | 1 | - | 1 |
| Weight of stomach content | 1 | 1 | 2 |
| Photographic record of fetus | 1 | - | 1 |
| Fetal length and weight | 1 | - | 1 |
| External measurements of fetus | 1 | - | 1 |
| Number of ribs | 1 | 1 | 2 |
| Number of vertebrae | 1 | 1 | 2 |
| Diatom film observation | 1 | 1 | 2 |
| Diatom film sample | 1 | 1 | 2 |
| Blood plasma for physiological study | 1 | 1 | 2 |
| Earplug for age determination | 1 | 1 | 2 |
| Ocular lens for age determination | 1 | 1 | 2 |
| Tympanic bone for chemical analysis | 1 | 1 | 2 |
| Largest baleen plate for chemical analysis | 1 | 1 | 2 |
| Number and length of baleen plates | 1 | 1 | 2 |
| Palate length | 1 | 1 | 2 |
| Vertebral epiphyses sample | 1 | 2 | 3 |
| Ovary | - | 1 | 1 |
| Histological sample of endometrium | - | 1 | 1 |
| Histological sample of mammary gland | - | 1 | 1 |
| Milk sample for chemical analysis | - | 0 | 0 |
| Histological sample of testis | 1 | - | 1 |
| Histological sample of epididymis | 1 | - | 1 |
| Skin and liver tissues for genetic study | 1 | 2 | 3 |
| Blubber, muscle and liver tissues for environmental monitoring | 1 | 2 | 3 |
| Lung and liver tissues for air monitoring | 1 | 1 | 2 |
| Macro pathological observation (thyroid, lung, stomach, gonad and liver) | 1 | 1 | 2 |
| Tissues for histopathological study | 1 | 1 | 2 |
| Tissues for lipid analysis (muscle, liver, kidney, lumbar, blubber) | 1 | 2 | 3 |
| Tissues for chemical study (muscle, liver, kidney) | 1 | 2 | 3 |
| Tissues for various studies (muscle, blubber) | 0 | 1 | 1 |
| Tissues for food study (muscle, blubber, ventral groove) | 0 | 0 | 0 |
| Tissues for nutritional study (muscle, blubber) | 1 | 2 | 3 |
| Stomach contents for food and feeding study | 1 | 1 | 2 |
| Stomach contents for environmental monitoring | 1 | 0 | 1 |
| Stomach contents for lipid analysis | 1 | 0 | 1 |
| External parasites | 0 | 0 | 0 |
| Internal parasites | 0 | 0 | 0 |
| Fetus | 0 | 0 | 0 |
| Fetus ocular lens for age determination | 1 | 0 | 1 |
| Fetal skin for genetic study | 1 | 0 | 1 |
| Blood samples for genetic study | 1 | - | 1 |
| Baleen plates for educational exhibition | 0 | 0 | 0 |
| Tympanic bone for educational exhibition | 0 | 0 | 0 |
| Pelvis bone for educational exhibition | 0 | 1 | 1 |

Table 9. Reproductive status of Antarctic minke whales sampled in 2006/2007 JARPAII. Maturity of males was tentatively defined by testis weight according to Kato (1986). "Resting" represents non-pregnant mature female without corpus luteum and "Ovulating" represents female that had corpus luteum but fetus was not observed.

| Stratum | Male | | | Female | | | | | Total |
|----------------------------|----------|--------|-------|----------|--------------------------|---------|-------|----------|-------|
| | Immature | Mature | Total | Immature | Mature | | Total | | |
| | | | | | No-pregnant Ovulating | Resting | | Pregnant | |
| AreaV West-North | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | - | - | - | - | - | - | - | - | - |
| AreaV East-North | 17 | 34 | 51 | 11 | 0 | 0 | 8 | 0 | 19 |
| | 33.3% | 66.7% | 72.9% | 57.9% | 0.0% | 0.0% | 42.1% | 0.0% | 27.1% |
| AreaVI West-North | 5 | 23 | 28 | 9 | 0 | 2 | 5 | 0 | 16 |
| | 17.9% | 82.1% | 63.6% | 56.3% | 0.0% | 12.5% | 31.3% | 0.0% | 36.4% |
| Northern Strata (Total) | 22 | 57 | 79 | 20 | 0 | 2 | 13 | 0 | 35 |
| | 27.8% | 72.2% | 69.3% | 57.1% | 0.0% | 5.7% | 37.1% | 0.0% | 30.7% |
| AreaV West-South | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | - | - | - | - | - | - | - | - | - |
| AreaV East-South (Ross)* | 0 | 40 | 40 | 30 | 4 | 16 | 242 | 0 | 292 |
| | 0.0% | 100.0% | 12.0% | 10.3% | 1.4% | 5.5% | 82.9% | 0.0% | 88.0% |
| AreaVI West-South | 7 | 28 | 35 | 13 | 0 | 2 | 7 | 0 | 22 |
| | 20.0% | 80.0% | 61.4% | 59.1% | 0.0% | 9.1% | 31.8% | 0.0% | 38.6% |
| Southern Strata (Total) | 7 | 68 | 75 | 43 | 4 | 18 | 249 | 0 | 314 |
| | 9.3% | 90.7% | 19.3% | 13.7% | 1.3% | 5.7% | 79.3% | 0.0% | 80.7% |
| Combined | 29 | 125 | 154 | 63 | 4 | 20 | 262 | 0 | 349 |
| | 18.8% | 81.2% | 30.6% | 18.1% | 1.1% | 5.7% | 75.1% | 0.0% | 69.4% |

* Two females with unknown maturity status.

Table 10. Some biological information on fin whales sampled in 2006/2007 JARPAII.

| No. | Date of capture | Body length (m) | Body weight (ton)* | Sex | Testis weight (L/R, kg) | Reproductive information | Remarks |
|------|-----------------|-----------------|--------------------|-----|-------------------------|--------------------------|----------------------|
| F001 | Jan. 3, 2007 | - | - | F | - | - | |
| F002 | Jan. 5, 2007 | 20.67 | 51.62 | M | 8.10 / 9.80 | | |
| F003 | Feb. 2, 2007 | 21.15 | 65.02 | F | - | Pregnant | Fetal length 243.4cm |

* Body weight was represented by total weight of body parts.

Table 11. Average body length (m) with standard deviation (S.D.) and body length range of Antarctic minke whales sampled in each stratum. Maturity of males was defined as Table 9.

| Sex | Male | | | | | | Female | | | | | |
|-------------------------|--------------|--------------|----|--------------|--------------|----|--------------|--------------|-----|--------------|--------------|----|
| | Mature | | | Immature | | | Mature | | | Immature | | |
| Stratum | Average S.D. | Max Min | N | Average S.D. | Max Min | N | Average S.D. | Max Min | N | Average S.D. | Max Min | N |
| AreaV West-North | - | - | - | - | - | - | - | - | - | - | - | - |
| AreaV East-North | 8.27 0.41 | 9.05 7.42 | 34 | 6.50 0.61 | 7.40 5.46 | 17 | 8.66 0.47 | 9.40 8.08 | 8 | 6.37 1.03 | 8.04 4.97 | 11 |
| AreaVI West-North | 8.21 0.42 | 9.45 7.51 | 23 | 6.34 1.24 | 7.55 4.74 | 5 | 8.83 0.55 | 9.28 7.67 | 7 | 7.35 0.70 | 8.12 6.15 | 9 |
| AreaV West-South | - | - | - | - | - | - | - | - | - | - | - | - |
| AreaV East-South (Ross) | 8.24 0.40 | 9.05 7.41 | 40 | - | - | - | 8.82 0.37 | 9.86 7.83 | 261 | 7.88 0.42 | 9.03 6.85 | 30 |
| AreaVI West-South | 8.24 0.37 | 8.83 7.47 | 27 | 7.57 0.69 | 8.51 6.33 | 7 | 8.77 0.26 | 9.27 8.48 | 9 | 6.80 0.65 | 8.26 5.86 | 13 |

Table 12. Summary of photo-ID.

| Species | Area VI | | Area V | | | | Total |
|----------------|---------|-------|--------|-------|-------|-------|-------|
| | West | | West | | East | | |
| | North | South | North | South | North | South | |
| Blue whale | - | - | - | - | 2 | - | 2 |
| Humpback whale | 6 | - | - | - | 19 | - | 25 |
| Total | 6 | 0 | 0 | 0 | 21 | 0 | 27 |

Table 13. Summary of biopsy sampling.

| Species | Area VI | | Area V | | | | Total |
|----------------|---------|-------|--------|-------|-------|-------|-------|
| | West | | West | | East | | |
| | North | South | North | South | North | South | |
| Blue whale | - | - | - | - | 1 | - | 1 |
| Fin whale | - | - | - | - | 3 | - | 3 |
| Humpback whale | 2 | - | - | 1 | 10 | - | 13 |
| Total | 2 | 0 | 0 | 1 | 14 | 0 | 17 |

Table 14. Summary of oceanographic and acoustic surveys.

| Area | E/W | N/S | CTD (stations) | | XCTD (stations) | | IKMT (stations) | EPCS (days) | | Echo sounder (days) |
|--------------|------|-------|-------------------|-----------|--------------------|-----------|--------------------|----------------|-----------|------------------------|
| | | | KK1 | KS2 | KK1 | KS2 | KK1 | KS2 | YS2 | KS2 |
| VI | West | North | 7 | 10 | 5 | 5 | 7 | 13 | 9 | 13 |
| | | South | 6 | 5 | 1 | 2 | 6 | 6 | 10 | 6 |
| V | East | North | 7 | 18 | 15 | 17 | 7 | 19 | 15 | 19 |
| | | South | 13 | 8 | 15 | 21 | 16 | 19 | 23 | 19 |
| V | West | North | 1 | 1 | 2 | 0 | 1 | 2 | 0 | 2 |
| | | South | 1 | 2 | 0 | 0 | 1 | 3 | 0 | 3 |
| Other | | | | | 5 | | | | | |
| Total | | | 35 | 44 | 43 | 45 | 38 | 62 | 57 | 62 |

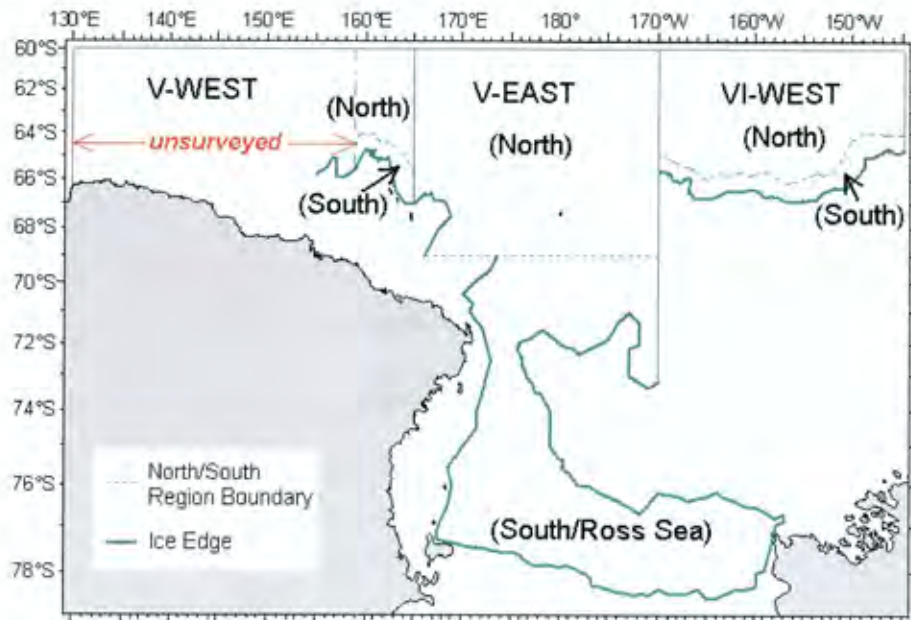


Figure 1. Geographic location of research area of the 2006/2007 JARPA II survey. Ice edge lines are estimated by observation from research vessels and the information from Near real time DMSP SSM / I daily polar gridded sea ice concentration data set available from the National Snow and Ice Data Center (NSIDC, Cavalieri *et al.* 1999).

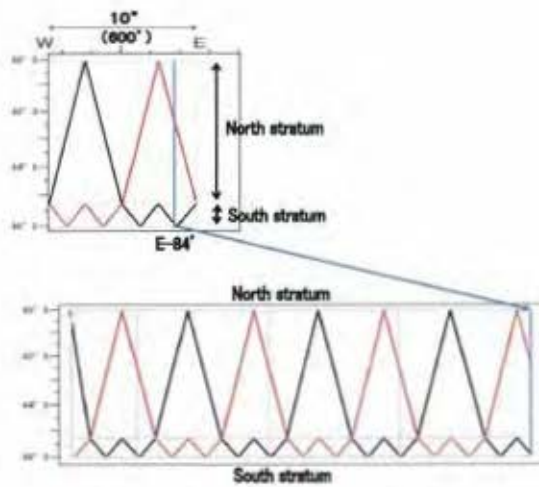


Figure 2. The principle design of survey track line of SVs based on the minimum unit.

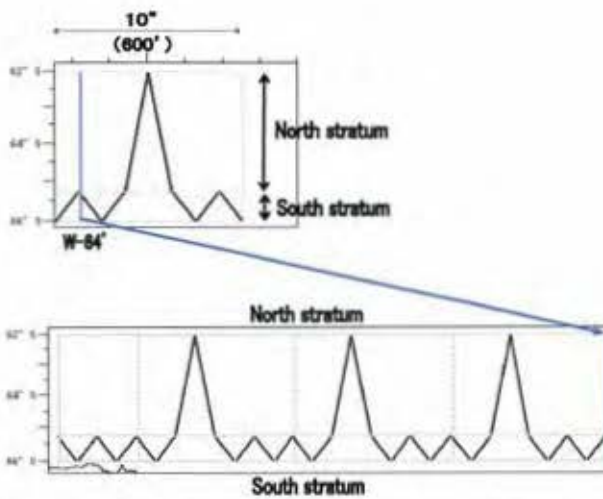


Figure 3. The principle design of survey track line of SSVs from the minimum unit.

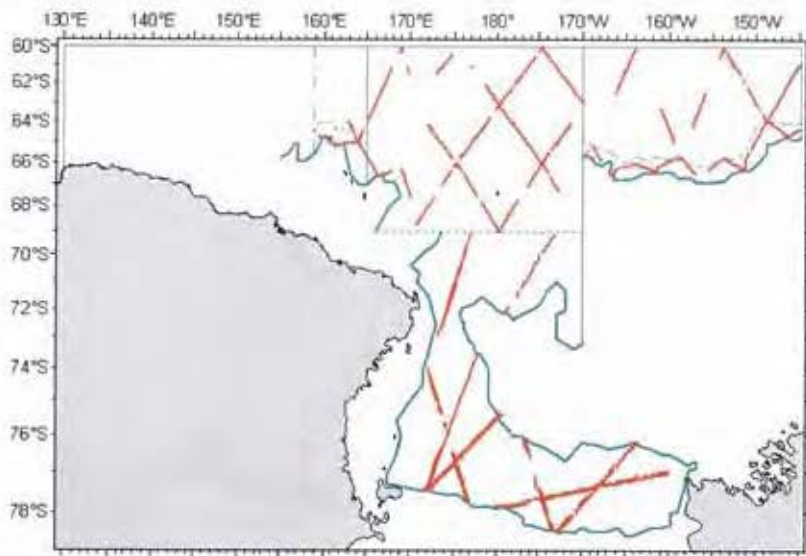


Figure 4. Survey track line Searching effort of SVs in 2006/2007 JARPAII.

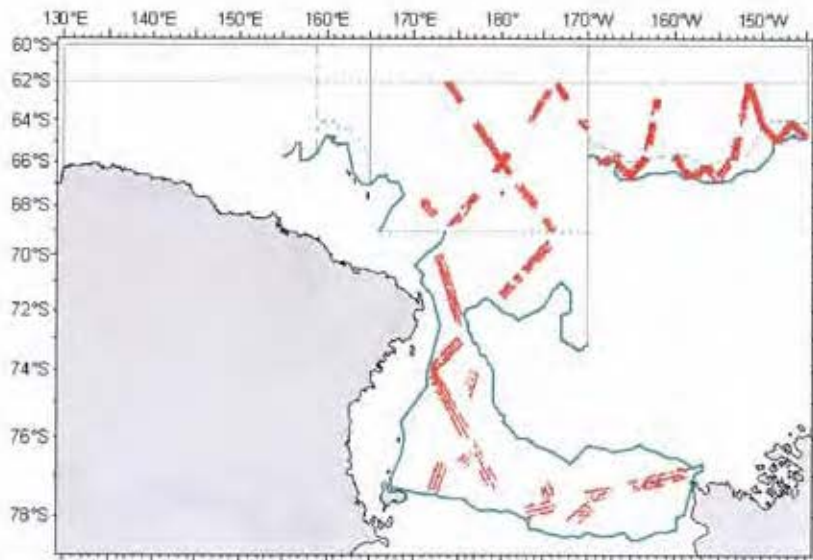


Figure 5. Survey track line of SSVs in 2006/2007 JARPAII.

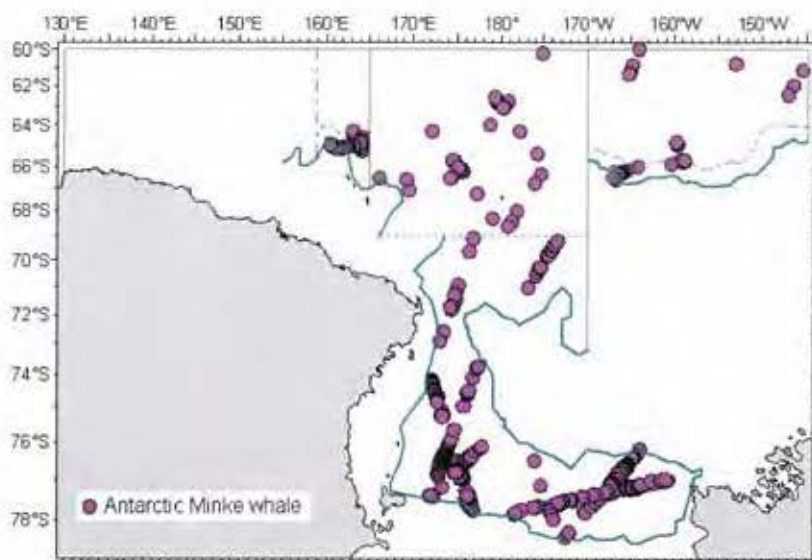


Figure 6. Distribution of primary sightings of Antarctic minke whales sighted by SVs in 2006/007 JARPAII.

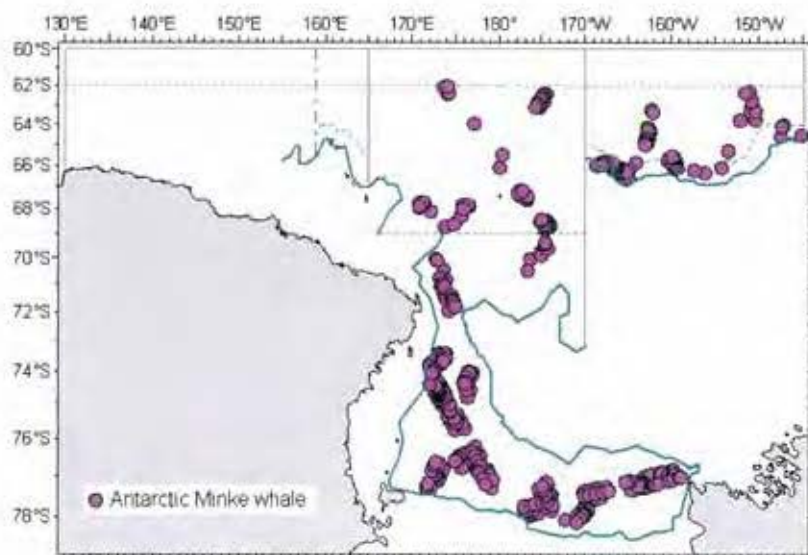


Figure 7. Distribution of primary sightings of Antarctic minke whales sighted by SSVs in 2006/2007 JARPAII.

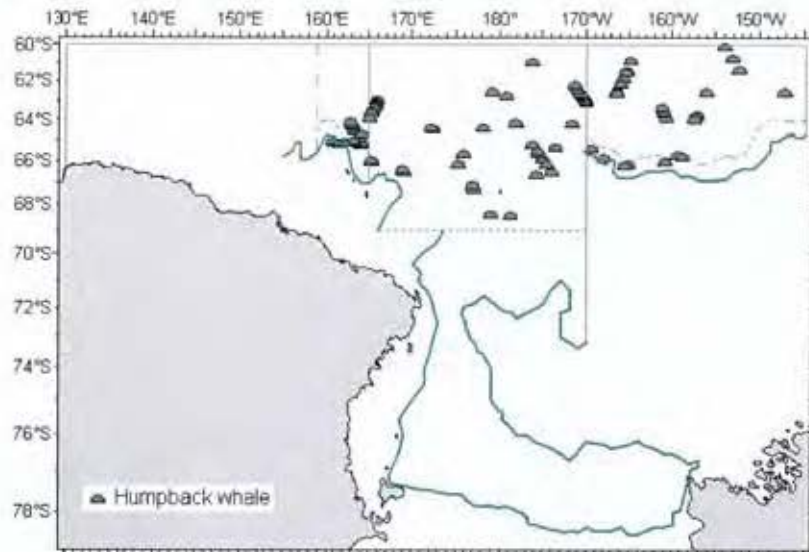


Figure 8. Distribution of primary sightings of humpback whales sighted by SVs in 2006/2007 JARPAII.

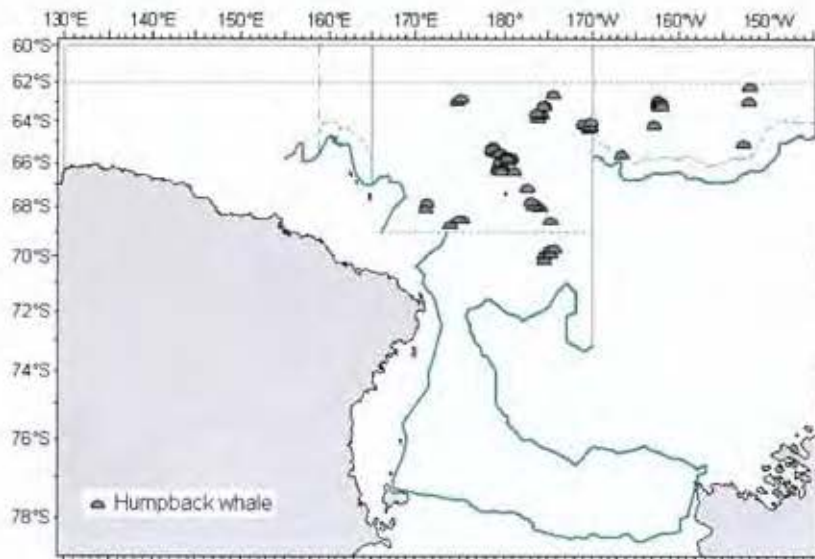


Figure 9. Distribution of primary sightings of humpback whales sighted by SSVs in 2006/2007 JARPAII.

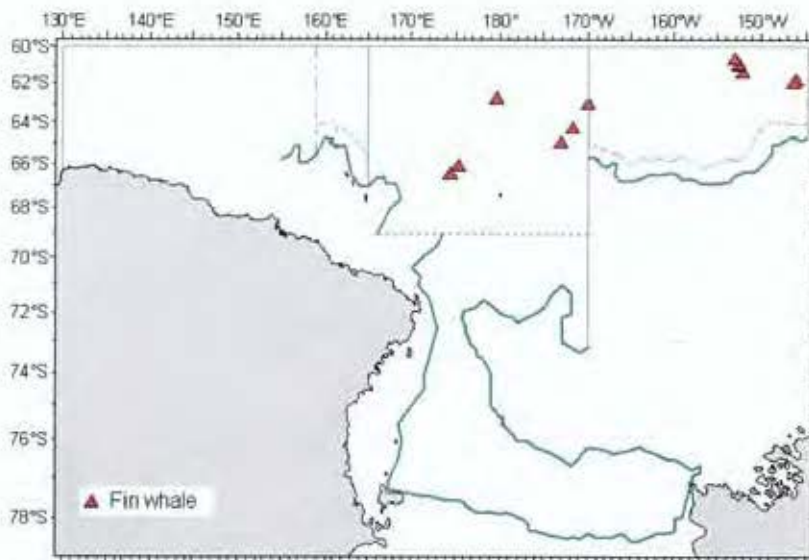


Figure 10. Distribution of primary sightings of fin whales sighted by SVs in 2006/2007 JARPAII.

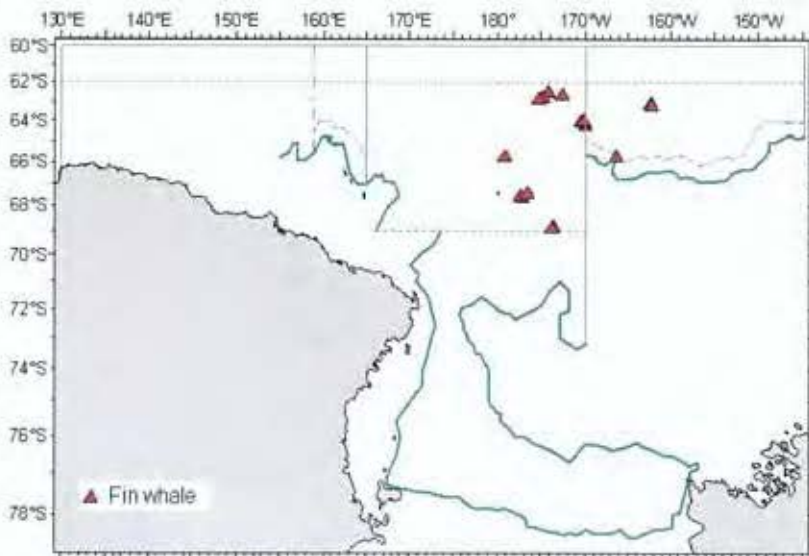


Figure 11. Distribution of primary sightings of fin whales sighted by SSVs in 2006/2007 JARPAII.

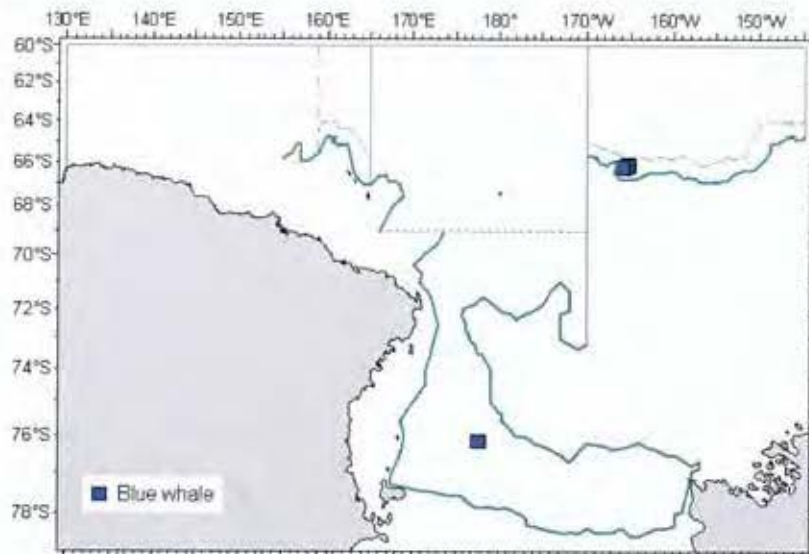


Figure 12. Distribution of primary sightings of blue whales sighted by SVs in 2006/2007 JARPAII.

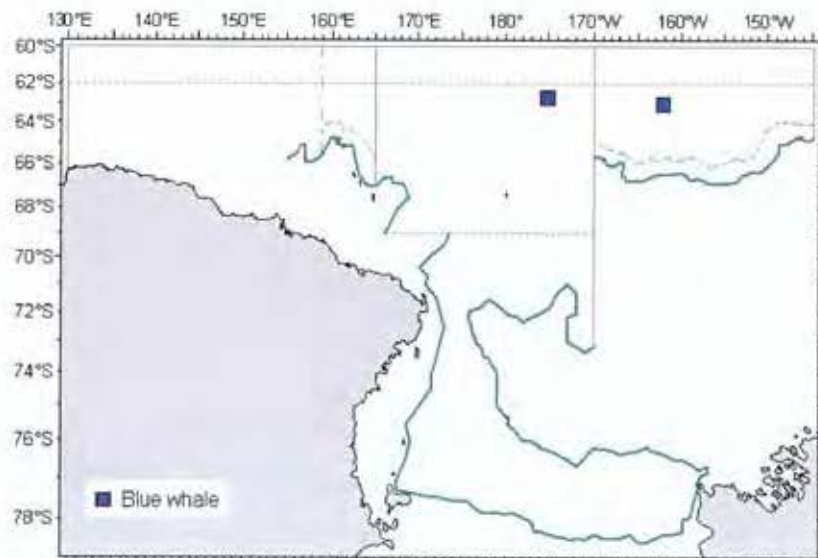


Figure 13. Distribution of primary sightings of blue whales sighted by SSVs in 2006/2007 JARPAII.

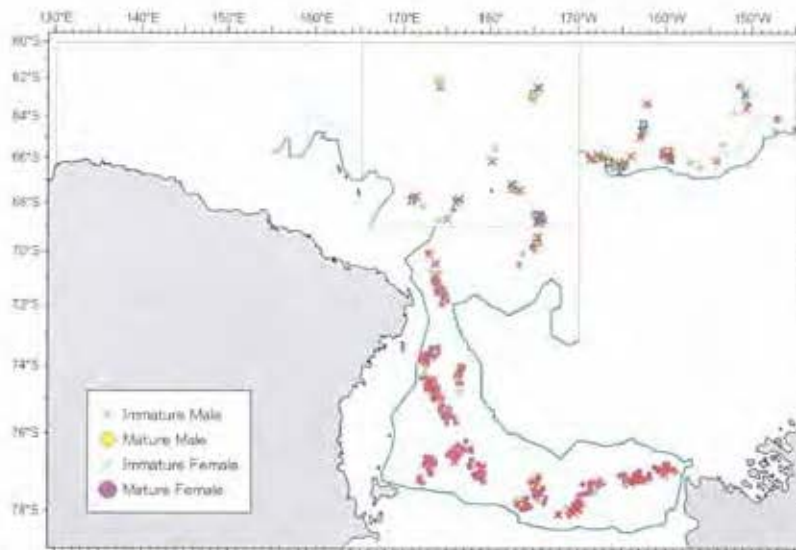


Figure 14. Sighted position of sampled Antarctic minke whales by sex and reproductive status in 2006/2007 JARPAII.

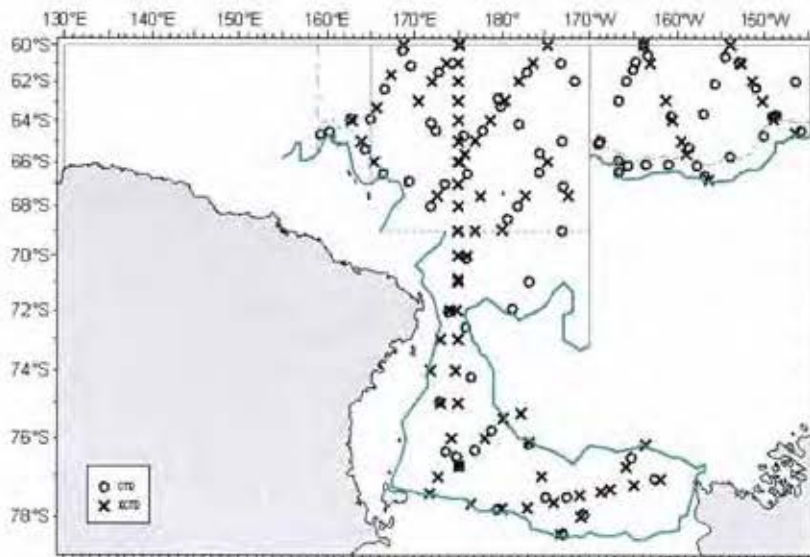


Figure 15. The CTD and XCTD observation stations in the research area in 2006/2007 JARPAII (circle: CTD stations, cross: XCTD stations).

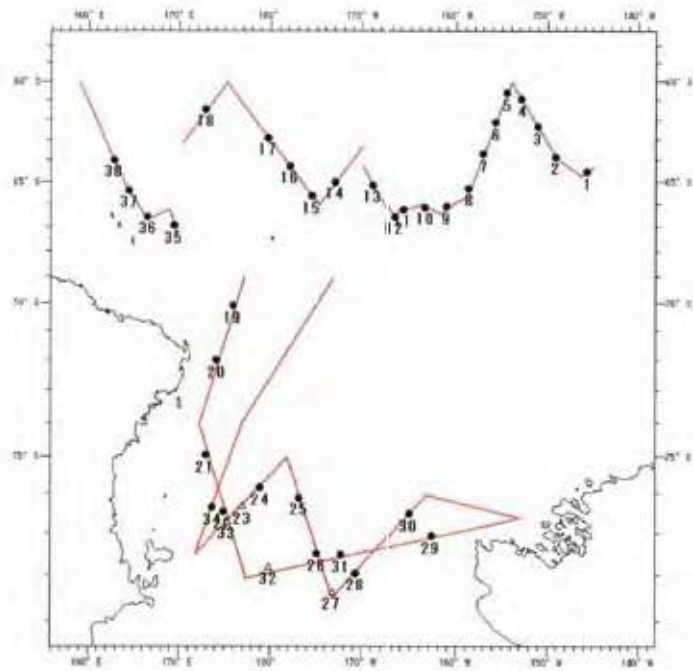


Figure 16. Pre-determined survey track line of KK1 and IKMT stations (filled circle: regular IKMT stations; open triangle: target IKMT stations) in 2006/2007 JARPAII.

Annex 59: Ishikawa, Hajime et al, *Cruise Report of the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) in 2007/2008, SC/60/04*

SC/60/04

Cruise Report of the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) in 2007/2008

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ABSTRACT

The 2007/08 Second Phase of the Japanese Whale Research Program under the Special Permit in the Antarctic (JARPA II) was conducted following feasibility research in the 2005/06 and 2006/07 austral summer seasons. Two dedicated sighting vessels (SVs), three sighting and sampling vessels (SSVs) and one research base ship engaged in the research for 101 days from 15 December 2007 to 24 March 2008. The planned research area was Area III East (35°E - 70°E), Area IV (70°E - 130°E), Area V West (130°E - 165°E) and a part of Area V East (165°E - 175°E). The research activity was interrupted several times by violent action by anti-whaling groups. As a result, both sighting and sampling surveys in the Area V East were canceled and sampling survey in the Area IV East and Area V West was not fully completed. The results of the sighting survey showed that the sighting number of humpback whales was far greater than those of Antarctic minke whales in the Areas III and IV. On the other hand, Antarctic minke whale sighting was less than a half of that in the previous survey conducted in the same area in 2005/06. It was suggested that the increase and habitat expansion of humpback whales in those areas may affect the distribution of Antarctic minke whales in the Antarctic. A sighting and sampling survey in a polynya revealed that mature female Antarctic minke whales were concentrated within the polynya and that they were segregated from humpback whales which were distributed outside of the polynya. The results support the hypothesis that many Antarctic minke whales, especially mature females, are distributed in the ice free area beyond the ice edge where research vessels could not enter. For the improvement of the management of whales in the Antarctic, elucidation of the interactions between humpback and Antarctic minke whales related to habitat and prey and elucidation of the behavior of Antarctic minke whales in pack ice are necessary. A combination of lethal and non-lethal methods, such as comparison of results obtained from stomach content analysis and net sampling is important to elucidate the role of whales in the Antarctic ecosystem.

KEYWORDS: JARPA I, ANTARCTIC MINKE WHALES, HUMPBACK WHALES, POLYNYA, SCIENTIFIC PERMITS.

INTRODUCTION

The Japanese Whale Research Program under the Special Permit in the Antarctic (JARPA) was conducted between 1987/88 and 2004/05 austral summer seasons, under Article VIII of the International Convention for the Regulation of Whaling. The IWC Scientific Committee conducted an interim review of JARPA results in 1997 and the final review in 2006. In 2005, another JARPA review meeting called by the Government of Japan was also held. JARPA provided a wide variety of information on biological parameters of Antarctic minke whale (*Balaenoptera bonaerensis*) such as the natural mortality coefficient and changes over time in the age at sexual maturity as well as narrowing down the parameters of relevance for stock management. IWC recognized these results from JARPA have the potential to improve management of minke whales in the Southern Hemisphere (IWC, 1998, 2007). JARPA data also demonstrated that there were at least two Antarctic minke whale stocks in the research area, and that their geographical boundaries were different from those used by the IWC, i.e. 150°E -165°E was suggested (IWC, 2007). The review meeting in 2005 agreed that results from JARPA were consistent with the behavior to be expected for baleen whale populations competing for a dominant single food resource, krill. The meeting also agreed that the JARPA results provided clear support for the need to take species-interaction effects into account in understanding the dynamics of the baleen whale species in the Antarctic ecosystem, and predicting future trends in their abundance and population structure (Government of Japan, 2005).

Based on these considerations, the Government of Japan launched a new comprehensive study, the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II), which combined lethal and non-lethal methods, starting from the 2005/06 austral summer season. The first two seasons (2005/06 and 2006/07) were dedicated to feasibility studies. Evaluation of two feasibility studies concluded that the practicability and appropriateness of the planned sighting and sampling methods and design were adequate and could be used to cover the entire research area under normal conditions (Government of Japan, 2007), therefore Japan decided to execute the original plan of JARPA II.

The 2007/08 season was the first full-scale survey of JARPA II. JARPA II is a long-term research program with the following objectives; 1) Monitoring of the Antarctic ecosystem, 2) Modeling interaction among whale species and developing future management objectives, 3) Elucidation of temporal and spatial changes in stock structure and 4) Improving the management procedure for the Antarctic minke whale stocks. JARPA II focuses on Antarctic minke whale, humpback whale (*Megaptera novaeangliae*), fin whale (*B. physalus*) and possibly other species in the Antarctic ecosystem that are major predators of Antarctic krill.

This is a cruise report of the 2007/08 JARPA II. In this season, the survey area could not be covered completely and the number of whale sample was restricted because of violent obstruction from anti-whaling groups. However, most of other research items were completed and valuable data and samples were obtained.

RESEARCH METHODS

Research vessels

The research fleet was composed of two dedicated sighting vessels, three sighting and sampling vessels and one research base ship. Following vessels were used.

Dedicated sighting vessels (SVs)

| | |
|--------------------------------------|------------------------------------|
| | Kyoshin Maru No. 2 (KS2; 372 tons) |
| | Kaiko Maru (KK1; 860.25 tons) |
| Sighting and sampling vessels (SSVs) | |
| | Yushin Maru No. 1 (YS1; 720 tons) |
| | Yushin Maru No. 2 (YS2; 747 tons) |
| | Yushin Maru No. 3 (YS3; 742 tons) |
| Research base ship | |
| | Nisshin Maru (NM; 8,044 tons) |

Two SVs were dedicated to sighting survey, prey species survey, oceanographic survey and most of the various experiments. Three SSVs were engaged in sighting and sampling surveys. NM served as a research base on which all biological examinations of sampled whales were conducted.

Research area

The area to be covered by JARPA II is basically same as JARPA; the eastern part of Area III, Areas IV and V, and the western part of Area VI (35°E - 145°W), south of 60°S. The research area for 2007/08 JARPA II was western side of the whole research area, i.e. Area IIIE (35°E - 70°E), Area IVW (70°E - 100°E), Area IVE (100°E - 130°E), Area VW (130°E - 165°E) and a part of Area VE (165°E - 175°E). They were further divided into two strata, a south stratum extending from the ice edge to a locus 45 n. miles, and a north stratum extending from the northern boundary of the south stratum to the 60°S. The southern boundary of the West-south stratum in Area IV between 70°E and 80°E was fixed at 66°S and the Prydz Bay was defined as the southern area of this boundary. Fig.1 shows geographic location of the research area for the 2007/08 JARPAII survey. The SVs cover south of 60°S, whereas the SSVs cover south of 62°S (Government of Japan, 2005).

Survey track line design

The survey track line for the SVs consisted of two legs in the northern stratum at 5° longitudinal degree intervals and four legs in the southern stratum for 2°30' longitudinal degree intervals (Fig. 2). Two SVs alternately survey the northern and southern strata each crossing the track line at the veering point between two strata.

The survey track line for the SSVs consisted of a zigzag course changing direction at 2°30' or 1°40' longitudinal degree intervals. Three parallel track lines were set at 7 n. miles apart (Fig. 3). The two legs of track line for the northern stratum were set every six legs for southern stratum, in principle. The interval of legs and number of legs for the northern stratum could be changed by sub-area according to progress of the survey.

Sighting method

Sighting procedures followed the previous JARPA surveys (e.g. Nishiwaki *et al.* 1999, Ishikawa *et al.* 2000) in principle. The sighting survey using SSVs was conducted under limited closing mode (when a sighting of target species was made on the predetermined track line, the vessel approached the whales and species and school size were confirmed). Three SSVs advanced along parallel track lines at a standard speed of 11.5 knots.

The sighting survey of SVs was conducted under limited closing mode and passing mode (even if sighting was made on the predetermined track line, the vessel did not approach the whales directly and searching from the barrel was uninterrupted). Two SVs advanced at a standard speed of 10.5 knots.

Both SV and SSV survey were operated under the same optimal research conditions (when the wind speed was below 25 knots in the southern strata and 20 knots in the northern strata and visibility was more than 2.0 n. miles). In addition to the sightings of Antarctic minke whales and fin whales or whales suspected to be these species, the SVs and SSVs approached blue whales (*Balaenoptera musculus*) and southern right whales (*Eubalaena australis*) for conducting experiments. Humpback whales and other whales were also approached for conducting

experiments.

Low and middle latitudinal sighting survey (Non-lethal research)

During transit cruises, sighting surveys were conducted in the area between 30°S and 60°S outside of national EEZs. The results of these surveys are not shown in this report.

Non-lethal research and experiments

Sighting distance and angle experiment

This experiment was conducted in order to evaluate the accuracy of sighting distance and sighting angle given by observers on the SV and SSV in this cruise. Observers on each vessel were required to assess eight sets of angles and distance from two platforms (barrel and upper bridge). All trials were conducted under good sighting condition.

Photo-identification

The following species were targeted for photographic record of natural markings during the surveys conducted from the SVs; blue whales, humpback whales and southern right whales. Photographic records of these species were also occasionally taken from the SSVs.

Biopsy sampling

In addition to the species targeted for the photo-identification experiment, pygmy right whale (*Caperea marginata*), fin whale, sei whale (*B. borealis*), sperm whale (*Physeter macrocephalus*) and southern bottlenose whale (*Hyperoodon planifrons*) were targeted for biopsy skin sampling by the SVs and SSVs using a compound-crossbow. All samples collected were preserved at -80°C.

Prey species survey

Two SVs conducted hydro-acoustic surveys using a passive acoustic system (EK500 with operating frequencies at 38kHz, 120kHz, 200kHz, SIMRAD, Norway) to elucidate distribution and abundance of prey species of Antarctic baleen whales. KK1 conducted net sampling for prey species of whales. The IKMT was used for sampling of krill and the NORPAC net was used for amphipods.

Oceanographic survey

Two SVs conducted the following oceanographic survey; 1) consecutive measuring of surface water temperature, conductivity, surface chlorophyll, dissolved oxygen and surface particle by Electric Particle Counting and Sizing System (EPCS), 2) XCTD and CTD survey and 3) marine debris recording in the research area. All marine debris found in the stomach of whales taken was also recorded and collected on the NM. In addition to these surveys, KK1 deployed Argo profiling floats (profiling devices) to collect high quality oceanographic data of upper and middle layers of the world ocean simultaneously with very high space-time resolution. This was a cooperative study with Japan Marine Science and Technology Center (JAMSTEC) (See http://w3.jamstec.go.jp/ARGO/J_ARGOe.html).

Sampling and biological survey for whales (lethal research)

Three SSVs were engaged in the whale sampling survey. 850 Antarctic minke whales (with 10 % allowance) and 50 fin whales were planned to be taken in the research area south of 62°S. Although the original plan included 50 humpback whales (Government of Japan, 2005), Government of Japan decided to suspend the sampling of humpback whales.

One or two Antarctic minke whales were targeted randomly for sampling from each primary sighted school within 3 n. miles of each track line. The dwarf minke whale was not a target for sampling. The fin whale was also targeted randomly from each primary sighted school within 3 n. miles of each track line. However, target of fin whales was restricted to an estimated body length less than 20 m due to a limitation of the research base ship facility for dissection. Biological research on all sampled whales were conducted on the NM

RESULTS

Outline of the research activities

Table 1 shows an outline of the research activities. The research period in the 2007/08 JARPAII was 101 days from 15 December 2007 to 24 March 2008.

On 7 January, NM received GMDSS (Global Maritime Distress and Safety System) emergency call. Responding to the request from the RCC (Rescue Coordinate Center) Australia, NM engaged in rescue activity of injured crew on a fishing vessel. Unfortunately the crew deceased and we were released from the rescue operation on 8 January by the RCC Australia.

Following the rescue operation, the research activity was interrupted several times by violent actions from anti-whaling groups. A Greenpeace (GP) vessel stalked the research base ship (NM) from 11 to 26 January and obstructed refueling of NM on 22 January. A Sea Shepherd (SS) vessel attacked YS2 and two hoodlums intruded the vessel on 15 January. The SS vessel also attacked YS3 on 17 January. Although we continued moving to avoid collision with SS, we encountered SS on 23 February and the SS vessel stalked 7 days and attacked NM twice on 3 and 7 March.

An Australian patrol ship, Oceanic Viking (OV) stalked NM and three SSVs from 22 January to 12 February. Although OV never obstructed research activity directly, it often approached our vessels at abnormally close distance and our crew members were exposed to potential threats of ship collisions all the time.

Research activity was interrupted for a total of 31 days. As this resulted in a reduction of the number of research days, both sighting and sampling surveys in the Area VE were canceled. Furthermore, the sampling surveys in Area IVE and Area VW were restricted.

Developed ice edge covered the Prydz Bay throughout the research period and prevented the research vessels from entering into the Bay. Therefore both SVs and SSVs conducted limited surveys within a small area between 66°S and the ice edge covering the Prydz Bay (data was combined with that for the West-south stratum in the area IV).

Results of non-lethal survey

Sighting survey

The searching distances of the SVs and the SSVs are shown in Table 2. The searching effort on the predetermined track line is shown in Figs. 4 and 5. The total searching distance was 14,575.4 n. miles consisting of 8,029.2 n. miles for the two SVs and 6,546.2 n. miles for the three SSVs. Compared to the 2005/06 survey in the same research area, the searching distance for SVs and SSVs was 807 n. miles and 990.3 n. miles lower, respectively. This is because research activity was interrupted for a prolonged period of time as described above and because the research vessels could not enter the Prydz Bay due to the thick pack ice. Proportions for northern strata in the total searching distance were 54.4 % for SVs and 25.5 % for SSVs. Searching effort by SVs was almost equal in northern and southern strata.

Whale species sighted

Twelve species including six baleen whales and six toothed whales were identified during the research period. Table 3 shows the number of sightings for eight large whale species and Figs 6 and 7 show sighting position of humpback and Antarctic minke whales. Humpback whale was the most abundant species in the research area, followed by Antarctic minke whale. The number of sightings of humpback whales (1,433 schools and 2,753 individuals in total) was about 1.5 times of that of Antarctic minke whales (926 schools and 1,961 individuals) and was considerably higher than that of other species. Many sightings of southern right whales were made, whereas the number of sightings of fin whale was relatively low. Both Antarctic minke whale and humpback whales were widely distributed in the whole research area, but density of the distribution was different among each stratum. Table 4 shows density indices (DI, the number of primary sighted schools per 100 n. miles) and mean school size (MSS) of Antarctic minke, humpback and fin whales for two SVs. The DI of Antarctic minke whale was higher in the southern strata than that in northern strata and the highest in the West-south stratum in the Area V. However, the DI in the Area IV was relatively low in every stratum. On the other hand, the density of humpback whale was high in both the northern and southern strata except for the Area VW. The DI for humpback whale in each stratum of Area IV was 5.8 - 29.5 times of that for Antarctic minke whale.

Fig. 8 shows the sighting position of other large whales. More southern right whales and blue whales were sighted than that reported for previous seasons. Most sightings of southern right whales were made in the southern strata of the Area IV. The sightings of blue whales were concentrated in the Area IIIE. Distribution of fin whale was sparse in the research area and few fin whales were found in the Area IVE.

Photo-ID and biopsy sampling

Table 5 summarizes the results of the photo-identification experiment. A total of 75 individual blue, humpback and southern right whales were photographed. Table 6 summarizes results of biopsy sampling. A total of 32 biopsy samples were collected from blue, fin, humpback and southern right whales. One sample from a carcass of a sperm whale was also collected.

Prey species and oceanographic survey

Table 7 shows the summary of prey species and oceanographic surveys. The CTD casting was conducted at 90 locations at the same point as net sampling by KK1 and once a day by KS2. The XCTD casting was conducted at 98 locations at predetermined positions. EPCS collected data for 87 days by KS2 in total. KS2 and KK1 conducted the quantitative echo sounder survey for 171 days in the whole research area except for the Area VE. KK1 conducted IKMT and NORPAC net sampling 36 and 37 times, respectively. Fig. 9 shows an overview of the prey species and the oceanographic survey in the research area.

Survey for the marine debris

The marine debris survey was carried out concomitant with the sighting survey of the two SVs in the research area. A total of 32 debris items was recorded which consisted of 28 buoys or floats, one rope, one lump of Styrofoam, one drum can and an unidentified box object. Most of these items seemed to be fishing gear related.

Sighting distance and angle experiment

A sighting distance and angle experiment was performed on 30-31 December 2007 by three SSVs and on 2 and 5 January 2008 by KS2 and KK1, respectively. The results of this experiment will be used in calculation of abundance estimates.

Results of lethal survey

Sampling for Antarctic minke whales

Out of 501 schools (979 individuals) in the primary sightings of Antarctic minke whales by three SSVs, 473 schools (912 individuals) were targeted for sampling. A total of 551 individuals were sampled (229 from Area III, 222 from Area IVW, 13 from Area IVE and 87 from Area VW). Sampling efficiency (the rate of successful sampling for targeted individuals) was 86.2 % for solitary schools, 95.6 % for the first targeted individual from multitude schools and 54.0 % for the second targeted individual from the same schools. An explosive harpoon was used as the primary killing method for all whales collected. When the animal was not killed instantaneously, a large caliber rifle and/or the second harpoon was used immediately as the secondary killing method. No struck and lost case occurred.

Sampling for fin whales

Although 50 whales were planned for sampling, three SSVs made only nine primary sightings of fin whales. Sampling for these whales was not conducted due to inappropriate sea condition for safe transferring and flensing and/or practical reasons.

Biological research

Biological research was conducted on the research base ship for all whales sampled. Table 8 summarizes biological data and samples collected from the Antarctic minke whales.

Biological information of sampled whales

Table 9 shows the reproductive status of sampled Antarctic minke whales by stratum. Fig. 10 shows distribution of sighting position of sampled Antarctic minke whales by sex and sexually mature status. Mature females were dominant in the IVW-south and VW-south strata, whereas mature males were dominant in both north and south strata in the Area III. In the IVW-north stratum, both immature males and females were dominant. Pregnancy rate in mature females was 92.3 % (168 individuals) in the whole research area. Two cases of twins were observed. Three lactating females were sampled, though neither suckling calf was sampled nor observed.

Fig. 11 shows body length distribution of Antarctic minke whales sampled during the 2007/08 JARPA II survey. Maximum length of the sample was 10.18 m for females and 9.23 m for males. Minimum length was 5.13 m and 4.82 m for female and male, respectively. Maximum body length of immature animals was 8.82 m and 8.61 m for female and male, whereas minimum body length of mature animals was 7.93 m and 7.05 m for female and male, respectively.

By-products from the research

All whales were processed on NM after biological examination, according to the provisions of Article VIII of the Convention. A total of 1,983.7 tons of meat, blubber, viscera, etc. was produced.

DISCUSSIONS

The third cruise of JARPA II was planned as the first full-scale research after two feasibility research cruises (Government of Japan, 2005). As the Government of Japan decided to suspend sampling of 50 humpback whales, target species and numbers for lethal sampling were 850 ± 85 of Antarctic minke whales and 50 of fin whales.

However, preventing collisions with vessels of violent and obstructive groups and ensuring the safety of crew and vessels, resulted in a suspension of research activity for 31 days. Due to the reduction in the number of research days, sampling activity of SSVs was restricted and could not cover whole research area. As a result, the total number of samples was lower than for the 2005/06 feasibility study in which nearly the same area was surveyed (Nishiwaki *et al.*, 2006).

In spite of the restricted survey, the 2007/08 JARPAII cruise obtained many important results summarized as follows:

1) Total number of sightings of humpback whales was far higher than that of Antarctic minke whales in this season. They were found widely distributed in both the southern and northern strata especially in the Areas III E and IV. Drastic increases of humpback whale sightings in the Areas III E and IV had been repeatedly reported in scientific documents from JARPA (e.g. Ishikawa *et al.*, 2000, 2002, 2004). It was suggested that the population of humpback whales were recovering and expanding their distributions year by year. It was also suggested that the population increase and habitat expansion of humpback whales in the Area IV may lead to interactions with Antarctic minke whales (Ishikawa *et al.*, 2004, Matsuoka *et al.*, 2003, 2005, 2006.). The results of the sighting survey in this season strongly support these findings.

2) On the other hand, the total number of sightings for Antarctic minke whale was less than a half of that in the previous (2005/06) survey. DI for the SV (Table 4) was only 4.1 in the entire area, which was one third of that in the 2005/06 survey (Nishiwaki *et al.*, 2006). Antarctic minke whales were more abundant in the southern strata of Areas III E, IV W and V W, whereas they were infrequently found in the northern strata of the Area III E and whole of the Area IV E. It is likely that the lower sighting number and smaller DI for Antarctic minke whales in this season were caused by complicated pack ice in Area IV. The Prydz Bay in the area IV W, where a large number of Antarctic minke whale sightings was expected, was isolated by thick ice throughout the austral summer in the 2007/08 season. A large ice-free area (polynya) was observed in the Prydz Bay from December to February from satellite photographs and information from the National Snow and Ice Data Center (NSIDC), US. Furthermore, it was observed that a lot of medium and small sized polynya occurred and/or disappeared in the Area IV compared to other seasons. Similar ice conditions were observed in the 1997/98 JARPA when the sightings and estimated population of Antarctic minke whale in Area IV were lower than those in other seasons (Ishikawa *et al.*, 1998, Matsuoka *et al.*, 2006). It was suggested that many Antarctic minke whales, especially mature females, were distributed in the ice free area beyond the ice edge where research vessels could not enter (Ishikawa *et al.*, 1998, Ishikawa, 2003). It was also suggested that recent drastic expansion of humpback whale distribution may force Antarctic minke whales to move in the pack ice (Ishikawa *et al.*, 2004., Fujise *et al.*, 2006).

3) To confirm above hypotheses, we conducted a sampling survey in a polynya formed at the Davis Sea, an area of the sea along the coast between West Ice Shelf and the Shackleton Ice Shelf (89°E - 95°E). Although concentrated pack ice covered the area north of the Davis Sea, we entered the polynya when a randomly set track line met the thinnest pack ice. Distribution pattern of humpback whales outside (north) of the pack ice was clearly separated from that of Antarctic minke whales inside of the polynya (Fig. 12). Biological survey of sampled whales revealed that most of the Antarctic minke whales distributed inside the polynya were mature females. The result shows the important examples of (1) the species interaction affecting distribution areas of humpback whales and Antarctic minke whales, (2) close relation between ice condition and distribution (sighting number) of Antarctic minke whales, and (3) segregation of Antarctic minke whales by sex and sexual maturity. Many

Antarctic minke whales in this season must have been distributed in the Prydz Bay and polynya formed by complicated pack ice. Fig. 13 shows distribution pattern of Antarctic minke whales and humpback whales by latitude and water temperature. Although latitudinal distribution of the two species was overlapped between 64°S to 65°30' S, humpback whales were apparently distributed in areas with higher sea surface temperature than Antarctic minke whales and Antarctic minke whales tend to distribute in higher latitude areas with lower sea surface temperature. One of the reasons why Antarctic minke whales tend to concentrate in polynya regardless of possibility of mass die offs from being bottled up by thick ice might be that pregnant females need to enter icy water to avoid disturbance from humpback and other larger whales.

4) Fin whales were not collected, although 50 whales were planned for sampling. One of the reasons was interruptions of sampling activity of SSVs, another was low numbers of sightings of this species. Nine sightings of fin whales by SSVs were not targeted for sampling due to inappropriate sea conditions for safe transferring and flensing and/or practical reasons.

However, SVs sighted relatively more fin whales north of 62°S and a number of fin whales were sighted during the Low and Middle Latitudinal Sighting Survey conducted north of 60°S (data is not shown). Therefore, it seems that in this season, fin whales were distributed more in northern areas as compared to other seasons.

5) Of 551 samples of Antarctic minke whales, maturity rate for male and female was 71.4 % and 65.5 %, respectively. 92.3 % of mature females were pregnant, which indicated their robust reproductive potential. 174 immature whales were collected and biological examinations revealed that there were no pre-weaning individuals. Both the sighting and biological surveys have been carefully conducted for a long period since 1987/88 when JARPA started in the Antarctic. During this period, neither mother and calf pair of Antarctic minke whales was observed nor pre-weaning individual taken. Kasamatsu *et al.* (1988) reported only two sighting records of calves south of 60°S from Japanese scouting boat data during twenty years (1965/66-1985/86) and described that mother and calf of Antarctic minke whales did not normally migrate into Antarctic waters. We also conclude that Antarctic minke whales calves weaned before their first migration to the Antarctic and that mother and calf pair do not normally occur in the Antarctic during the austral summer season.

6) Two SVs succeeded in covering almost all of the research area and a full scale prey species survey and several oceanographic surveys as well as the sighting survey were conducted successfully. It is expected that estimation of consumption of prey species by whales in the Antarctic will become more accurate by combining the results of the acoustic and net sampling surveys by the SV and stomach contents study of whales by the NM.

Combination of lethal and non-lethal methods is necessary to elucidate the role of whales in the Antarctic ecosystem. Comparing the stomach contents and net samples is important to understand preference of whales for prey species. Combination of sighting and sampling survey data clearly showed inter and intra species segregated distribution. In this season, we found a concentrated distribution of pregnant females of Antarctic minke whales in the small polynya. Continuous expansion of the humpback whale distribution may increase the number of Antarctic minke whales in polynya. For the improvement of the management of whales in the Antarctic, elucidation of the interactions between humpback whales and Antarctic minke whales related to their habitat and prey and elucidation of the behavior of Antarctic minke whales in pack ice is necessary.

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Table1. Outline of the research activities. SV includes two sighting vessels (KS2 and KK1) and SSV includes three sighting and sampling vessels (YS1, YS2 and YS3). NM was operated with SSV in principle.

| EVENT | DATE | SVs | SSVs | REMARK |
|---|-----------------------------|-----|------|--------|
| Departure from Shogama port, Miyagi | 14 Nov. 2007 | ○ | | |
| Departure from Shimonezeki port, Yamaguchi | 18 Nov. 2007 | | ○ | |
| Low and middle latitudinal sighting survey in transit | 4 Dec. 2007 ~ 15 Dec. 2007 | ○ | ○ | |
| Start of the survey in the Antarctic | 15 Dec. 2007 | | ○ | |
| | 16 Dec. 2007 | ○ | | |
| Survey in the Area III E. (85 E - 70 E) | 15 Dec. 2007 ~ 7 Jan. 2008 | ○ | | |
| | 16 Dec. 2007 ~ 7 Jan. 2008 | | ○ | |
| Survey in the Area IV W. (70 E - 100 E) | 9 Jan. 2008 ~ 11 Jan. 2008 | | ○ | *1 |
| | 31 Jan. 2008 ~ 23 Feb. 2008 | | ○ | |
| | 7 Jan. 2008 ~ 13 Jan. 2008 | ○ | | *1 |
| Survey in the Area IV E. (100 E - 130 E) | 25 Feb. 2008 ~ 2 Mar. 2008 | | | |
| | 25 Feb. 2008 ~ 1 Mar. 2008 | | ○ | *2 |
| | 2 Mar. 2008 ~ 20 Mar. 2008 | ○ | | |
| Survey in the Area V W. (130 E - 165 E) | 26 Jan. 2008 ~ 18 Feb. 2008 | ○ | | |
| | 11 Mar. 2008 ~ 23 Mar. 2008 | | ○ | *2 |
| Survey in the Area V E. (165 E - 175 E) | - - - - - | | | *3 |
| Finish of the Survey in the Antarctic | 24 Mar. 2008 | ○ | ○ | |
| Low and middle latitudinal sighting survey in transit | 25 Mar. 2008 ~ 2 Apr. 2008 | ○ | ○ | |
| Arrival at Tokyo and Shimonezeki port | 14 Apr. 2008 ~ 16 Apr. 2008 | KS2 | ○ | |
| Arrival at Kagoshima port | 18 Apr. 2008 | KK1 | | |

*1) The survey was interrupted by the obstruction of the violent anti-whaling groups

*2) The survey effort was restricted by the obstruction of the violent anti-whaling groups

*3) The survey was cancelled by the obstruction of the violent anti-whaling groups

Table2. Searching distances (n. miles) of two sighting vessels (SVs) and three sighting / sampling vessels (SSVs) in each stratum.

| Area | Sector | Stratum | SVs | | | SSVs | Total |
|--------------|--------|---------|---------|---------|-----------|---------|---------|
| | | | Closing | Passing | sub-total | Closing | |
| III | East | North | 322.2 | 609.2 | 931.4 | 397.2 | 1328.6 |
| | | South | 241.7 | 884.4 | 1126.2 | 2161.2 | 3287.4 |
| IV | West | North | 281.7 | 677.2 | 958.9 | 956.6 | 1915.5 |
| | | South | 193.5 | 654.1 | 847.6 | 1920.9 | 2768.4 |
| V | East | North | 503.6 | 828.8 | 1332.4 | 312.5 | 1644.9 |
| | | South | 261.8 | 558.0 | 819.8 | 563.9 | 1383.7 |
| V | West | North | 280.9 | 867.3 | 1148.2 | 0.0 | 1148.2 |
| | | South | 149.9 | 715.0 | 864.9 | 233.9 | 1098.8 |
| Total | | | 2235.3 | 5793.9 | 8029.2 | 6546.2 | 14575.4 |

Table 3. Summary of whale sightings conducted by SV and SSVs in whole research areas.

| Vessels Type of the sightings Species | Sighting vessels | | | | Sighting and sampling vessels | | | | Total | | | |
|---|------------------|------|----------|------|-------------------------------|------|----------|------|---------|------|----------|------|
| | Primary | | Secondly | | Primary | | Secondly | | Primary | | Secondly | |
| | Sch. | Ind. | Sch. | Ind. | Sch. | Ind. | Sch. | Ind. | Sch. | Ind. | Sch. | Ind. |
| Blue whale | 29 | 55 | 2 | 2 | 14 | 29 | 4 | 6 | 43 | 84 | 6 | 8 |
| Fin whale | 39 | 91 | 9 | 23 | 9 | 43 | 3 | 15 | 48 | 134 | 12 | 38 |
| Sei whale | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 |
| Antarctic minke whale | 326 | 727 | 77 | 190 | 501 | 979 | 22 | 65 | 827 | 1706 | 99 | 255 |
| Like minke whale | 21 | 35 | 4 | 9 | 14 | 14 | 0 | 0 | 35 | 49 | 4 | 9 |
| Humpback whale | 796 | 1528 | 107 | 196 | 518 | 1008 | 12 | 21 | 1314 | 2536 | 119 | 217 |
| Southern right whale | 54 | 70 | 3 | 5 | 18 | 26 | 0 | 0 | 72 | 96 | 3 | 5 |
| Sperm whale | 181 | 181 | 11 | 11 | 99 | 99 | 4 | 4 | 280 | 280 | 15 | 15 |
| Southern bottlenose whale | 53 | 108 | 3 | 4 | 27 | 52 | 1 | 4 | 80 | 160 | 4 | 8 |
| Unidentified baleen whales | 133 | 229 | 16 | 23 | 3 | 15 | 3 | 5 | 136 | 244 | 19 | 28 |
| Unidentified cetacean | 21 | 118 | 1 | 20 | 60 | 60 | 0 | 0 | 81 | 178 | 1 | 20 |

Table 4. Density indices (DI, the number of primary sighted schools per 100 n. miles) and mean school size (MSS) of Antarctic minke whale, humpback whale and fin whale by two SVs.

| Area Sector Stratum | Antarctic minke whale | | | | Humpback whale | | | | Fin whale | | | | |
|---------------------|-----------------------|------------|------------|------------|----------------|-------------|------------|------------|-----------|-----------|------------|------------|-----|
| | Sch. | Ind. | DI | MSS | Sch. | Ind. | DI | MSS | Sch. | Ind. | DI | MSS | |
| III East | North | 11 | 14 | 1.2 | 1.3 | 87 | 195 | 9.3 | 2.2 | 4 | 8 | 0.4 | 2.0 |
| | South | 57 | 89 | 5.1 | 1.6 | 84 | 150 | 7.5 | 1.8 | 7 | 24 | 0.6 | 3.4 |
| IV West | North | 26 | 34 | 2.7 | 1.3 | 159 | 307 | 16.6 | 1.9 | 10 | 26 | 1.0 | 2.6 |
| | South | 33 | 78 | 3.9 | 2.4 | 244 | 471 | 28.8 | 1.9 | 1 | 2 | 0.1 | 2.0 |
| V East | North | 2 | 2 | 0.2 | 1.0 | 78 | 147 | 5.9 | 1.9 | 1 | 1 | 0.1 | 1.0 |
| | South | 15 | 39 | 1.8 | 2.6 | 85 | 159 | 10.4 | 1.9 | 0 | 0 | 0.0 | 0.0 |
| V West | North | 45 | 172 | 3.9 | 3.8 | 44 | 79 | 3.8 | 1.8 | 16 | 30 | 1.4 | 1.9 |
| | South | 137 | 299 | 15.8 | 2.2 | 15 | 20 | 1.7 | 1.3 | 0 | 0 | 0.0 | 0.0 |
| Total | 326 | 727 | 4.1 | 2.2 | 796 | 1528 | 9.9 | 1.9 | 39 | 91 | 0.5 | 2.3 | |

Table 5. Summary of Photo-ID conducted during 2007/08 JARPAII.

| Species | Stratum | | | | | | | | Total |
|----------------------|----------|-----------|----------|-----------|----------|-----------|----------|----------|-----------|
| | Area III | | Area IV | | | | Area V | | |
| | East | South | East | South | West | South | West | South | |
| Blue whale | 1 | 21 | 0 | 0 | 0 | 1 | 0 | 0 | 23 |
| Humpback whale | 3 | 0 | 2 | 4 | 0 | 7 | 0 | 0 | 16 |
| Southern right whale | 0 | 0 | 4 | 18 | 0 | 11 | 0 | 3 | 36 |
| Total | 4 | 21 | 6 | 22 | 0 | 19 | 0 | 3 | 75 |

Table 6. Summary of biopsy conducted during 2007/08 JARPAII.

| Species | Stratum | | | | | | | | Total |
|-----------------------|----------|----------|----------|----------|----------|-----------|----------|----------|-----------|
| | Area III | | Area IV | | | | Area V | | |
| | East | South | East | South | West | South | West | South | |
| Blue whale | 0 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 5 |
| Fin whale | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Humpback whale | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 5 |
| Southern right whale | 0 | 0 | 1 | 4 | 0 | 11 | 0 | 2 | 18 |
| Sperm whale (Carcass) | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 1 | 7 | 2 | 4 | 0 | 16 | 0 | 2 | 32 |

Table 7. Summary of oceanographic survey, acoustic survey and plankton net sampling conducted during 2007/08

| JARPAII | | | CTD (stations) | | XCTD (stations) | | EPCS (days) | Quantitative echo sounder (days) | | IKMT (stations) | NORPAC-Net (stations) |
|----------|------|-------|----------------|-----|-----------------|-----|-------------|----------------------------------|-----|-----------------|-----------------------|
| Vessels | | | KS2 | KK1 | KS2 | KK1 | KS2 | KS2 | KK1 | KK1 | KK1 |
| Area III | East | North | 9 | 7 | 11 | 3 | 14 | 14 | 10 | 7 | 7 |
| | | South | 10 | 5 | 2 | 1 | 11 | 11 | 8 | 5 | 5 |
| Stratum | East | North | 6 | 5 | 6 | 7 | 10 | 10 | 10 | 4 | 5 |
| | | South | 5 | 3 | 2 | 3 | 10 | 10 | 11 | 3 | 3 |
| Area IV | West | North | 6 | 2 | 7 | 13 | 10 | 10 | 10 | 2 | 2 |
| | | South | 2 | 4 | 2 | 9 | 6 | 6 | 14 | 4 | 4 |
| Area V | West | North | 11 | 7 | 14 | 11 | 14 | 14 | 11 | 7 | 7 |
| | | South | 4 | 4 | 4 | 3 | 12 | 12 | 10 | 4 | 4 |
| Total | | | 53 | 37 | 48 | 50 | 87 | 87 | 84 | 36 | 37 |

Table 8. Summary of biological data and samples collected from Antarctic minke whales.

| Samples and data | Number of whales | | |
|---|------------------|--------|-------|
| | Male | Female | Total |
| Photographic record of external character | 273 | 278 | 551 |
| Body length and sex identification | 273 | 278 | 551 |
| Measurement of external body proportion | 273 | 278 | 551 |
| Body weight | 63 | 38 | 101 |
| Body weight by total weight of parts | 19 | 13 | 32 |
| Skull measurement (length and breadth) | 263 | 269 | 532 |
| Standard measurement of blubber thickness (two points) | 273 | 278 | 551 |
| Observation of lactation status | - | 278 | 278 |
| Measurement of mammary gland | - | 278 | 278 |
| Testis weight | 273 | - | 273 |
| Weight of stomach content | 273 | 278 | 551 |
| Diatom film observation | 273 | 278 | 551 |
| Blood plasma for physiological study | 272 | 278 | 550 |
| Earplug for age determination | 273 | 278 | 551 |
| Ocular lens for age determination | 89 | 98 | 187 |
| Tympanic bulla for chemical analysis | 33 | 22 | 55 |
| Largest baleen plate for chemical analysis | 272 | 278 | 550 |
| Vertebral epiphyses for biological study | 222 | 223 | 445 |
| Observation and collection of ovary | - | 278 | 278 |
| Histological sample of endometrium | - | 14 | 14 |
| Histological sample of mammary gland | - | 278 | 278 |
| Milk sample for chemical study | - | 1 | 1 |
| Histological sample of testis | 273 | - | 273 |
| Skin and liver tissues for genetic study | 273 | 278 | 551 |
| Blubber, muscle and liver tissues for environmental monitoring | 273 | 278 | 551 |
| Lung and liver tissues for environmental monitoring | 21 | 21 | 42 |
| Gross pathological observation (thyroid, lung, stomach and gonad) | 273 | 278 | 551 |
| Tissues for histopathological study | 34 | 33 | 67 |
| Tissues for various study (muscle, blubber) | 3 | 3 | 6 |
| Tissues for nutrient study (muscle, blubber, ventral groove) | 0 | 1 | 1 |
| Stomach contents for food and feeding study | 24 | 22 | 46 |
| Stomach contents for environmental monitoring | 10 | 12 | 22 |
| External parasites | 3 | 3 | 6 |
| Internal parasites | 2 | 0 | 2 |
| Photographic record of fetus | 82 | 85 | 170* |
| Fetal length and weight | 82 | 85 | 170* |
| Collection of small fetus | - | - | 3* |
| Fetal ocular lens for age determination | 28 | 27 | 55 |
| Fetal skin for genetic study | 82 | 85 | 170* |
| Fetus for embryological study | 3 | 3 | 6 |
| Cyanid for phylogenetic study | 1 | 2 | 3 |

*including fetus of sex unidentified.

Table 9. Reproductive status of Antarctic minke whales sampled in 2007/08 JARPAII. Numbers in percentage represent ratio of samples in each stratum. Maturity of males was tentatively defined by testis weight according to Kato (1986). "Resting" represents non-pregnant mature female without corpus luteum.

| Area Sector Stratum | Male | | | Female | | | | | | Total | Combined | |
|---------------------|----------|--------|-------|----------|-------------|---------|--------------|-----------|---------|-------|----------|-----|
| | Immature | Mature | Total | Immature | No-pregnant | | Pregnant | | Unknown | | | |
| | | | | | Lactating | Resting | No Lactating | Lactating | | | | |
| III East | North | 7 | 13 | 20 | 6 | 0 | 0 | 1 | 1 | 0 | 8 | 28 |
| | South | 36 | 94 | 130 | 41 | 1 | 1 | 26 | 1 | 1 | 71 | 201 |
| IV West | North | 15 | 13 | 28 | 15 | 0 | 0 | 3 | 0 | 0 | 18 | 46 |
| | South | 15 | 41 | 56 | 28 | 0 | 7 | 85 | 0 | 0 | 120 | 178 |
| IV East | North | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | South | 4 | 6 | 10 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 13 |
| V West | North | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | South | 1 | 28 | 29 | 6 | 0 | 4 | 48 | 0 | 0 | 58 | 87 |
| Combined | | 78 | 195 | 273 | 96 | 1 | 12 | 166 | 2 | 1 | 278 | 551 |
| | | 14.2% | 35.4% | 49.5% | 17.4% | 0.2% | 2.2% | 30.1% | 0.4% | 0.2% | 50.5% | |

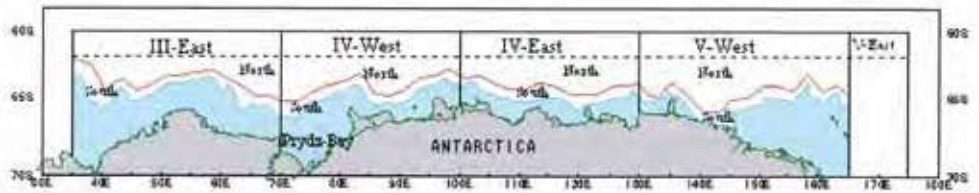


Fig. 1. Geographic location of the research area of 2007/08 JARPA II. A solid line represents a border between northern and southern strata.

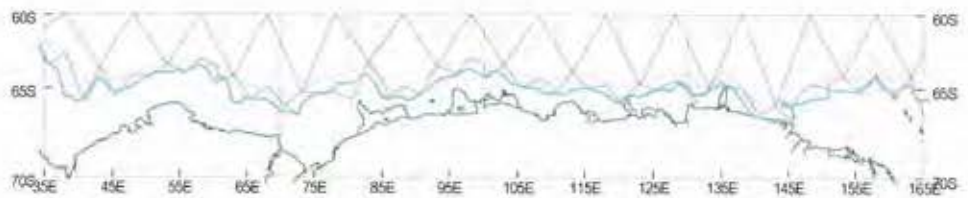


Fig. 2. Predetermined survey track lines of two sighting vessels (SVs) in 2007/08 JARPA II. A solid line (red) represents a border between northern and southern strata. A bold line (blue) represents the ice edge line. The ice edge line was estimated by direct observation of research vessels and the information from near real time DMSP SSM / I daily polar gridded sea ice concentration data set available from the National Snow and Ice Data Center (NSIDC, Cavalieri *et al.* 1999), US.

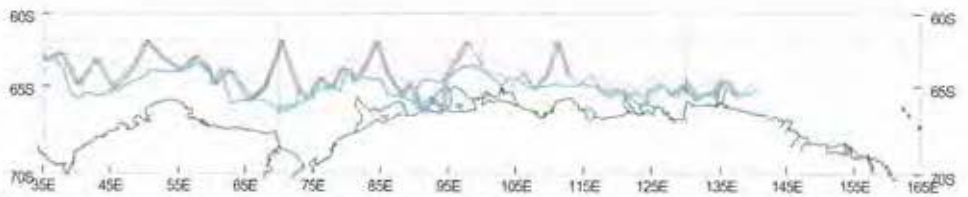


Fig. 3. Predetermined survey track lines of three sighting and sampling vessels (SSVs) in 2007/08 JARPA II. A single track line represents the track line which was planned but cancelled because of shortage of the research period. Elements in the map are referred to Fig. 2.

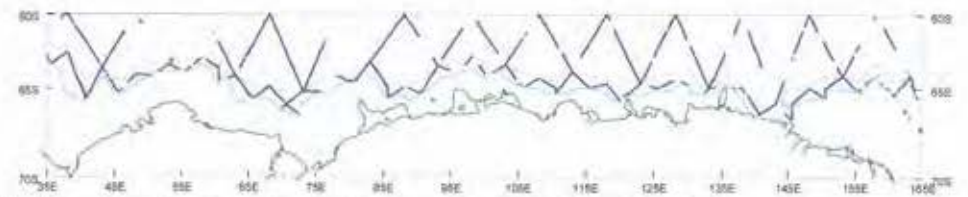


Fig. 4. Searching effort on the predetermined track lines of two SVs in 2007/08 JARPA II. Elements in the map are referred to Fig. 2.

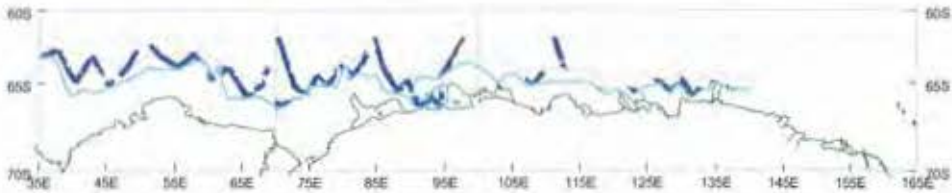


Fig. 5. Searching effort on the predetermined track lines of three SSVs in 2007/08 JARPAII. Elements in the map are referred to Fig. 2.

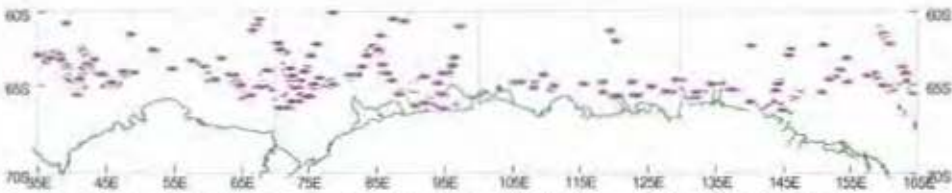


Fig. 6. Distribution of all sightings of Antarctic minke whales sighted by SVs and SSVs in 2007/08 JARPAII.

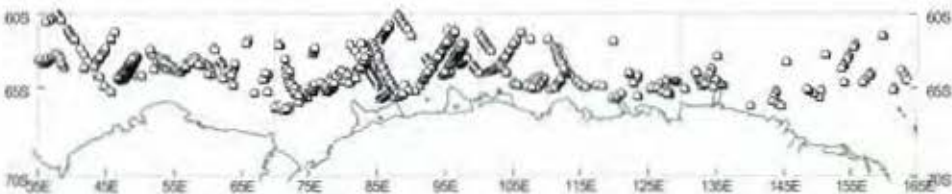


Fig. 7. Distribution of all sightings of humpback whales sighted by SVs and SSVs in 2007/08 JARPAII.

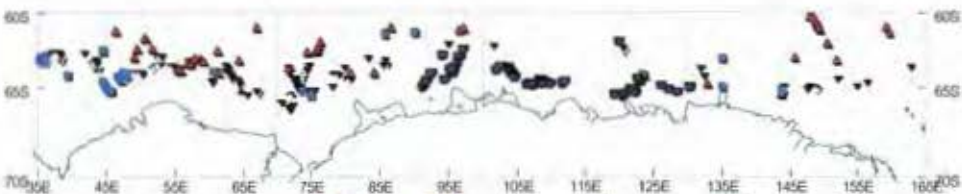


Fig. 8. Distribution of all sightings of fin (▲), blue (■), Southern right (●) and sperm (▼) whales sighted by SVs and SSVs in 2007/08 JARPAII.

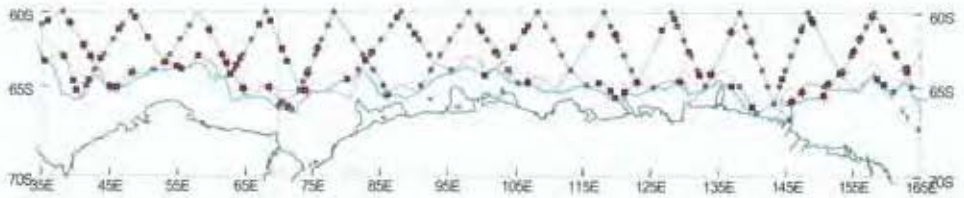


Fig. 9. Geographical localities of NORPAC and IKMT (+) sampling and CTD (■) and XCTD (◆) casting conducted by two SVs during 2007/08 JARPAII.



Fig. 10. Distribution of sampled Antarctic minke whales by sex and sexual maturity status in 2007/08 JARPAII.

■: Mature male, ◆: Immature male, ▲: Mature female and ▲: Immature female

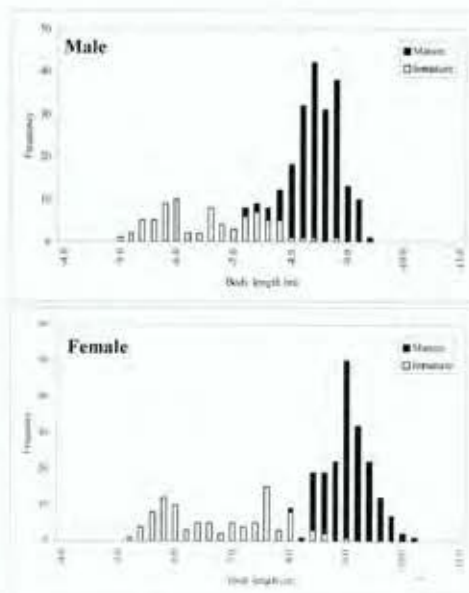


Fig. 11. Body length distribution of Antarctic minke whales sampled during 2007/08 JARPA II survey.

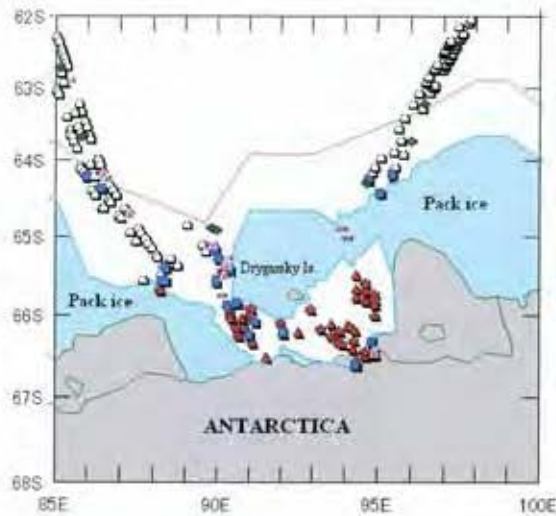


Fig. 12. Segregated distribution between Antarctic minke whales and humpback whales in the Davis Sea. Humpback whale (\bigcirc) was dominant north of pack ice that covered the Davis Sea, whereas Antarctic minke whales was concentrated in a polynya formed by the pack ice and most of them were matured female. Sexual maturity of the Antarctic minke whale was represented as follows; matured female \blacktriangle , matured male \blacksquare , immature female \triangle , immature male \blacklozenge , unknown (only sighted) \circ .

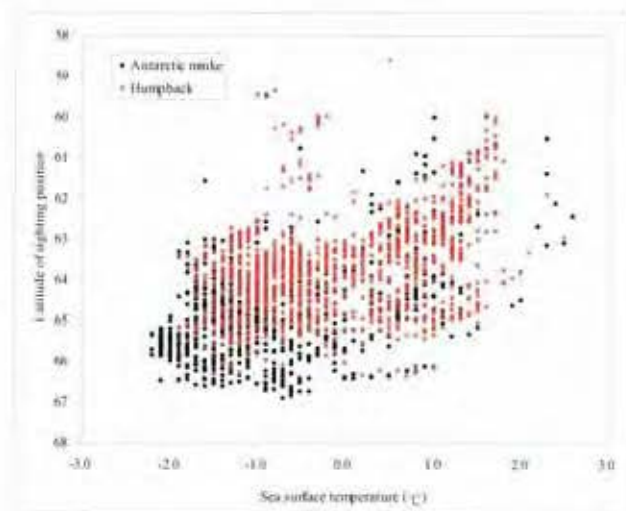


Fig. 13. Relationship between latitude of sighting position and sea surface temperature of Antarctic minke and humpback whales.

Annex 60: Nishiwaki, Shigetoshi et al, *Cruise Report of the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) in 2008/2009, SC/61/O3*

SC / 61 / O3

Cruise Report of the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) in 2008/2009

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KEYWORDS: ANTARCTIC MINKE WHALES; FIN WHALES; HUMPBACK WHALES; BALÆEN WHALES; ANTARCTIC; SOUTHERN HEMISPHERE; SCIENTIFIC PERMITS

ABSTRACT

During the 2008/09 austral summer season, the Second Phase of the Japanese Whale Research Program under the Special Permit in the Antarctic (JARPA II) was conducted following the full-scale research plan. Two dedicated sighting vessels (SVs), three sighting and sampling vessels (SSVs) and one research base ship were engaged in the research for 103 days from 10 December 2008 to 22 March 2009 in the Area V (130°E -170°W) and western part of Area VI (170°W - 145°W). The total searching distance was 14,351.45 n.miles and the following species were sighted: Antarctic minke, blue, fin, sei, humpback, southern right, sperm and southern bottlenose whales. The Antarctic minke whale 1,973 schools (4,883 individuals) were the dominant species. Out of 700 schools (1,553 individuals) in the primary sightings of Antarctic minke whales by SSVs, 642 schools (1,339 individuals) were targeted for sampling. A total of 679 individuals was sampled. Out of 34 schools (111 individuals) in the primary sightings of fin whales by SSVs, 1 school (1 individual) was targeted and sampled. The body length of this fin whale was 14.79m (immature female). Photo-id experiments were conducted on blue and humpback whales and a total of 50 animals was photographed. A total of 14 skin biopsy samples was collected from fin and humpback whales. EPCS (Electric Particle Counting and Sizing System) survey was conducted for 83 days by SV. SVs conducted the quantitative echo sounder survey for 164 days and IKMT and NORPAC net sampling 46 and 46 times, respectively in the whole research area. CTD and XCTD castings were conducted at 160 and 43 locations, respectively. The main results of the survey were as follows: 1) Whale composition in the research area was stable compared to previous surveys. Antarctic minke whale was dominant, humpback was second and fin whale was third. 2) The ice-free extent of the Ross Sea was substantially larger than in past seasons. High density areas of Antarctic minke whales were observed in the Ross Sea and Area VI West. The Density index of this species was higher than the latest two surveys, 3) Mature male of Antarctic minke was dominant in Area VI West which was surveyed for the first time in January, which contrast with the Ross sea, 4) fin whales were widely distributed in the northern and southern strata and large schools were observed in Area V. Stomach content of fin whales sampled was 300 kg of krills, 5) Humpback whales were widely distributed in the research area and density index was higher than the last survey. The research activity in part of Areas V and VI West was interrupted several times by violent actions of an anti-whaling group over 16 days.

INTRODUCTION

The Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) was conducted between 1987/88 and 2004/05 austral summer seasons, under Article VIII of the International Convention for the Regulation of Whaling. JARPA provided a wide variety of information on biological parameters of Antarctic minke whale (*Balaenoptera bonaerensis*) such as the natural mortality coefficient and changes over time in the age at maturity as well as narrowing down the parameters of relevance for stock management (IWC, 1998, Anonymous, 2005). JARPA also elucidated that there were at least two stocks of Antarctic minke whales in the research area but their geographical boundaries were different from those used for the IWC Areas (Pastene, 2006). Further, JARPA found that pollutant concentration in whale's tissues, such as heavy metals and PCBs, was extremely low (Yasunaga *et al.*, 2006). JARPA has thus successfully obtained data related to the initially proposed objectives (IWC, 2008).

Based on these considerations, the Government of Japan launched a new comprehensive study under the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II), combining lethal and non-lethal methods, starting from the 2005/2006 austral summer season. The research plan for the JARPA II was presented to the 2005 meeting of the IWC/SC. The research methods for the JARPA II are basically the same as the previous JARPA with some modifications. The program involves both non-lethal research techniques such as sighting surveys, biopsy sampling, acoustic surveys for prey species and the collection of oceanographic data, and lethal sampling since collection of certain information, of vital importance to the overall study, requires examination of internal organs such as ovaries, earplugs and stomachs. The first two seasons (2005/2006 and 2006/2007) were dedicated to feasibility studies. Evaluation of two feasibility studies concluded that the practicability and appropriateness of the planned sighting and sampling methods were adequate and could be used to cover the entire research area under normal conditions (Government of Japan, 2007). Therefore Japan decided to execute the original plan of JARPA II. A comprehensive review will be conducted following completion of the first 6 years of the research (Government of Japan, 2005).

The full-scale JARPA II started from the 2007/08 season. It is a long-term research program with the following objectives: 1) Monitoring of the Antarctic ecosystem, 2) Modeling interaction among whale species and developing future management objectives, 3) Elucidation of temporal and spatial changes in stock structure and 4) Improving the management procedure for the Antarctic minke whale stocks. JARPA II focuses on Antarctic minke whale (*Balaenoptera bonaerensis*), humpback whale (*Megaptera novaeangliae*), fin whale (*B. physalus*) and possibly other species in the Antarctic ecosystem that are major predators of Antarctic krill. Annual sample sizes for the full-scale research (lethal sampling) are 850 (with 10% of allowance) Antarctic minke whales (Eastern Indian Ocean and Western South Pacific Stocks), 50 humpback whales (D and E-Stocks) and 50 fin whales (Indian Ocean and the Western South Pacific Stocks). During the feasibility study, the annual sample size was 850±10% Antarctic minke and ten fin whales. Humpback whales are not sampled during the feasibility study. This is a cruise report of the 2008/09 JARPA II. During this season, as was the case last year, the survey area could not be covered completely and the number of whale sample was reduced as a result of the violent actions of an anti-whaling group over 16 days. However, most of other research items were completed and valuable data and samples were obtained.

RESEARCH METHODS

Research vessels

The research fleet was composed of two dedicated sighting vessels, three sighting and sampling vessels and one research base ship. Following vessels were used.

Research base ship

Nisshin-Maru (NM; 8,044 tons)

Dedicated sighting vessels (SVs)*Kyoshin-Maru No. 2* (KS2; 372 tons)*Kaiko-Maru* (KK1; 860.25 tons)**Sighting and sampling vessels (SSVs)***Yushin-Maru* (YS1; 720 tons)*Yushin-Maru No.2* (YS2; 747 tons)*Yushin-Maru No.3* (YS3; 742 tons)

Two SVs were dedicated to the sighting survey, prey species survey, oceanographic survey and most of the various experiments. Three SSVs were engaged in sighting and sampling surveys. NM served as a research base on which all biological examinations of sampled whales were conducted.

Research area and ice edge

The area covered by JARPA II is basically same as JARPA; the eastern part of Area III, Areas IV and V, and the western part of Area VI (35°E - 145°W), south of 60°S. In this season, JARPA II surveyed the Eastern Indian Ocean Stock and the Western South Pacific Ocean Stock of Antarctic minke whales (Pastene, 2006) in a longitudinal span of 85° on the eastern side of the JARPA II research area (130°E - 145°W). Figure.1 shows geographic location of the research area for the 2008/2009 JARPAII survey.

For this survey, our best estimate of the position of the ice edge was based on our visual and radar observations of the ice edge as well as satellite predictions. The satellite predictions were from near real time DMSP SSM/I daily polar gridded sea ice concentration data set available from the National Snow and Ice Data Center (NSIDC, Cavalieri *et al.* 1999). In this season, the ice-free extent of the Ross Sea was substantially larger than previous surveys (See Appendix A).

Survey track line design

The survey track line for the SVs consisted of two legs in the northern stratum at 5° longitudinal degree intervals and four legs in the southern stratum for 2°30' longitudinal degree intervals. Two SVs alternately survey the northern and southern strata each crossing the track line at the veering point between two strata. The survey track line for the SSVs consisted of a zigzag course changing direction at 2°30' or 1°40' longitudinal degree intervals. Three parallel track lines were set at 7 n. miles apart. The two legs of track line for the northern stratum were set every six legs for the southern stratum, in principle. The interval of legs and number of legs for the northern stratum could be changed by sub-area according to progress of the survey. However, in this season, due to the interference the SSVs canceled the research in the northern part of Areas V and VIW.

The longitudinal interval and number of the survey track line in the sub-research area

The longitudinal interval and number of teeth in the unit of survey track line in each sub-research area were as follows:

1) The western part of Area V (including west of 170°E in the eastern part of Area V)

The research area was south of 60°S and from 170°E to 130°E. The starting points of SVs were at 130°E. The survey track line was set zigzag in north and south to eastward. The longitudinal interval of one leg of survey track line was 1°40' for SSVs in south strata, and 5° in north stratum and 2°30' in south stratum for SVs. SVs surveyed in order of one tooth (two legs) in the north stratum and two teeth (four legs) in the south stratum.

2) The western part of Area VI

The research area was south of 60°S and from 145°W to 170°W. The starting points of the SVs and SSVs were

at 145°W. The survey track line was set zigzag in north and south to westward. The longitudinal interval of one leg of survey track line was 1° 40' for the SSVs in south strata, and 5° in north stratum and 2°30' of south stratum for the SVs. SVs surveyed in order of one tooth (two legs) in the north stratum and two teeth (four legs) in the south stratum.

3) The eastern part of Area V

East-North stratum

The research area ranged from 60°S to 69°S and from 170°W to 170°E. The starting points of the SVs were at 170°W. The survey track line was set zigzag in north and south to westward between 170°W to 170°E. The longitudinal interval of each tooth (two legs) of the survey track line was 5° for SVs. In the range between 170°E and 165°E, the same design of survey track line was continued from that of the western part of Area V.

East-South stratum (Ross Sea)

The research area was south of 69°S between 165°E to 170°W (including west of 165°E and east of 170°W in the inner part of the Ross Sea). The starting and ending points of SVs and SSVs were at 69°S. The survey track line was set zigzag in north and south to westward or eastward in the Ross Sea. The longitudinal interval of the survey track line for SSVs and SVs was 10°. The start point of the longitudinal line in the survey track line was set by the random selection. This longitudinal interval of survey track line was adjusted corresponding to the ice edge line which changed remarkably through the research period.

Sighting method

Sighting procedures were the same as in the previous JARPA surveys (Nishiwaki *et al.* 1999, Ishikawa *et al.* 2000). The sighting surveys by SSVs were conducted under limited closing mode (when a sighting of Antarctic minke and fin whales were made on the predetermined track line, the vessel approached the whales and confirmed species and school size). Three SSVs advanced along parallel track lines 7 n.miles apart, at a standard speed of 11.5 knots. The sighting surveys by SVs were conducted under limited closing mode and passing mode (even if sighting was made on the predetermined track line, the vessel did not approach the whales directly and searching from the barrel was uninterrupted) at a standard speed of 10.5 knots.

The survey was operated under optimal research conditions (i.e., the wind speed below 25 knot in the south strata and 20 knot in the north strata, and visibility further than 1.5 n.miles). In addition to the sighting of Antarctic minke and fin whales or whales suspected to be those species, the SVs approached blue (*B. musculus*), humpback, southern right (*Eubalaena australis*), pigmy right (*Caperea marginata*), sei (*B. borealis*), sperm (*Physeter macrocephalus*) and southern bottlenose (*Hyperoodon planifrons*) whales for conducting some experiments. The SSVs also approached the same whale species for experiments while they engaged in sighting survey.

Sampling method

Three SSVs were engaged in sampling survey. Sampling of 850 Antarctic minke whales (with 10 % allowance) and 50 fin whales was planned in the research area south of 62°S. One to two Antarctic minke whales were sampled randomly from each primary sighted school within 3 n.miles of the track line. The dwarf form minke whales were not a target for sampling. Sampling of fin whales was restricted to those animals with an estimated body length less than 18m due to the limitation of NM facility for pulling up the animal onboard. One fin whale smaller than 18m was sampled from each primary sighted school within 3 n.miles of the track line. If two or more animals smaller than 18m were found in the single school, then only one of them was randomly selected.

Low and middle latitudinal sighting survey

During transit, sighting surveys were conducted in the area between 30°S and 60°S except for the areas within national EEZs. The results of these surveys are not shown in this report.

Biological research

Most of the biological research methods used in this JARPA II survey were developed and improved during the JARPA I 18 year research period. Biological research including scaling body weight on all sampled whales was conducted on the NM.

Experiments**Sighting distance and angle experiment**

This experiment was conducted in order to evaluate the accuracy of the information on sighting distance and sighting angle given by observers of the SVs and SSVs.

Photo-identification experiment

The following species were targeted for photographic record of natural markings by SVs and SSVs: blue, humpback and southern right whales.

Biopsy sampling

In addition to the species targeted for the photo-identification experiment, pygmy right, fin, sei, sperm, southern bottlenose whales were targeted for biopsy skin sampling by the SVs and SSVs using compound-crossbows. All collected sample were preserved at -80°C.

Satellite tagging

The YS1 and the YS2 attempted satellite tag attachment on Antarctic minke and humpback whales.

Preliminary prey species survey

Prey species (krill) samples were collected using the Isaacs-Kidd Mid water trawl (IKMT) on the KK1.

Oceanographic and acoustic survey

SVs and SSVs conducted the following oceanographic surveys.

- 1) Consecutive measurements of surface temperature, conductivity, surface chlorophyll, dissolved oxygen, surface particle using the Electric Particle Counting and Sizing System (EPCS) on KS2.
- 2) XCTD and CTD casting by KK1 and KS2.
- 3) Record of marine debris in the research area by KK1 and KS2. In addition all marine debris found in the stomach of Antarctic minke whales was recorded on NM.
- 4) Hydro-acoustic survey using a scientific echo sounder (EK500 with operating frequencies at 38kHz, 120kHz, 200kHz, SIMRAD, Norway) to study distribution and abundance of prey species of baleen whales. Hydro-acoustic survey was conducted by KS2 and KK1 along sighting survey through the whole research area.

In addition to these surveys, KK1 deployed Argo profiling floats (profiling devices) to collect high quality oceanographic data of upper and middle layers of the world ocean simultaneously with very high space-time resolution. This was done in cooperation with Japan Marine Science and Technology Center (JAMSTEC) (See http://w3.jamstec.go.jp/ARGO/J_ARGOe.html).

RESULTS**Outline of the cruise**

SVs departed from Shioyama (Japan) on 14 November and started Antarctic sighting survey in the research area on 10 December. SSVs and NM departed from Shimonoseki and Inuoshima, respectively on 17 November and started Antarctic sighting and sampling surveys in the research area on 10 December.

The Antarctic research period of this cruise was 103 days from 10 December 2008 to 22 March 2009. The research activity was interrupted for 10 days due to violent interference by the Sea Shepherd. Due to this

interference SSVs canceled the research in the northern part of Areas V and VIW and a part of the Ross Sea.

SV (KS2) arrived at Tokyo on 7 April. And SV (KK1) arrived at Shioyama on 9 April. SSVs and NM arrived at Shimonoseki on 13 April and 14 April, respectively.

Results of non-lethal survey

Sighting survey and whale species sighted

The total searching distances were 14,351.45 n.miles consisting of 7,621.76 n.miles for the two SVs and 6,729.69 n.miles for the three SSVs. Ten species were identified during the research period. Table 1 shows the number of sightings during the survey. The following six species of baleen whales were confirmed; Antarctic minke, blue, fin, sei, humpback and southern right whales, and two toothed whale species were confirmed; sperm, southern bottlenose whales (Table 1).

Antarctic minke whales were the most abundant species in the whole research area. The number of total sightings of Antarctic minke whales by five research vessels was 1,973 schools (4,883 individuals). In addition 418 schools (735 individuals) of humpback whales, 122 schools (491 individuals) of fin whales, 77 schools (91 individuals) of sperm whales, 32 schools (61 individuals) of southern bottlenose whales, 15 schools (30 individuals) of blue whales, 5 schools (7 individuals) of sei whales and one school (one individual) of southern right whale were observed.

Geographical distribution, density index (DI) and mean school size (MSS)

1) Antarctic minke whales

The distribution of sightings of the Antarctic minke whales by SVs is shown in Figure 2. They were widely distributed throughout the entire research area. A high concentration area was confirmed in the East-South stratum (Ross Sea) and Western part of Area VI. Table 2 shows density indices (DI; number of schools sighted/ 100 n.miles searching distance) and mean school size (MSS) of two SV's primary sightings of this species by stratum. For the whole research area, DI and MSS for SVs were 15.35 and 2.66, respectively (Table 2).

2) Fin whales

Fin whales were widely distributed throughout the whole research area except south of 69° S. A high concentration area was confirmed between 140° and 165°E, and 180°-150°W (Figure 3). In the western part of Area V, they were sighted near the ice edge. Large schools (35 individuals and 55 individuals) were observed in East-North and West-South stratum in Area V. For the whole research area, DI and MSS for SVs were 0.98 and 4.39, respectively. The DI of the West-South stratum in Area V was high (2.51) compare to other strata (Table 2).

3) Humpback whales

Humpback whales were widely distributed throughout the whole research area except south of 70° S. A high concentration area was confirmed between 130°E and 140°E, and 160°E-170°E in the western part of Area V (Figure 3). These sightings overlapped with those of Antarctic minke whales but humpback whales were rarely observed in the Ross Sea (south of 69°S) where Antarctic minke whales were highly concentrated. For the whole research area, DI and MSS for SVs of this species were 2.44 and 1.80, respectively.

4) Blue whales

Blue whales were mainly distributed in the southern part of the research area, especially in the Ross Sea (Figure 3). Most southern sighting was 74°S in the Ross Sea.

5) Southern right whale

This species was observed (65°-39S, 145°-53E) as mixed school with one humpback whale in Area V. This is rare sighting since this species is sighted mainly in Area IV.

6) Sperm and southern bottlenose whales

Sperm whales were widely distributed throughout the research area except south of 70°S. They were distributed in the area outside of the continental slope. A large school (14 large males) of this species was observed (64°-11S, 157°-00E) in a small sea ice area within the pack ice. This is a very rare sighting in the JARPA and JARPA II surveys. Southern bottlenose whales were widely distributed in the whole northern part of the research area. (Figure 4).

Photo-ID and biopsy sampling

Table 3 summarizes the results of the photo-ID experiment. It was conducted throughout the entire research area. A total of 50 targeted individuals were photographed (11 blue whales and 39 humpback whales). Table 4 summarizes the results of biopsy sampling. A total of 14 skin biopsy samples were collected from fin whale (n=1) and humpback whales (n=13).

Prey species and oceanographic survey

Table 5 shows a summary of acoustic and oceanographic surveys. KS2 and KK1 conducted a quantitative echo sounder survey which ranged over 83 days by KS2 and 81 days by KK1 in the whole research area. KK1 also conducted sampling of prey species (Krill) by the IKMT and NORPAC-net at 46 locations in the whole research area (Figure 5).CTD and XCTD castings conducted at 106 and 43 locations, respectively (Figure 6). EPCS survey was conducted for 83 days by KS2.

Survey for the marine debris

The marine debris survey was carried out concomitant with the sighting survey of the SVs in all research areas. A total of 25 items were found.

Sighting distance and angle experiment

A sighting distance and angle experiment was performed on 20 January 2009 by YS1 and YS3, 28 January 2009 by KS2, 1 February 2009 by KK1, and 23 February 2009 by YS2. The results of this experiment will be used in estimating abundance.

Attachment of the Satellite tag for whales

YS2 attempted the attachment of a satellite tag on one school of humpback whale (1 animal) on 20 March 2009. However, technical problems with the transmission antenna were found with this attachment.

Results of lethal survey

Sampling of Antarctic minke whales and fin whales

1) Antarctic minke whales

Out of 700 schools (1,553 individuals) primarily sighted by SSVs, 642 schools (1,339 individuals) were targeted for sampling. A total of 679 animals were sampled (295 in Area VI-SW, 240 in Area V-SE (Ross Sea) and 144 in Area V-SW). Struck and lost occurred in one case. Due to interruption of sampling activity of SSVs, samples from northern strata and a northern part of the Ross Sea were not collected.

2) Fin whales

Out of 34 schools (111 individuals) primarily sighted by SSVs, 1 school (1 individual) in Area V-SW was targeted and sampled (see DISCUSSIONS). No struck and lost occurred.

Biological research

Biological research was conducted on the research base ship for all whales sampled. Table 6 summarizes research items conducted for the sampled Antarctic minke and fin whales.

Preliminary analysis of biological information

1) Antarctic minke whales

Of 679 samples of Antarctic minke whales, Table 7 shows the reproductive status of samples, by stratum. Figure 7 shows the sighted position of sampled whales, by sex and reproductive status. The collected samples were 144 individuals in the western part of Area V, 240 individuals in the East-South stratum (Ross Sea) and 295 in the Western part of Area VI. The ratio of males, in the West-South stratum in Area V was 58.3 %, 35.4 % in the East-South (Ross Sea) and 69.8 % in the West-South in Area VI.

The mature males were widely distributed throughout the whole research areas. Mature males were dominant in the Western part of Area VI. Some immature males were sampled (3.3%) in the northern part of the East-South stratum (Ross Sea) in Area V.

Females were also widely distributed throughout the whole research area. Mature pregnant females were dominant (54.2%) in the East-South stratum (Ross Sea) in Area V. Females constituted 44.8 % of the collected samples and the pregnancy rate of mature females was 96.0 % for the whole research area. One set of conjoined male twin fetuses of this species was collected. This is a second such observation for this species (Zinchenko and Ivashin, 1987). Maximum length of this species was 9.44 m for males and 9.79 m for females; minimum length was 5.15m and 4.96m, respectively.

2) Fin whales

The body length of the collected fin whale of this season was 14.79 m. This animal was an immature female, and the smallest animal of this species taken during the 2005/06 to 2008/09 JARPA II surveys. About 300 kg of krills was observed from the stomach contents of this animal.

DISCUSSION

This fourth cruise of JARPA II was planned as the second full-scale research after two feasibility research cruises (Government of Japan, 2005). As the Government of Japan decided to suspend sampling of 50 humpback whales, target species and numbers for lethal sampling were 850 ± 85 Antarctic minke whales and 50 fin whales. However, preventing collisions with vessels of a violent and obstructive anti-whaling group and ensuring the safety of crew and vessels, resulted in a suspension of research activity for 16 days. Due to the reduction in the number of research days, sampling activity of SSVs was restricted and could not cover the whole research area. However, in spite of the restricted survey, the 2008/09 JARPA II cruise obtained many important results summarized as follows:

1) Antarctic minke whales were the dominant species sighted in this survey (1,973 schools and 4,883 individuals). Second and third dominant species were humpback (418 schools and 735 individuals) and fin 122 schools and 491 individuals) whales. This species composition was the same as in previous surveys. This indicates that the whale species composition in Area V and VI West were stable compare to the Area IV where it was recently reported that humpback whale sightings were dominant and the number of sightings of this species increased year by year (Ishikawa *et al.*, 2008). This information is useful for the monitoring of the Antarctic ecosystem.

2) The ice-free extent of the Ross Sea was substantially larger than that of previous surveys (Appendix A). High density areas of Antarctic minke whales were observed in the Ross Sea and Area VI West. The Density index of this species (32.24 whales / 100 n.miles) was higher than that of the latest two surveys (2004/05: 14.44, 2006/07: 17.99). The mean school size of this species (3.00) was also higher than that of the latest two surveys (2004/05: 2.07, 2006/07: 2.05). For the improvement of the management of whales in the Antarctic, elucidation of the year to year changes of habitat and their prey of Antarctic minke whales in the Ross Sea is necessary.

3) Antarctic minke whales were widely distributed throughout the entire research area although the 679 samples

showed segregation by sex and reproductive status. Mature pregnant females were dominant in the Ross Sea (East-South stratum) and mature males and immature animals were concentrated in the western part of Area VI. This information is useful for the elucidation of temporal and spatial changes in stock structure and for improving the management procedure for the Antarctic minke whale stocks.

4) Of 111 primary sighted fin whales by SSVs, one fin whale was targeted and collected, although 50 whales were planned for the sampling. One of the reasons for the limited sampling of fin whales was interruptions of sampling activity of the SSVs, and another was logistics. 110 sightings of fin whales by SSVs were not targeted for sampling due to inappropriate sea conditions for safe transferring and flensing and/or practical works.

5) Highest density index (DI) of humpback (7.68 whales / 100 n.miles) and fin (2.98 whales / 100 n.miles) whales were observed in the southern part of Area V West. High rates of increase for these species were also reported in recent surveys (Matsuoka *et al.*, 2006, Branch, 2007). The present result is consistent with these reports. For the improvement of the management of whales in the Antarctic, elucidation of the interactions between humpback, fin and Antarctic minke whales related to their habitat and prey is necessary.

6) Two SVs succeeded in covering almost all of the research area. A full scale prey species survey and several oceanographic surveys as well as the sighting survey were conducted successfully including photo-ID and biopsy sampling. It is expected that estimation of consumption of prey species by whales in the Antarctic will become more accurate by combining the results of the acoustic and net sampling surveys by the SV and stomach contents study of whales by the NM. Comparing the stomach contents and net samples is important to understand preference of whales for prey species. Combination of lethal and non-lethal methods is necessary to elucidate the role of whales in the Antarctic ecosystem.

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Table 1. Summary of whale sightings by SVs and SSVs in the research area during 2008/09 JARPA II.

| Species | Sch | Ind. |
|----------------------------|-------|-------|
| Blue whale | 11 | 30 |
| Fin whale | 122 | 499 |
| Sev whale | 5 | 7 |
| Antarctic minke whale | 1,975 | 4,883 |
| Like Antarctic minke whale | 72 | 171 |
| Humpback whale | 418 | 735 |
| Southern Right whale | 1 | 1 |
| Unidentified Baleen whales | 250 | 772 |
| Sperm whale | 77 | 91 |
| Southern bottlenose whale | 32 | 61 |

Table 2. The Density indices (DI, number of schools per 100 n.miles) and mean school size (MSS) of Antarctic minke, fin and humpback whales by SV during 2008/09 JARPA II.

| Area | Sector | Stratum | Effort [n.miles] | Antarctic Minke whale | | | | Fin whale | | | | Humpback whale | | | |
|-------|--------|---------------------|---------------------|-----------------------|-------|-------|-------|-----------|-----|------|-------|----------------|-----|------|-------|
| | | | | Sch | Ind | D.I. | M.S.S | Sch | Ind | D.I. | M.S.S | Sch | Ind | D.I. | M.S.S |
| V | West | North | 1,211.47 | 4 | 5 | 0.33 | 1.25 | 10 | 27 | 0.83 | 2.70 | 28 | 49 | 2.31 | 1.75 |
| | | South | 797.43 | 27 | 43 | 3.28 | 1.59 | 20 | 92 | 2.51 | 4.85 | 67 | 119 | 8.40 | 1.78 |
| | East | North | 1,143.44 | 19 | 34 | 1.66 | 1.79 | 19 | 127 | 1.66 | 6.68 | 37 | 66 | 3.24 | 1.78 |
| | | South (Ross/Sea) | 2,757.76 | 889 | 2,667 | 32.24 | 3.00 | 0 | 0 | — | — | 6 | 12 | 0.22 | 2.00 |
| VI | West | North | 721.57 | 3 | 5 | 0.42 | 1.00 | 12 | 40 | 1.66 | 3.33 | 28 | 59 | 3.88 | 2.11 |
| | | South | 990.09 | 228 | 363 | 23.03 | 1.59 | 14 | 38 | 1.41 | 2.71 | 20 | 29 | 2.03 | 1.45 |
| Total | | | 7,621.76 | 1,170 | 3,115 | 15.35 | 2.66 | 75 | 329 | 0.98 | 4.39 | 186 | 334 | 2.44 | 1.80 |

Table 3. Summary of photo-ID collected during 2008/09 JARPA II.

| Species | Area V | | | | Area VI | | Total |
|----------------|----------|-----------|----------|----------|----------|----------|-----------|
| | West | | East | | West | | |
| | North | South | North | RossSea | North | South | |
| Blue whale | 0 | 1 | 2 | 5 | 0 | 3 | 11 |
| Humpback whale | 1 | 29 | 5 | 0 | 0 | 4 | 39 |
| Total | 1 | 30 | 7 | 5 | 0 | 7 | 50 |

Table 4. Summary of biopsy samples collected during 2008/09 JARPA II.

| Species | Area V | | | | Area VI | | Total |
|----------------|----------|-----------|----------|----------|----------|----------|-----------|
| | West | | East | | West | | |
| | North | South | North | RossSea | North | South | |
| Fin whale | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Humpback whale | 1 | 10 | 2 | 0 | 0 | 0 | 13 |
| Total | 2 | 10 | 2 | 0 | 0 | 0 | 14 |

Table 5. Summary of oceanographic survey, acoustic survey and plankton net sampling conducted during 2008/09 JARPA II.

| | | | EPCS (days) | Quantitative echo sounder (days) | | IKMT (stations) | NORPAC-Net (stations) | CTD (stations) | | XCTD (stations) | |
|--------------|----|-------|----------------|-------------------------------------|-----------|--------------------|--------------------------|-------------------|-----------|--------------------|----|
| Vessels | | | KS2 | KS2 | KK1 | KK1 | KK1 | KS2 | KK1 | KK1 | |
| Area | V | West | North | 11 | 11 | 14 | 5 | 5 | 12 | 6 | 2 |
| | | South | 7 | 5 | 10 | 4 | 4 | 4 | 4 | 0 | |
| | | East | North | 10 | 16 | 18 | 13 | 13 | 10 | 11 | 17 |
| | | | RossSea | 23 | 23 | 18 | 12 | 12 | 22 | 6 | 24 |
| | VI | West | North | 11 | 12 | 10 | 7 | 7 | 7 | 7 | 0 |
| | | South | 15 | 15 | 11 | 5 | 5 | 12 | 5 | 0 | |
| Total | | | 83 | 83 | 81 | 40 | 46 | 67 | 39 | 43 | |

Table 6. Summary of research items conducted for sampled Antarctic minke and fin whales.

| Research item | Antarctic minke | | | Fin | | |
|--|-----------------|--------|-------------------|------|--------|-------|
| | Male | Female | Total | Male | Female | Total |
| Photographic record of external character | 375 | 303 | 678 | 0 | 1 | 1 |
| Body length and sex identification | 375 | 304 | 679 | 0 | 1 | 1 |
| Measurement of external body proportion | 375 | 304 | 679 | 0 | 1 | 1 |
| Body weight | 375 | 304 | 679 | 0 | 0 | 0 |
| Body weight by total weight of parts | 6 | 3 | 9 | 0 | 1 | 1 |
| Skull measurement (length and breadth) | 357 | 288 | 645 | 0 | 1 | 1 |
| Standard measurement of blubber thickness | 375 | 304 | 679 | 0 | 1 | 1 |
| Observation of lactation status | - | 304 | 304 | - | 1 | 1 |
| Measurement of mammary gland | - | 304 | 304 | - | 1 | 1 |
| Testis weight | 375 | - | 375 | 0 | - | 0 |
| Weight of stomach content | 262 | 288 | 650 | 0 | 1 | 1 |
| Diatom film observation | 375 | 304 | 679 | 0 | 1 | 1 |
| Blood plasma for physiological study | 375 | 300 | 675 | 0 | 1 | 1 |
| Earplug for age determination | 373 | 303 | 676 | 0 | 1 | 1 |
| Ocular lens for age determination | 97 | 104 | 201 | 0 | 1 | 1 |
| Tympanic bulla for chemical analysis | 41 | 30 | 71 | 0 | 1 | 1 |
| Largest baleen plate for chemical analysis | 373 | 303 | 676 | 0 | 1 | 1 |
| Vertebral epiphyses for biological study | 322 | 232 | 554 | 0 | 1 | 1 |
| Observation and collection of ovary | - | 304 | 304 | 0 | 1 | 1 |
| Histological sample of endometrium | - | 7 | 7 | 0 | 1 | 1 |
| Histological sample of mammary gland | - | 304 | 304 | 0 | 1 | 1 |
| Milk sample for chemical study | - | 2 | 2 | - | 0 | 0 |
| Histological sample of testis | 375 | - | 375 | 0 | - | 0 |
| Tissue samples for genetic study | 375 | 304 | 679 | 0 | 1 | 1 |
| Blubber, muscle and liver tissues for environmental monitoring | 375 | 304 | 679 | 0 | 1 | 1 |
| Lung and liver tissues for environmental monitoring | 20 | 20 | 40 | 0 | 1 | 1 |
| Gross pathological observation (thyroid, lung, stomach and gonad) | 375 | 304 | 679 | 0 | 1 | 1 |
| Tissues for histopathological study | 50 | 45 | 95 | 0 | 0 | 0 |
| Tissues for various study | 3 | 3 | 6 | 0 | 1 | 1 |
| Tissues for lipid analysis | - | - | - | 0 | 1 | 1 |
| Tissues for nutritional component study | - | - | - | 0 | 1 | 1 |
| Tissues for chemical study | - | - | - | 0 | 1 | 1 |
| Tissues for nutrient study | 0 | 1 | 1 | 0 | 1 | 1 |
| Stomach contents for food and feeding study | 43 | 30 | 73 | 0 | 1 | 1 |
| Stomach contents for environmental monitoring | 13 | 8 | 21 | 0 | 0 | 0 |
| Samples of internal and external parasites | 3 | 3 | 6 | 0 | 0 | 0 |
| Photographic record of fetus | 91 | 98 | 195 ¹⁾ | 0 | 0 | 0 |
| Fetal length and weight | 91 | 98 | 195 ¹⁾ | 0 | 0 | 0 |
| Fetal ocular lens for age determination | 27 | 41 | 68 | 0 | 0 | 0 |
| Fetal skin for genetic study | 90 | 98 | 193 ¹⁾ | 0 | 0 | 0 |
| Tissues for functional food study | 2 | 4 | 6 | 0 | 1 | 1 |
| Tissue samples for construction of monitoring system of infectious disease | 6 | 3 | 9 | 0 | 0 | 0 |
| Fetal sample for clarification of jaw opening mechanism | 1 | 1 | 2 | - | - | - |
| Fetal sample for clarification of hind-limb disappearance mechanism | - | - | 2 ¹⁾ | - | - | - |

¹⁾including fetus of sex unidentified.

Table 7. Reproductive status of Antarctic minke whales sampled in 2008/09 JARPAII. Maturity of males was tentatively defined by testis weight according to Kato (1986). "Resting" represents non-pregnant mature female without corpus luteum and "Ovulating" represents female that had corpus luteum but fetus was not observed.

| Stratum | Male | | | Female | | | | | | Combined |
|---------------------------------|----------|--------|-------|----------|-----------|---------|--------------|-----------|-------|----------|
| | Immature | Mature | Total | Immature | Mature | | | | Total | |
| | | | | | Ovulating | Resting | No-lactating | Lactating | | |
| Area V West-South | 25 | 59 | 84 | 29 | 0 | 1 | 30 | 0 | 60 | 144 |
| | 17.4% | 41.0% | 58.3% | 20.1% | 0.0% | 0.7% | 20.8% | 0.0% | 41.7% | 100.0% |
| Area V East-South (Ross Sea) | 8 | 77 | 85 | 25 | 1 | 4 | 125 | 0 | 155 | 240 |
| | 3.3% | 32.1% | 35.4% | 10.4% | 0.4% | 1.7% | 52.1% | 0.0% | 64.6% | 100.0% |
| Area VI West-South | 49 | 157 | 206 | 50 | 2 | 0 | 33 | 4 | 89 | 295 |
| | 16.6% | 53.2% | 69.8% | 16.9% | 0.7% | 0.0% | 11.2% | 1.4% | 30.2% | 100.0% |
| Combined | 82 | 293 | 375 | 104 | 3 | 5 | 188 | 4 | 304 | 679 |
| | 12.1% | 43.2% | 55.2% | 15.3% | 0.4% | 0.7% | 27.7% | 0.6% | 44.8% | 100.0% |

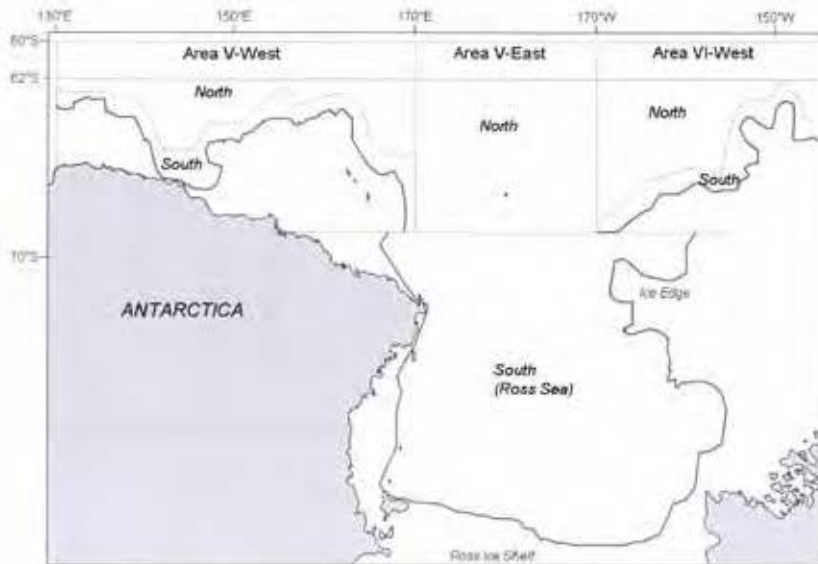


Figure 1. Geographic location of research area of the 2008/2009 JARPAII survey. Solid line shows the ice edge line. Ice edge lines are estimated by observation from research vessels and the information from Near real time DMSP SSM/I daily polar gridded sea ice concentration data set available from the National Snow and Ice Data Center (NSIDC, Cavalieri *et al.*, 1999).

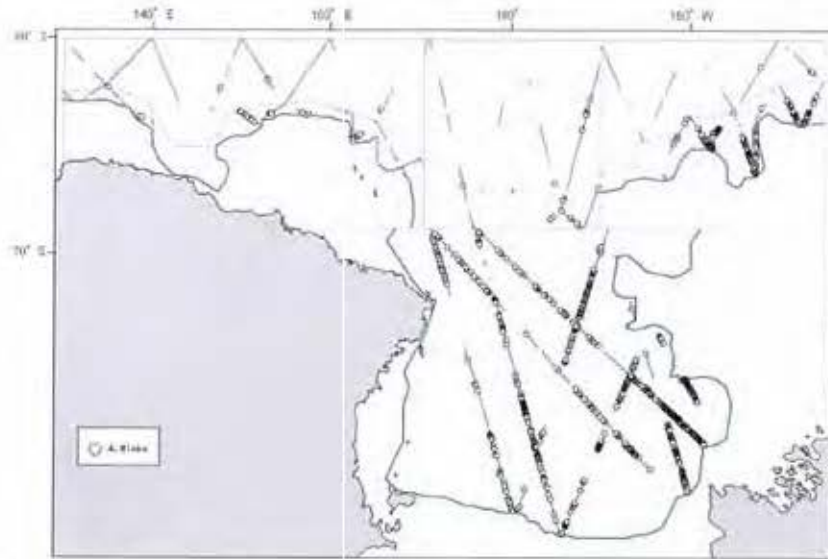


Figure 2. Distribution of primary sightings of Antarctic minke whales sighted with the searching effort by SVs in 2008/09 JARPAII.

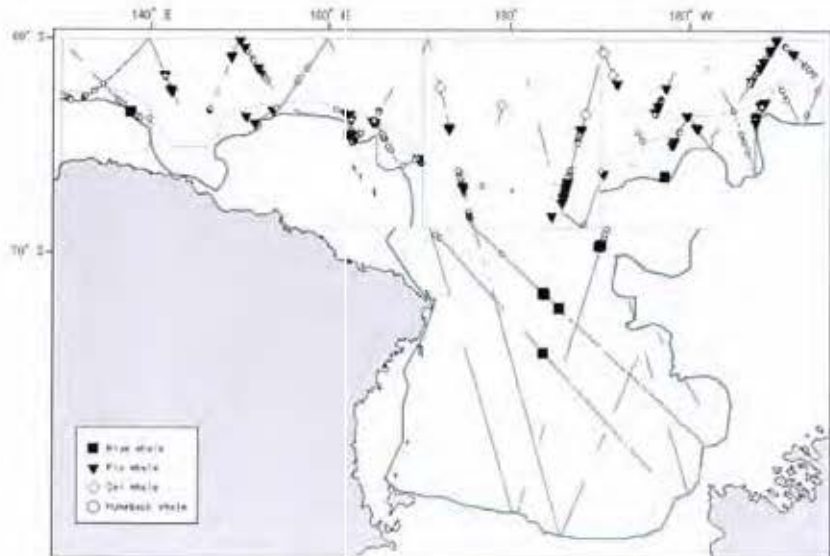


Figure 3. Distribution of primary sightings of blue, fin, sei and humpback whales sighted with the searching effort by SVs in 2008/09 JARPAII.

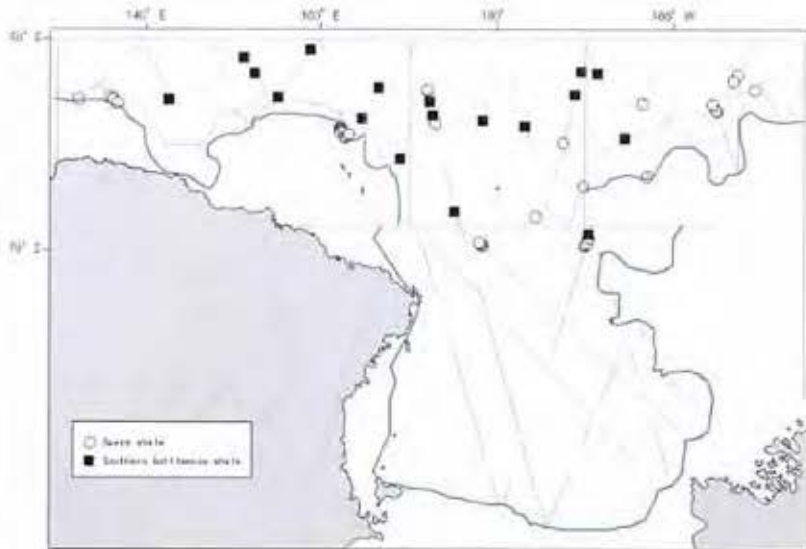


Figure 4. Distribution of primary sightings of sperm and southern bottlenose whales sighted with the searching effort by SVs in 2008/09 JARPAII.

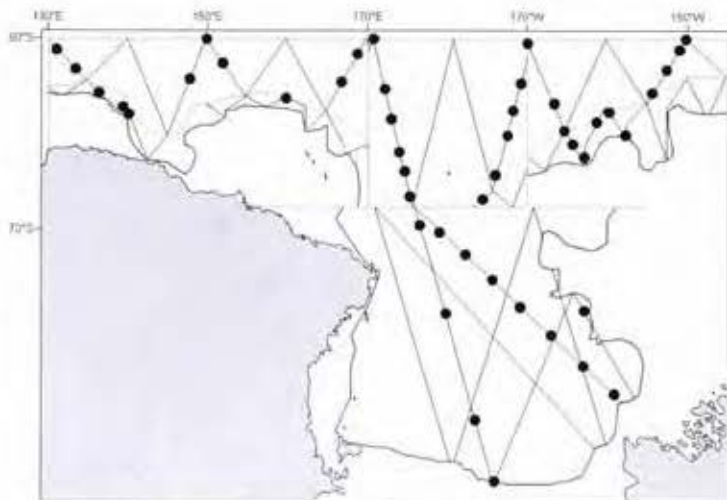


Figure 5. Geographical locations of NORPAC and IKMT net sampling (same positions) conducted by SV/Kaiko-Maru, during 2008/09 JARPAII.

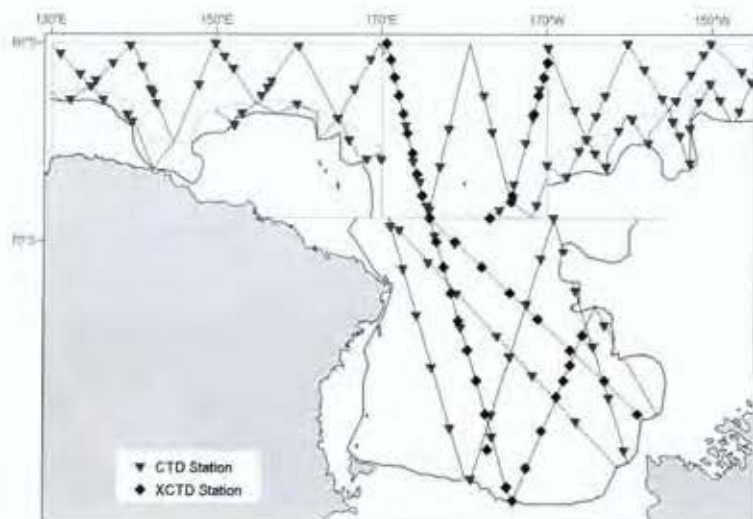


Figure 6. Geographical locations of CTD and XCTD casting conducted by two SVs during 2008/09 JARPAII.

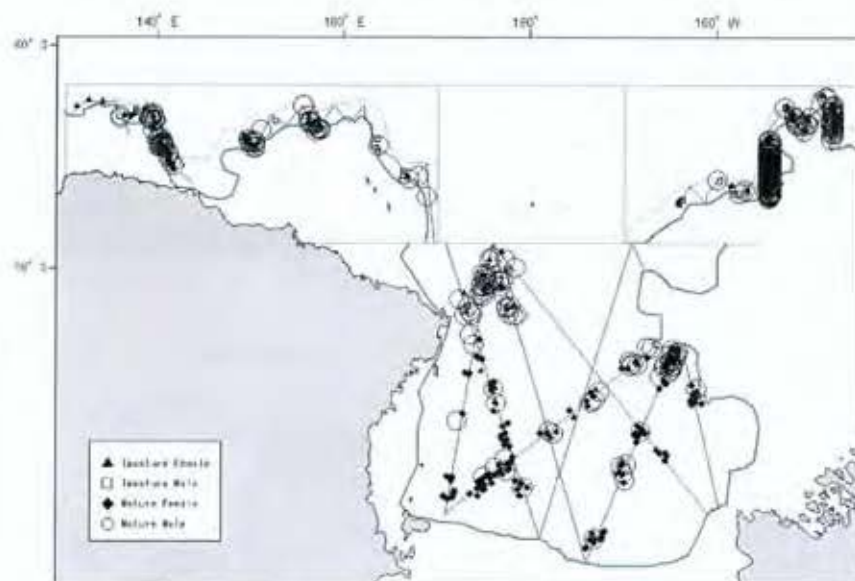


Figure 7. Distribution of sampled Antarctic minke whales by sex and sexual maturity status with the planned cruise track line (main course: a solid line) in 2008/09 JARPAII.

Appendix A. Satellite sea ice information.

Ice-edge information from near real time DMSP SSM/I daily polar gridded sea ice concentration data set available from the National Snow and Ice Data Center (NSIDC, Cavalieri *et al.*, 1999). See Figures A-C below for examples of daily polar gridded sea ice concentration data using sea ice concentration categories (0-12%(white colored), 13-28%(blue), 29-44%(green), 45-60%(yellow), 61-80%(brown), 81-100%(red-purple) between January and March in 2009.

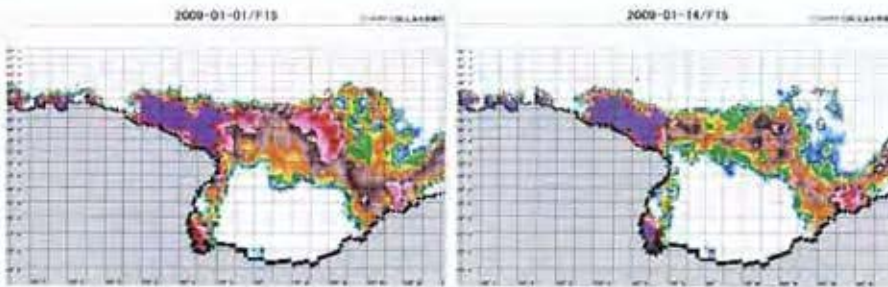


Figure A (left: 1st January, right: 14 January).

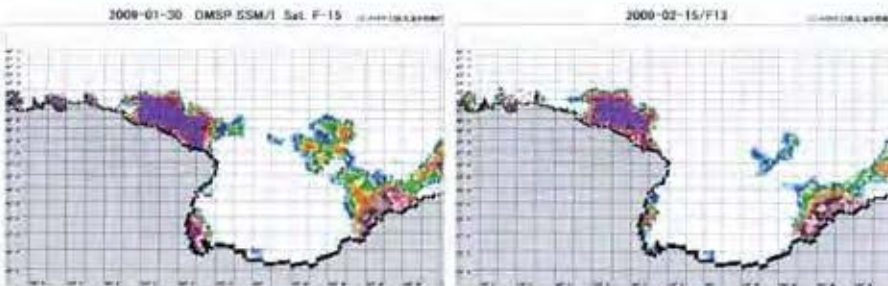


Figure B (left: 30 January, right: 15 February).

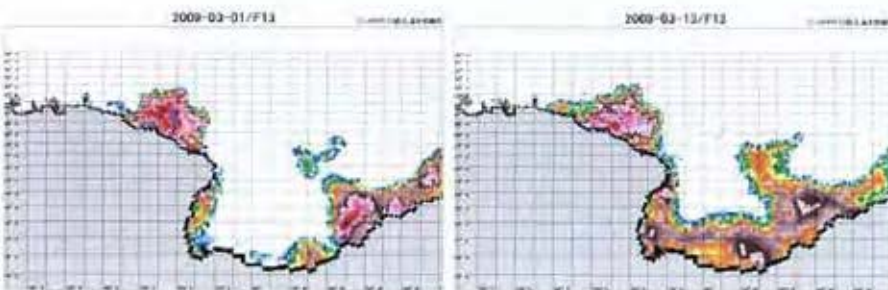


Figure C (left: 1st March, right: 13 March).

Annex 61: Nishiwaki, Shigetoshi et al, *Cruise Report of the Japanese Whale Research Program under Special Permit in the Antarctic – Second Phase (JARPA II) in 2009/2010*, SC/62/O3

SC/62/O3

Cruise Report of the Japanese Whale Research Program under Special Permit in the Antarctic-Second Phase (JARPA II) in 2009/2010

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ABSTRACT

The third full-scale research plan of the Japanese Whale Research Program under the Special Permit in the Antarctic-Second Phase (JARPA II) was conducted during the 2009/10 austral summer season. Two dedicated sighting vessels (SVs), two sighting and sampling vessels (SSVs) and one research base ship were engaged in the research for 97 days from 14 December 2009 to 20 March 2010 in Areas III East (35°E - 70°E), IV (70°E - 130°E), V West (130°E - 165°E) and part of Area V East (165°E - 175°E). The total searching distance was 8,232.0 n.miles. The research activities were interrupted several times by violent actions of an anti-whaling group over 31 days. Eleven species including six baleen whales (Antarctic minke, blue, fin, sei, humpback and southern right whale) and two toothed whales (sperm and southern bottlenose) were identified during the research period. A total of 986 groups (2,242 animals) of Antarctic minke whales were sighted. It was the dominant species in the research area followed by the humpback whales (603 groups, 1,187 animals), fin whales (56 groups, 186 animals). The number of sightings of the Antarctic minke whales was about 1.9 times higher than that of humpback whales and was considerably higher than those of other species. A total of 506 Antarctic minke whales and one fin whale were sampled. All whales sampled were examined on board the research base vessel. Photo-id experiments were conducted on blue, humpback and southern right whales and a total of 8 blue, 110 humpback and two southern right whales was photographed. A total of 86 skin biopsy samples were collected from fin (1), humpbacks (84) and southern right whale (1). Oceanographic surveys to investigate vertical sea temperature profiles were conducted at 57 points using TDR. The main results of this survey were as follows: 1) whale composition in the research area was stable compared to previous JARPA II surveys in this area; 2) the ice-free extent of the research area was substantially larger than in past seasons. High density areas of Antarctic minke whales were observed near the continental shelf; 3) mature females of Antarctic minke whale were dominant in Prydz Bay; 4) humpback whales were widely distributed in the research area and its density index was higher than that of the Antarctic minke whales in Areas IV West and V East. The 1994/95 IWC/SOWER cruise was conducted in similar areas and periods as in the present survey. In 1994/95 Antarctic minke whales were the most dominant species followed by southern bottlenose whales. These species were widely distributed in the research area. The number of sightings of Antarctic minke whales in 1994/95 was about 5 times higher than that of humpback whales. Comparison of whale between these two surveys suggests that humpback whales were increasing and expanding in the research area.

KEYWORDS: ANTARCTIC MINKE WHALE; FIN WHALE; HUMBACK WHALE; SCIENTIFIC PERMITS

BACKGROUND

The Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) was conducted between 1987/88 and 2004/05 austral summer seasons, under Article VIII of the International Convention for the Regulation of Whaling. JARPA provided a wide variety of information on biological parameters of Antarctic minke whale (*Balaenoptera bonaerensis*) such as the natural mortality coefficient and changes over time in the age at maturity as well as narrowing down the parameters of relevance for stock management (IWC, 1998, Anonymous, 2005). JARPA also elucidated that

there were at least two stocks of Antarctic minke whales in the research area but their geographical boundaries were different from those used for the IWC Areas (Pastene, 2006). Also JARPA found that pollutant concentration in whale tissues, such as heavy metals and PCBs, was extremely low (Yasunaga *et al.*, 2006). Further, JARPA showed an annual decreasing trend in energy storage in the 18 year period of JARPA (Konishi *et al.*, 2008). JARPA has thus successfully obtained data related to the initially proposed objectives (IWC, 2008).

Based on these considerations, the Government of Japan launched a new comprehensive study under the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II), combining lethal and non-lethal methods, starting from the 2005/2006 austral summer season. The full-scale JARPA II started from the 2007/08 season. JARPA II is a long-term research program with the following objectives: 1) Monitoring of the Antarctic ecosystem, 2) Modeling interaction among whale species and developing future management objectives, 3) Elucidation of temporal and spatial changes in stock structure and 4) Improving the management procedure for the Antarctic minke whale stocks. JARPA II focuses on Antarctic minke whale, humpback whale (*Megaptera novaeangliae*), fin whale (*B. physalus*) and possibly other species in the Antarctic ecosystem that are major predators of Antarctic krill.

The present paper reports the third full scale survey of the JARPA II conducted during the austral summer season 2009/10.

MATERIALS AND METHODS

Research vessels

The research fleet was composed of two dedicated sighting vessels, two sighting and sampling vessels and one research base vessel. The following vessels were used.

Research base vessel

Nisshin-Maru (NM; 8,044 tons)

Dedicated sighting vessels (SVs)

Shonan-Maru No.2 (SM2; 712 tons)

Yushin-Maru No.3 (YS3; 742 tons)

Sighting and sampling vessels (SSVs)

Yushin-Maru (YS1; 720 tons)

Yushin-Maru No.2 (YS2; 747 tons)

Two SVs were engaged in sighting and oceanographic surveys and most of the experiments. Two SSVs were engaged in sighting and sampling surveys and some of the experiments. NM served as a research base on which all biological examinations of sampled whales were conducted.

Research area and ice edge

The area covered by JARPA II is basically the same as in JARPA; the eastern part of Area III, Areas IV and V, and the western part of Area VI. The total area extends from 35°E to 145°W, south of 60°S. In this season, JARPA II surveyed the eastern part of Area III, Area IV and western part of Area V (35°E - 175°E). Figure 1 shows the geographic location of the research area for the 2009/2010 JARPA II survey. For this survey, our best estimate of the position of the ice edge was based on our visual and radar observations of the ice edge as well as satellite predictions. In this season, the ice-free extent of the research area including the Prydz Bay was substantially larger than previous surveys.

Survey track design

The survey track line for the SVs and the SSVs consisted of a zigzag course changing direction at 1°40' longitudinal degree intervals. For SSVs, two parallel track lines were set at 7n miles apart. However, in this season, due to the interference of an anti-whaling group the SVs and SSVs could not carry out the research in the planned track line in Area III East (35°E - 70°E), a part of Area IV (90°E - 130°E) and a part of Area V West (130°E - 132°E).

Sighting methods

Sighting procedures were the same as in the previous JARPA surveys (Nishiwaki *et al.* 1999, Ishikawa *et al.* 2000). The sighting surveys by SSVs were conducted under limited closing mode (when a sighting of Antarctic minke and fin whales were made on the predetermined track line, the vessel approached the whales and confirmed species and school size). Two SSVs advanced along parallel track lines 7n miles apart, at a standard speed of 11.5 knots. The sighting

surveys by SVs were conducted under limited closing mode and passing mode (even if sighting was made on the predetermined track line, the vessel did not approach the whales directly and searching from the barrel was uninterrupted) at a standard speed of 10.5 knots. The survey was operated under optimal research conditions (i.e., the wind speed below 25 knot in the south strata and 20 knot in the north strata, and visibility of more than 1.5 n.miles). In addition to the sighting of Antarctic minke and fin whales, the SVs approached blue (*B. musculus*), humpback, southern right (*Eubalaena australis*), pigmy right (*Caperea marginata*), sei (*B. borealis*), sperm (*Physeter macrocephalus*) and southern bottlenose (*Hyperoodon planifrons*) whales for conducting some experiments. The SSVs also approached the same whale species for experiments while they engaged in sighting survey.

Sampling methods

Two SSVs were engaged in sampling survey. Sampling of 850 Antarctic minke whales (with 10 % of allowance) and 50 fin whales was planned in the research area south of 62°S. One to two Antarctic minke whales were sampled randomly from each primary sighted school within 3n.miles of the track line. Dwarf minke whales were not a target for sampling. Sampling of fin whales was restricted to those animals with an estimated body length less than 18m due to logistic limitations at the NM. Only one fin whale was planned to be sampled from each primary sighted school within 3n.miles of the track line. If two or more animals smaller than 18m were found in a school, then only one of them was randomly selected and sampled. An explosive harpoon was used as the primary killing method for all whales collected. When the animal was not killed instantaneously, a large caliber rifle and/or the second harpoon was used immediately as the secondary killing method.

Low and middle latitudinal sighting survey

During transit, sighting surveys were conducted in the area between 30°S and 60°S except for the areas within national EEZs. The results of these surveys are not shown in this report.

Biological research

Most of the biological research methods used in this JARPA II survey were developed and improved during the JARPA 18 year research period. Biological research including sealing body weight on all sampled whales was conducted on the NM.

Experiments

Sighting distance and angle experiment

This experiment was conducted in order to evaluate the accuracy of the information on sighting distance and sighting angle given by observers of the SVs and SSVs.

Photo-identification experiment

The following species were targeted for photographic record of natural markings by SVs and SSVs: blue, humpback and southern right whales.

Biopsy sampling

In addition to the species targeted for photo-identification experiment, pygmy right, fin, sei, sperm and southern bottlenose whales were targeted for biopsy skin sampling by the SVs and SSVs using compound-crossbows. All collected sample were preserved at -80°C.

Vomiting and fecal observation

The SVs and SSVs were engaged in observations of vomits and feces of sighted whales.

Oceanographic survey

Two SVs conducted the following oceanographic survey; 1) consecutive measuring of vertical water temperature profile by TDR, and 2) marine debris recording in the research area.

RESULTS AND DISCUSSIONS

Outline of the cruise

SVs departed Shioyama and Shimonoseki (Japan) on 19 November and started Antarctic sighting survey in the research area on 14 December. SSVs and NM departed from Shimonoseki and Innoshima, respectively on 19 November and started Antarctic sighting and sampling surveys in the research area on 14 December. The Antarctic research period of this cruise was 97 days from 14 December 2009 to 20 March 2010. The research activity was interrupted for 31 days due to violent interferences by the Sea Shepherd group. Due to this interference SSVs cancelled the research in the northern part of the research area, Area IV east, a part of Area IV west, Area V west. SV (SM2) arrived at Tokyo on 12 March and SV (YS3) arrived at Shimonoseki on 27 March. SSVs (YS and YS2) arrived at Shimonoseki on 11 April. NM arrived at Tokyo on 12 April.

Sighting survey and whale species sighted

The total searching distances was 8,232.0 n.miles consisting of 4,620.8 n.miles for the two SVs and 3,611.3 n.miles for the two SSVs. Eleven species including six baleen whales and five toothed whales were identified during the research period. The following six species of baleen whales were confirmed: Antarctic minke, blue, fin, sei, humpback and southern right whales, and two toothed whale species were confirmed: sperm and southern bottlenose.

Table 1 shows the number of sightings during the survey and Figure 2 shows the sighting position of Antarctic minke and humpback whales. The number of sightings of Antarctic minke whales (986 schools and 2,242 individuals in total) was about 1.9 times higher than that of humpback whales (603 schools and 1,187 individuals) and was considerably higher than those of other species. Both Antarctic minke whale and humpback whales were widely distributed in the entire research area, but density was different among strata.

The 1994/95 IWC/SOWER cruise (Ensor *et al.* 1995) was conducted in similar areas and period as in the present survey. This fact provides a good opportunity to compare the whale composition in the area in two different seasons. In 1994/95 season Antarctic minke whales were the most frequent species encountered in the research area followed by the southern bottlenose whales. Humpback whales were also common in the research area. The number of sightings of Antarctic minke whales (291 schools and 508 individuals) was about 5.0 times higher than that of humpback whales (46 schools and 100 individuals). This comparison suggests that humpback whales were increasing and expanding in the research area.

Table 2 shows the density indices (D.I., the number of primary sighted schools per 100 n. miles) and mean school size (M.S.S.) of Antarctic minke, humpback and fin whales for the SVs. The D.I. of Antarctic minke whale was higher in the southern strata excluding the case of Area V East, and the highest index was in the southern strata of Area V West. However the D.I. in the Prydz Bay was relatively low. The density of humpback whale was higher than that of Antarctic minke whale in the southern strata of Area IV West and southern strata of Area V East. The D.I. for humpback whale in southern strata of Area V East was 10.3 times higher than that for Antarctic minke whale.

Figure 3 shows the sighting position of other large baleen whales. The sightings of blue whales and fin whales were concentrated in Area III East and Area IV West.

Sampling for Antarctic minke and fin whales

Out of 511 schools (1,032 individuals) in the primary sightings of Antarctic minke whales by two SSVs, 476 schools (967 individuals) were targeted for sampling. A total of 506 individuals were sampled (246 from Area III East, 49 from Area IV West, 53 from Prydz Bay and 158 from Area V West). Sampling efficiency (the rate of successful sampling for targeted individuals) was 92.9 % for the first targeted individual from schools with single individual and 97.9 % for the first targeted individual from schools with more than one individual. One struck and lost case occurred.

SSVs made only fifteen primary sightings of fin whales. Sampling for these whales was not conducted due to inappropriate sea condition for safe transferring and flensing and/or practical reasons. As a result, only one individual was sampled.

Biological research

Biological research was conducted on the research base vessel for all whales sampled. Table 3 summarizes biological data and samples collected from the Antarctic minke and fin whales.

Biological information of sampled whales

Table 4 shows the reproductive status of sampled Antarctic minke whales by stratum. Figures 4-1, 4-2 and 4-3 show distribution of sighting position of sampled Antarctic minke whales by sex and sexually mature status. Mature females were dominant in the Areas III East and Prydz Bay strata, whereas mature males were dominant in the Areas IV West and V West. Pregnancy rate in mature females was 92.5 % (184 individuals) in the entire research area. Two cases of twins were observed. Ten lactating females were sampled, though neither suckling calf was sampled nor observed.

Figure 3 shows body length distribution of Antarctic minke whales sampled during this survey. Maximum length of the sample was 10.66 m for females and 9.33 m for males. Minimum length was 5.16 m and 5.24 m for female and male, respectively. Maximum body length of immature animals was 8.62 m and 8.26 m for female and male, whereas minimum body length of mature animals was 7.55 m and 7.19 m for female and male, respectively.

Experiments

Photo-ID and biopsy sampling

Table 5 summarizes the results of the photo-identification experiment. A total of 8 blue, 110 humpback and two southern right whales was photographed. Table 6 summarizes results of biopsy sampling. A total of 86 biopsy samples were collected from fin, humpback and southern right whales.

Vomiting and faecal observation

Table 7 summarizes the results of the vomiting and faecal observations. A total of 6 faecal observations was recorded.

Oceanographic survey

SVs conducted the oceanographic survey to get the vertical water temperature profile in 57 points using TDR. Figure 6 shows an overview of the oceanographic survey in the research area. The marine debris survey was carried out concomitant with the sighting survey of the two SVs in the research area. A total of 9 debris items was recorded which consisted of 7 buoys or floats, one drum can and one pet bottle.

Sighting distance and angle experiment

A sighting distance and angle experiment was performed on 5 January 2010 by three SSVs and on 26 and 31 January 2010 by YS3 and SM2, respectively. The results of this experiment will be used in calculation of abundance estimates.

By-products from the research

All sampled whales were processed on NM after biological examination, according to the provisions of Article VIII of the Convention. A total of 2,045.6 tons of meat, blubber, viscera, etc. was produced.

ACKNOWLEDGMENTS

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Table 1. List of cetacean species and number of sightings (no. schools/no. individuals)

| Species | Sch | Ind. |
|----------------------------|-----|-------|
| Blue whale | 24 | 40 |
| Fin whale | 56 | 189 |
| Sci whale | 1 | 2 |
| Antarctic minke whale | 986 | 2,242 |
| Like Antarctic minke whale | 46 | 88 |
| Humpback whale | 603 | 1,187 |
| Southern right whale | 2 | 2 |
| Unidentified baleen whales | 87 | 189 |
| Sperm whale | 127 | 130 |
| Southern bottlenose whale | 30 | 48 |

Table 2. The Density indices (DI, number of schools per 100 n.miles) and mean school size (MSS) of Antarctic minke, fin and humpback whales by SV during 2009/10 JARPA II.

| Area | Sector | Stratum | Effort [n.miles] | Antarctic minke | | Humpback | | Fin | |
|------|-----------|---------|---------------------|-----------------|-------|----------|-------|------|-------|
| | | | | D.I. | M.S.S | D.I. | M.S.S | D.I. | M.S.S |
| III | East | North | 654.21 | 16.7 | 2.2 | 4.7 | 1.6 | 0.3 | 2.0 |
| | | South | 1,202.81 | 37.2 | 2.6 | 5.2 | 2.1 | 2.6 | 3.9 |
| IV | West | South | 874.29 | 24.2 | 2.9 | 25.0 | 2.1 | 3.9 | 2.8 |
| | Prydz Bay | | 802.26 | 15.3 | 1.7 | 11.6 | 1.9 | 0.6 | 1.7 |
| V | West | North | 227.75 | 5.7 | 6.5 | 5.3 | 1.7 | 0.0 | - |
| | | South | 430.47 | 37.4 | 3.6 | 13.7 | 1.6 | 0.0 | - |
| | East | North | 289.39 | 3.8 | 1.0 | 2.8 | 1.1 | 0.0 | - |
| | | South | 139.50 | 0.7 | 1.0 | 7.2 | 1.4 | 0.0 | - |

Table 3. Summary of research items conducted for sampled Antarctic minke and fin whales.

| Samples and data | Antarctic minke | | | Fin | | |
|--|-----------------|-----|-------|-----|---|-------|
| | M | F | Total | M | F | Total |
| Photographic record of external character | 237 | 267 | 504 | 1 | 0 | 1 |
| Body length and sex identification | 237 | 269 | 506 | 1 | 0 | 1 |
| Measurement of external body proportion | 237 | 269 | 506 | 1 | 0 | 1 |
| Body weight | 237 | 269 | 506 | 0 | 0 | 0 |
| Body weight by total weight of parts | 2 | 1 | 3 | 1 | 0 | 1 |
| Skull measurement (length and breadth) | 233 | 264 | 497 | 1 | 0 | 1 |
| Standard measurement of blubber thickness (two points) | 237 | 269 | 506 | 0 | 0 | 0 |
| Detailed measurement of blubber thickness (fourteen points) | 0 | 0 | 0 | 1 | 0 | 1 |
| Lactation status | - | 269 | 269 | - | 0 | 0 |
| Measurement of mammary gland | - | 269 | 269 | - | 0 | 0 |
| Measurement of uterin horn | - | - | - | - | 0 | 0 |
| Testis weight | 237 | - | 237 | 1 | - | 1 |
| Epididymis weight | - | - | - | 1 | - | 1 |
| Weight of stomach content | 237 | 269 | 506 | 1 | 0 | 1 |
| Photographic record of fetus | 83 | 91 | 186* | - | 0 | 0 |
| Fetal length and weight | 83 | 91 | 186* | - | 0 | 0 |
| External measurements of fetus | - | - | - | - | 0 | 0 |
| Fetal ocular lens for age determination | 9 | 8 | 17 | 0 | 0 | 0 |
| Fetal skin for genetic study | 83 | 91 | 182* | 0 | 0 | 0 |
| Number of ribs | - | - | - | 1 | 0 | 1 |
| Number of vertebra | - | - | - | 1 | 0 | 1 |
| Diatom film observation | 237 | 269 | 506 | 1 | 0 | 1 |
| Diatom film sample | - | - | - | 1 | 0 | 1 |
| Blood plasma for physiological study | 215 | 239 | 454 | 1 | 0 | 1 |
| Earplug for age determination | 236 | 269 | 505 | 1 | 0 | 1 |
| Ocular lens for age determination | 237 | 269 | 506 | 1 | 0 | 1 |
| Tympanic bone for chemical analysis | 30 | 18 | 48 | 1 | 0 | 1 |
| Largest baleen plate for chemical analysis | 237 | 269 | 506 | 1 | 0 | 1 |
| Vertebral epiphyses sample | 208 | 230 | 438 | 1 | 0 | 1 |
| Ovary sample | - | 269 | 269 | - | 0 | 0 |
| Histological sample of endometrium | - | 17 | 17 | - | 0 | 0 |
| Histological sample of mammary gland | - | 269 | 269 | - | 0 | 0 |
| Milk sample for chemical analysis | - | 0 | 0 | - | 0 | 0 |
| Histological sample of testis | 237 | - | 237 | 1 | - | 1 |
| Histological sample of epididymis | - | - | - | 1 | - | 1 |
| Skin and liver tissues for genetic study | 237 | 269 | 506 | 1 | 0 | 1 |
| Blubber, muscle and liver tissues for environmental monitoring | 237 | 269 | 506 | 1 | 0 | 1 |
| Lung and liver tissue for air monitoring | 19 | 20 | 39 | 1 | 0 | 1 |
| Macro pathological observation (thyroid, lung and liver) | 237 | 269 | 506 | 1 | 0 | 1 |
| Tissues for histopathological study | 12 | 6 | 18 | 1 | 0 | 1 |
| Muscle, liver, kidney, lumbar and blubber tissues for lipid analysis | - | - | - | 1 | 0 | 1 |
| Muscle and blubber tissues for various analysis | 3 | 3 | 6 | 1 | 0 | 1 |
| Muscle liver and blubber tissues for chemical analysis | - | - | - | 1 | 0 | 1 |
| Stomach contents for food and feeding study | 25 | 31 | 56 | 1 | 0 | 1 |
| Stomach contents for environmental monitoring | 8 | 13 | 21 | 0 | 0 | 0 |
| Stomach contents for lipid analysis | - | - | - | 0 | 0 | 0 |
| External parasites | 4 | 6 | 10 | 1 | 0 | 1 |
| Internal parasites | 3 | 2 | 5 | 0 | 0 | 0 |
| Stomach contents for DNA study | 2 | 5 | 7 | - | - | - |
| Gut contents for food and feeding study | 9 | 12 | 21 | 1 | - | 1 |
| Fundus for food and feeding study | 1 | 1 | 2 | 1 | - | 1 |
| Tissue samples for construction of monitoring system of infectious disease | 198 | 221 | 419 | 1 | 0 | 1 |
| Tissues for functional food study | 3 | 2 | 5 | 1 | 0 | 1 |
| Uterus and placenta tissues for histological study | - | 5 | 5 | - | - | - |
| Fetal sample for clarification of hind-limb disappearance mechanism | - | - | 4* | - | - | - |

* : Including foetus of sex unidentified.

Table 4. Reproductive status of Antarctic minke whales sampled in 2009/10 JARPA II. Maturity of males was tentatively defined by testis weight according to Kato (1986). "Resting" represents non-pregnant mature female without corpus luteum.

| Area | Sector | Male | | | Female | | | | | | | Total | Combined |
|------|------------|----------|--------|-------|----------|-----------|---------|--------------|-----------|---------|---------|-------|----------|
| | | Immature | Mature | Total | Immature | | | Mature | | | Unknown | | |
| | | | | | Maturing | Lactating | Resting | No-lactating | Lactating | Unknown | | | |
| III | East | 21 | 81 | 102 | 30 | 6 | 1 | 2 | 95 | 9 | 1 | 144 | 246 |
| | | 8.5% | 32.9% | 41.5% | 12.2% | 2.4% | 0.4% | 0.8% | 39.0% | 3.3% | 0.4% | 58.5% | |
| | South west | 7 | 23 | 30 | 10 | 0 | 0 | 0 | 9 | 0 | 0 | 19 | 49 |
| | | 14.3% | 46.9% | 61.2% | 20.4% | 0.0% | 0.0% | 0.0% | 18.4% | 0.0% | 0.0% | 38.8% | |
| IV | Prydz | 0 | 10 | 10 | 4 | 1 | 0 | 3 | 34 | 1 | 0 | 43 | 53 |
| | | 0.0% | 18.9% | 18.9% | 7.5% | 1.9% | 0.0% | 5.7% | 64.2% | 1.9% | 0.0% | 81.1% | |
| V | West | 17 | 78 | 95 | 26 | 0 | 0 | 1 | 36 | 0 | 0 | 63 | 158 |
| | | 10.8% | 49.4% | 60.1% | 16.5% | 0.0% | 0.0% | 0.6% | 22.8% | 0.0% | 0.0% | 39.9% | |
| | Combined | 45 | 192 | 237 | 70 | 7 | 1 | 6 | 175 | 9 | 1 | 269 | 506 |
| | | 8.9% | 37.9% | 46.8% | 13.8% | 1.4% | 0.2% | 1.2% | 34.6% | 1.8% | 0.2% | 53.2% | |

Table 5. Summary of photo-ID collected during 2009/10 JARPA II

| Species | Number of experiments | Targeted individuals | Number of photos |
|----------------|-----------------------|----------------------|------------------|
| | (A) | (B) | (C) |
| Humpback whale | 59 | 110 | 497 |
| Blue whale | 8 | 8 | 48 |
| Right whale | 2 | 2 | 14 |

Table 6. Summary of biopsy samples collected during 2009/10 JARPA II.

| Species | Ship Type | Number of experiments | Targeted individuals | Number of shoots | Number of hits | Number of samples | Effort (hr:min) | sample per trial | sample per hit |
|----------------|-----------|-----------------------|----------------------|------------------|----------------|-------------------|-----------------|------------------|----------------|
| | | (A) | (B) | (C) | (D) | (E) | (F) | (E)/(C) | (E)/(D) |
| Blue whale | SSVs | 1 | 1 | 2 | 0 | 0 | 0:18 | 0.00 | 0.00 |
| Blue whale | SVs | 7 | 11 | 5 | 0 | 0 | 3:44 | 0.00 | 0.00 |
| Fin whale | SSVs | 4 | 17 | 7 | 1 | 1 | 2:05 | 0.14 | 1.00 |
| Fin whale | SVs | 1 | 4 | 1 | 0 | 0 | 0:35 | 0.00 | 0.00 |
| Humpback whale | SSVs | 45 | 27 | 104 | 68 | 63 | 10:56 | 0.61 | 0.93 |
| Humpback whale | SVs | 14 | 95 | 36 | 23 | 21 | 3:41 | 0.58 | 0.91 |
| Right whale | SSVs | 1 | 1 | 1 | 1 | 1 | 0:03 | 1.00 | 1.00 |
| Right whale | SVs | 1 | 1 | 1 | 0 | 0 | 0:44 | 0.00 | 0.00 |

Table 7. Summary of vomiting and fecal observation during 2009/10 JARPA II.

| Species | Area | School size | Body size (m) | Distance (miles) | Vomiting or Fecal | Photo (Y or N) | Sample (Y or N) |
|-----------------------|------|-------------|---------------|------------------|-------------------|----------------|-----------------|
| Fin whale | III | 4 | 16.0 | 0.1 | Fecal | N | N |
| Fin whale | III | 1 | 21.0 | 0.1 | Fecal | N | N |
| Antarctic minke whale | III | 4 | 8.0 | 0.1 | Fecal | N | N |
| Antarctic minke whale | III | 1 | 8.0 | 0.2 | Fecal | N | N |
| Humpback whale | III | 1 | 11.2 | 0.2 | Fecal | N | N |
| Humpback whale | IV | 2 | 12.1 | 0.1 | Fecal | N | N |

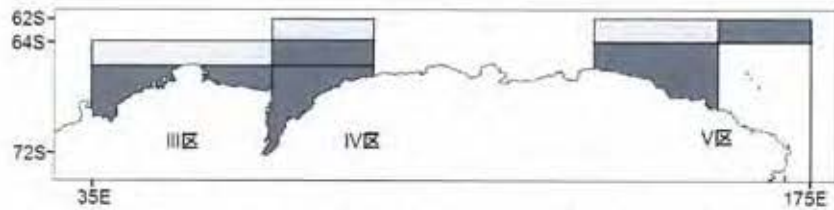


Fig. 1. Map showing this research area and strata. Dark grey part shows the research activity zone by SSVs and SVs. Light grey shows the research activity zone by SVs.

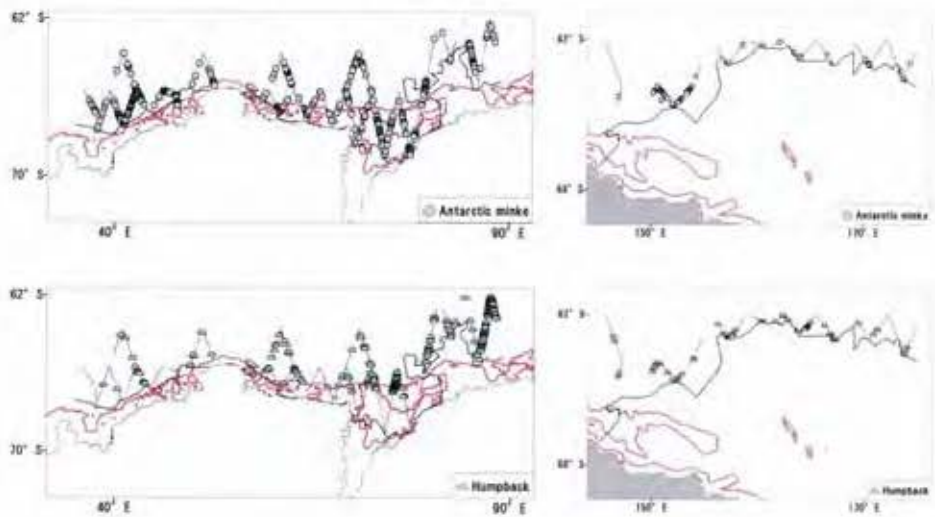


Fig. 2. Distribution of primary sightings of Antarctic minke (upper) and humpback whales (lower) sighted with the searching effort by SVs.

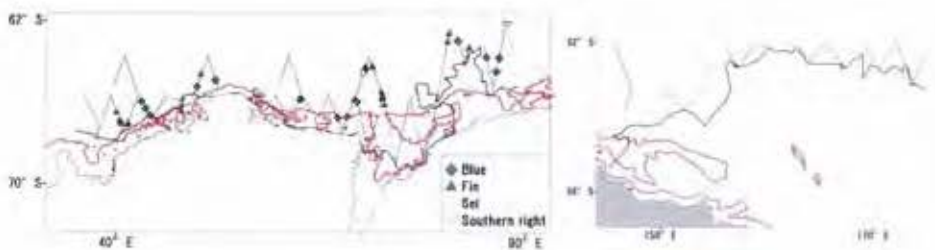


Fig. 3. Distribution of primary sightings of other baleen whales sighted with the searching effort by SVs.

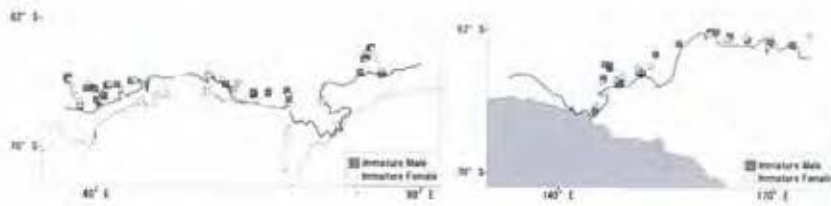


Fig. 4-1. Distribution of sampled immature of Antarctic minke whales

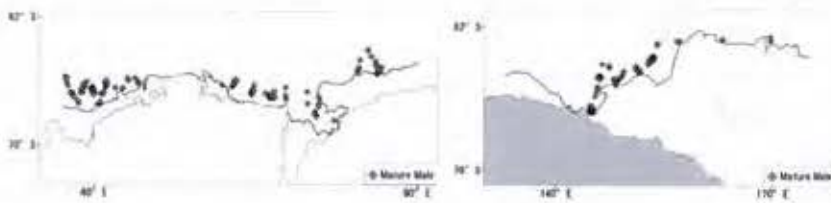


Fig. 4-2. Distribution of sampled mature male of Antarctic minke whales

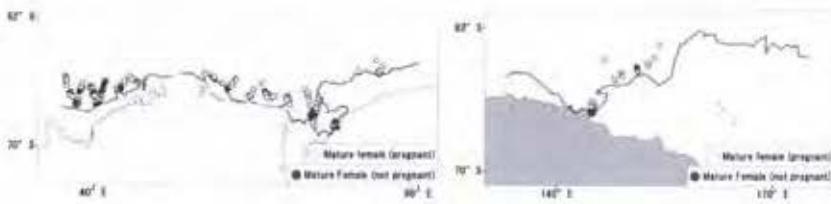


Fig. 4-3. Distribution of sampled mature female of Antarctic minke whales (upper; pregnant; lower; non-pregnant)

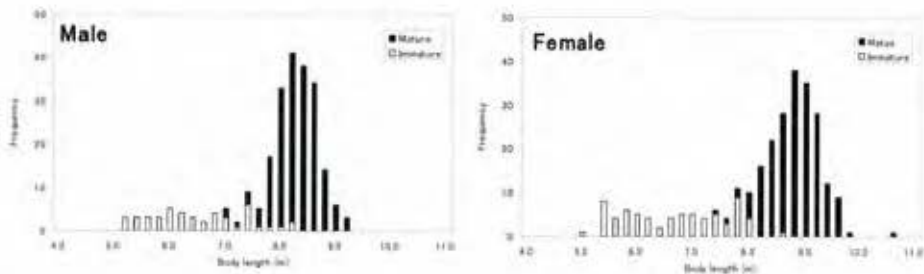


Fig. 5. Body length distribution of sampled Antarctic minke whales in each sexual maturity.

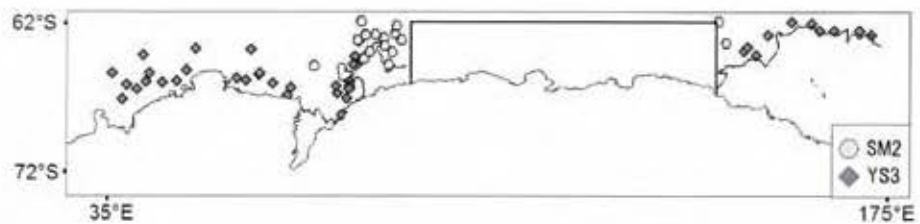


Fig. 6. Geographical locations of TDR conducted by two SVs.

**Annex 62: Concerns Regarding Scientific Permits, Appendix 2 to Annex O,
Report of the Scientific Committee, *J. Cetacean Res. Manage.*
6 (Suppl.), 2004, 364**

**Appendix 2
CONCERNS REGARDING SCIENTIFIC PERMITS¹**

A. Read, C.S. Baker, P. Berggren, F. Borsani, R. Brownell, S. Childerhouse, P. Clapham, C. Clark, C. Fortuna, C. Fosst, Gales, K. Groch, M. Iniguez, L. Kell, K.H. Kosck, M. Krahn, G. Lauriano, R. Leaper, T. Lyrholm, S. Manzanilla, K. Mann, H. Oosthuizen, J. Palazzo, C. Parsons, W. Perrin, C. Perry, R. Pinto de Lima, P. Reijnders, S. Reilly, V. Ridoux, E. Rogan, Rojas, L. Sadler, D. Sem, M. Simmonds, M. Stachowitsch, B. Taylor, D. Thiele, P. Wade and B. Wilson.

In its report to the Scientific Committee, the IWC's Working Group on Scientific Permits noted the inadequate time allotted for discussion of scientific permit proposals. In light of this situation, we wish to register serious concerns regarding the Icelandic scientific whaling proposal, and scientific permits in general.

The Icelandic government has submitted to the SC a proposal for a two-year feasibility study involving lethal takes of fin, sei and minke whales. This programme is characterised as a 'feasibility study' despite the existence of substantial data from a very similar study conducted during the last period of Icelandic scientific whaling in the 1980s. By labelling the programme as a feasibility study, the proponents have effectively exempted themselves from the level of scrutiny required of a true research programme. As was the case with a similar 'feasibility study' (JARPN) proposed by the Government of Japan, it is our contention that the Icelandic proposal would not meet the scientific standards required by any major international research agency.

Criticism voiced during the SC's review clearly indicates that the proposal is deficient in almost every respect. The proponents have failed to provide adequate justification for the proposed sample sizes, and have offered no performance criteria for how the work's 'feasibility' will subsequently be determined. As noted in the Working Group report, the proponents were repeatedly asked to provide, for any aspect of the study, an example of results that would cause them to conclude that the proposed research was *not* feasible; they did not do so.

Despite the proposal's strong emphasis on multi-species management, the sampling scheme is not designed to obtain the data required for the ecosystem modelling underlying this approach. Furthermore, the recent IWC modelling workshop on cetacean-fishery interactions (SC/55/Rep1) concluded that current ecosystem models are not sufficiently developed to provide reliable management advice in any context.

With regard to the effects of the proposed sampling on stocks of the three species, there has been no recent assessment of fin and minke whales in Icelandic waters, and

no agreement by the SC on management advice. There has never been an assessment of sei whales, and considerable concern was noted during the review with regard to the status of this population, and the deficient manner in which the impacts of the proposed catches were assessed by the Icelandic proposal.

We reiterate that the major objectives of the Icelandic proposal are either not relevant to the management of whales under the Revised Management Procedure (RMP), or if the subset of information which is relevant to the management procedures can be, and routinely are, obtained with far greater efficiency by well-established non-lethal methods. Population structure (required for restricting the set of plausible hypotheses used in *Implementation Simulated Trials*) is now widely studied through genetic analysis of skin biopsies; thus the proposed lethal sampling is entirely unnecessary, and unlike a large-scale biopsy programme will not yield sample sizes with the statistical power to provide a reliable picture of stock structure in the species concerned.

By linking the proposed work to 'multi-species management', and through its repeated references to a need to manage cetaceans to benefit human fisheries, Iceland is in practice proposing a cull of whales, a concept that is in opposition to the conservative principle underlying the RMP. We find it particularly regrettable that the proponents close to respond to this criticism by questioning whether the RMP is indeed 'rational management'. The RMP was developed by the SC, and is accepted by the IWC as the basis for the management of whale stocks.

As members of the Scientific Committee, we are seriously concerned by what we see as the increasingly frequent abuse of Article VIII of the International Whaling Convention (the Regulation of Whaling by some member nations). This has important ramifications for the IWC and the work of the SC. Member governments that promote poorly conceived research whaling programmes place their scientists in an untenable position of having to defend these proposals in order to support the agendas of their governments. In so doing, this causes unnecessary conflict between SC members (as has occurred at the last several SC meetings), damages the credibility of the SC as a whole, and undermines the agreed basis by which the IWC manages stocks of whales.

¹ This Appendix was submitted to the Plenary after closure of Working Group discussions.

Annex 63: *Agreement between the United States of America and Japan concerning commercial sperm whaling in the western division stock of the North Pacific (with record of discussion)*, (contained in Letter from Yasushi Murazumi, *Chargé d'Affaires ad interim* of Japan to Malcolm Baldrige, United States Secretary of Commerce, 13 November 1984, and letter from Malcolm Baldrige to Yasushi Murazumi, 13 November 1984), 2039 UNTS 35266 (Washington, 13 November 1984)

No. 35266

**United States of America
and
Japan**

Agreement between the United States of America and Japan concerning commercial sperm whaling in the western division stock of the North Pacific (with record of discussion). Washington, 13 November 1984

Entry into force: *13 November 1984, in accordance with its provisions*

Authentic text: *English*

Registration with the Secretariat of the United Nations: *United States of America, 19 October 1998*

**États-Unis d'Amérique
et
Japon**

Accord entre les États-Unis d'Amérique et le Japon concernant la chasse commerciale au cachalot du stock de la division occidentale du Pacifique nord (avec compte-rendu de négociations). Washington, 13 novembre 1984

Entrée en vigueur : *13 novembre 1984, conformément à ses dispositions*

Texte authentique : *anglais*

Enregistrement auprès du Secrétariat des Nations Unies : *États-Unis d'Amérique, 19 octobre 1998*

The Japanese Chargé d'Affaires ad interim to the Secretary of Commerce

EMBASSY OF JAPAN

WASHINGTON, D.C.

November 13, 1984

Dear Mr. Secretary:

I am writing to you concerning the recent meetings between the representatives of the Government of Japan and the Government of the United States on the subject of commercial sperm whaling in the western division stock of the North Pacific.

As you know, the Government of Japan is keenly aware that the whaling issue poses a threat of friction between our two countries. The Government of Japan wishes to resolve this issue as quickly and amicably as possible to avoid a confrontation which might be caused by the application of United States domestic statutes, namely Section 8(a) of the Fishermen's Protective Act (the Pelly Amendment) and Section 201(e)(2) of the Magnuson Fishery Conservation and Management Act (the Packwood-Magnuson Amendment).

Unfortunately, while both Governments are Parties to the International Convention for the Regulation of Whaling (the Convention) and while we both share the concern for the general objectives of the Convention, there are certain differences between our two countries which arise from our different cultural and domestic situations.

As you know, footnote 1 added in 1981 to Table 3 of the Schedule to the Convention prohibits the commercial harvest of sperm whales from the western division stock of the North Pacific unless the International Whaling Commission affirmatively decides otherwise. The Government of Japan has lodged an objection to footnote 1, in accordance with the provision of paragraph 3 of Article V of the Convention, and is therefore not bound by the footnote.

The Government of Japan, recognizing the need to take measures including the withdrawal of the objection mentioned above in order to avoid a confrontation between our two countries seeks an additional period of time for the purpose of minimizing the economic and social hardship of those who are engaged in commercial sperm whaling. The Government of Japan endeavors to take appropriate measures in order to meet this purpose.

I therefore request that, as long as Japanese commercial whaling is conducted in a manner as indicated in the arrangement set forth in the Summary of Discussions attached to this letter, you not consider that the whaling will diminish the effectiveness of the Convention or its conservation program and not certify such whaling as provided for in the Pelly Amendment or the Packwood-Magnuson Amendment.

Sincerely yours,

YASUSHI MURAZUMI
Chargé d'Affaires ad interim of Japan

The Honorable
Malcom Baldrige
The Secretary of Commerce
Washington, D.C.

November 13, 1984

SUMMARY OF DISCUSSIONS ON COMMERCIAL SPERM WHALING IN THE WESTERN DIVISION STOCK OF THE NORTH PACIFIC, NOVEMBER 1-12, 1984, WASHINGTON, D.C.

Dr. John V. Byrne, United States Commissioner to the International Whaling Commission

Mr. Hiroya Sano, Director-General, Fisheries Agency, Ministry of Agriculture, Forestry and Fisheries, the Government of Japan

The latest in a series of bilateral discussions between Japan and the United States were conducted in Washington, D.C., November 1-12, 1984, in an effort to determine whether it would be possible, in accordance with the laws and regulations in effect in each country, to develop an arrangement whereby the United States Secretary of Commerce might refrain from "certifying" sperm whaling by Japanese nationals, if they take sperm whales under the objection of the Government of Japan to footnote 1 to Table 3 of the Schedule to the International Convention for the Regulation of Whaling, 1946 (the Convention). The heads of the delegations shared the view that such an arrangement might be possible, subject to satisfactory resolution of certain details and to approval and implementation by the cognizant authorities of each Government. The essential points of such a possible arrangement would be the following:

1. (A) The Government of Japan may permit a catch of 400 sperm whales during each of the 1984 and 1985 coastal seasons, subject to the provisions on by-catch of females as set forth in footnote 2 to Table 3 of the Schedule (dated November, 1983) to the Convention.

(B) If, by December 13, 1984, the Government of Japan withdraws its objection, lodged November 9, 1981, under paragraph 3 of Article V of the Convention, effective on or before April 1, 1988, the United States would not consider sperm whaling permitted under sub-paragraph (A) above to diminish the effectiveness of the Convention or its conservation program, and would therefore not certify such sperm whaling as provided for in Section 8(a) of the Fishermen's Protective Act (the Pelly Amendment) or Section 201(e)(2) of the Magnuson Fishery Conservation and Management Act (the Packwood-Magnuson Amendment).

2. If, by April 1, 1985, the Government of Japan withdraws its objection, lodged November 4, 1982, to paragraph 10(e) of the Schedule, effective such that Japanese commercial coastal whaling will cease following the 1987 coastal season and Japanese commercial pelagic whaling will cease following the 1986/87 pelagic season, the United States would not consider that whaling specified below would diminish the effectiveness of the Convention or its conservation program and would not certify such whaling under the Pelly Amendment or the Packwood-Magnuson Amendment, if such whaling were limited to the following species and catch limits:

1986 and 1987 Coastal Whaling Seasons

Western Division, North Pacific sperm whales -- 200 per season, subject to the provisions on by-catch of females as set forth in footnote 2 to Table 3 of the Schedule (dated November, 1983) to the Convention;

Okhotsk Sea-West Pacific minke whales -- catch limits acceptable to the Government of the United States after consultation with the Government of Japan;

Western North Pacific Bryde's whales -- catch limits acceptable to the Government of the United States after consultation with the Government of Japan; and

1985/1986 and 1986/1987 Pelagic Whaling Seasons

Southern Hemisphere minke whales -- catch limits acceptable to the Government of the United States after consultation with the Government of Japan.

II

The Secretary of Commerce to the Japanese Chargé d'Affaires ad interim

THE SECRETARY OF COMMERCE

WASHINGTON, D.C.

November 13, 1984

Dear Mr. Murazumi:

Thank you for your letter about the recent bilateral consultations between representatives of our governments on the Japanese harvest of sperm whales from the western division stock of the North Pacific and the possibility that I, as Secretary of Commerce, may certify any confirmed harvest of sperm whales by Japanese nationals.

After consulting with the United States Commissioner to the International Whaling Commission (IWC), I have concluded that commercial harvests of whales by Japanese nationals within the limits and under the circumstances set forth in the Summary of Discussions attached to your letter would not diminish the effectiveness of the international Convention for the Regulation of Whaling, 1946, or its conservation program.

The reports of the IWC's Scientific Committee, as well as the IWC's 1982 decision to permit quotas of 450 and 400 whales for the 1982 and 1983 coastal sperm whaling seasons, respectively, indicate that sperm whaling in accordance with paragraph 1 of the summary of Discussions attached to your letter is not inconsistent with the IWC's essential conservation purposes. Moreover, in deciding that Japanese commercial whaling in accordance with paragraph 2 of that Summary of Discussions would not thwart the essential conservation purposes of the IWC, I have noted the apparent purpose of the IWC in having itself provided for a delayed effective date of paragraph 10(e).

This arrangement does not insulate from certification any Japanese whaling in excess of the 1984-85 quota for Southern Hemisphere minke whales. I urge that the Government of Japan comply with that quota. Furthermore, the withdrawals of your government's objections to footnote 1 to Table 3 and paragraph 10(e) of the Schedule would be irrevocable, notwithstanding their prospective effective dates.

Finally, in judging whether the Government of the United States would accept the catch limits for the 1986 and 1987 coastal seasons and 1985/86 and 1986/87 pelagic seasons as contemplated in paragraph 2 of the Summary of Discussions, the Government of the United States would be guided by the most recent quota voted by the IWC prior to those seasons.

Our purpose in recent consultations with the Government of Japan has been to encourage adherence by the Government of Japan to all provisions of the Convention's Schedule. We regard the provisions of paragraph 10(e) of the Schedule to be of central importance to the rational conservation and management of the world's remaining whale stocks. This is

reflected in President Reagan's 1981 letter to each of the IWC Commissioners encouraging them to take action along the lines now reflected in paragraph 10(e) of the Schedule.

Sincerely,

MALCOM BALDRIGE
Secretary of Commerce

Mr. Yasushi Murazumi
Chargé d'Affaires ad interim of Japan
Embassy of Japan
Washington, D.C.

[TRANSLATION - TRADUCTION]

I

Le Chargé d'Affaires japonais par intérim au Ministre du Commerce

AMBASSADE DU JAPON

WASHINGTON, DC

Le 13 novembre 1984

Monsieur le Ministre,

La présente lettre a trait aux réunions qui se sont déroulées récemment entre les représentants du Gouvernement du Japon et du Gouvernement des États-Unis relatives aux opérations commerciales de chasse au cachalot parmi les populations de baleines dans la division occidentale de la partie nord de l'océan pacifique.

Vous n'êtes pas sans savoir que le Gouvernement du Japon est très conscient du fait que la chasse à la baleine risque d'entraîner des frictions entre nos deux pays. Le Gouvernement du Japon est désireux de résoudre cette question le plus rapidement et le plus amicalement possible afin d'éviter une confrontation que risquerait d'entraîner l'application des règlements internes des États-Unis, à savoir la Section 8(a) de la Loi sur la protection des pêcheurs (l'Amendement Pelly) et la Section 201 (e)(2) de la Loi Magnuson sur la préservation et la gestion des pêcheries (l'Amendement Packwood-Magnuson).

Malheureusement, bien que les deux Gouvernements soient parties à la Convention internationale pour la réglementation de la chasse à la baleine (la Convention)² et partagent les mêmes préoccupations en ce qui concerne les objectifs généraux de la Convention, il existe entre nos deux pays un certain nombre de différences de points de vue ayant leur origine dans nos cultures et nos situations intérieures différentes.

Le renvoi 1 ajouté en 1981 au Tableau 3 de l'Annexe à la Convention interdit les opérations commerciales de chasse au cachalot parmi les populations de baleine dans la division occidentale de la partie nord de l'océan pacifique à moins que la Commission internationale de la chasse à la baleine n'en décide autrement. Le Gouvernement du Japon a présenté son objection au renvoi 1, conformément aux dispositions du paragraphe 3 de l'Article V de ladite Convention, et en conséquence il n'est pas lié par le renvoi en question.

Le Gouvernement du Japon, reconnaissant qu'il est nécessaire de prendre des mesures, notamment le retrait de l'objection susmentionnée afin d'éviter une confrontation entre nos deux pays, demande une extension de la période allouée afin de minimiser les difficultés économiques et sociales de ceux qui se livrent à des opérations commerciales de chasse au cachalot. Le Gouvernement du Japon s'efforce de prendre des mesures appropriées afin de réaliser cet objectif.

En conséquence, j'ai l'honneur de vous demander, dans la mesure où les opérations commerciales japonaises de chasse à la baleine sont menées de la façon indiquée dans les dispositions présentées dans le compte rendu des entretiens mis en Annexe à la présente let-

tre, de ne pas considérer que la chasse à la baleine réduira l'efficacité de la Convention ou son programme de préservation et de ne pas leur appliquer les dispositions de l'Amendement Pelly ou de l'Amendement Packwood-Magnuson.

Veillez agréer, etc. ...

YASUSHI MURAZUMI
Chargé d'affaires par interim du Japon

L'Honorable M. Malcom Baldrige
Ministre du Commerce
Washington, DC

Le 13 novembre 1984

COMPTE RENDU DES ENTRETIENS SUR LES OPÉRATIONS COMMERCIALES
DE CHASSE AU CACHALOT DANS LA DIVISION OCCIDENTALE DE LA
PARTIE NORD DU PACIFIQUE, 1-12 NOVEMBRE 1984, WASHINGTON, D.C.

Monsieur John V. Byrne, Délégué des États-Unis à la Commission internationale de la
chasse à la baleine

Monsieur Hiroya Sano, Directeur général, Agence des pêcheries, Ministère de l'agri-
culture, de la foresterie et des pêcheries, du Gouvernement du Japon

Les derniers entretiens bilatéraux en date entre le Japon et les États-Unis se sont dérou-
lés à Washington, D.C. du premier au 12 novembre 1984, en vue de déterminer la probabili-
té, conformément aux lois et règlements en vigueur dans chaque pays, de parvenir à un
accord par lequel le Ministre du commerce des États-Unis s'abstiendrait de "certifier" les
opérations de chasse au cachalot effectuées par des nationaux japonais, si leur prise s'effec-
tue dans le cadre de l'objection du Gouvernement du Japon au renvoi 1 au Tableau 3 de
l'Annexe à la Convention internationale pour la réglementation de la chasse à la baleine si-
gnée en 1946 (la Convention). Les chefs des délégations sont d'accord pour reconnaître
qu'un arrangement de ce genre serait possible, sous réserve de la résolution satisfaisante de
certains points et de l'approbation et mise en oeuvre par les autorités compétentes de chaque
Gouvernement. Les points essentiels d'un tel arrangement seraient les suivants:

1. A. Le Gouvernement du Japon pourrait permettre la prise de 400 cachalots pendant
chacune des saisons de cabotage de 1984 et 1985, sous réserve des dispositions relatives
aux prises auxiliaires de femelles comme indiqué au renvoi 2 au Tableau 3 de l'Annexe (no-
vembre 1983) à la Convention.

B. Si, au 13 décembre 1984, le Gouvernement du Japon retire son objection, laquelle
a été exprimée le 9 novembre 1981 en vertu du paragraphe 3 de l'Article V de la Conven-
tion, entrée en vigueur au plus tard le 1er avril 1988, les États-Unis ne considéreront pas
que la chasse au cachalot autorisée en vertu de l'alinéa A ci-dessus réduit l'efficacité de la
Convention ou son programme de préservation et, en conséquence, ne certifieront pas ladite
activité conformément aux dispositions de la Section 8(a) de la Loi de protection des pé-
cheurs (l'Amendement Pelly) ou à la Section 201(e)(2) de la Loi Magnuson sur la
préservation et la gestion de la pêche (Amendement Packwood-Magnuson).

2. Si, au 1er avril 1985, le Gouvernement du Japon retire son objection, présentée le 4
novembre 1982, au paragraphe 10(e) de l'Annexe, de sorte que les opérations commerciales
japonaises de chasse à la baleine le long du littoral cesseront après la saison 1987 et que les
opérations commerciales japonaises de chasse à la baleine en haute mer cesseront après la
saison 1986/87, les États-Unis ne considéreront pas que les opérations de chasse à la balei-
ne spécifiées ci-après réduiront l'efficacité de la Convention ou son programme de préser-
vation et ne certifieront pas lesdites opérations en vertu de l'Amendement Pelly ou de
l'Amendement Packwood-Magnuson, à condition que lesdites opérations de chasse à la ba-
leine ne portent que sur les espèces et les limites de prise ci-après:

Saisons de chasse à la baleine côtière 1986 et 1987

Division occidentale, cachalot dans le nord de l'océan pacifique -- 200 par saison, sous réserve des dispositions sur les prises auxiliaires de femelles indiquées au renvoi 2 au Tableau 3 de l'Annexe (en date de novembre 1983) à la Convention;

Baleine minke mer d'Okhotsk - partie occidentale de l'océan pacifique -- limites de prise jugées acceptables par le Gouvernement des États-Unis après consultation avec le Gouvernement du Japon;

Baleines de la partie occidentale du nord de l'océan pacifique -- limites de prise jugées acceptables par le Gouvernement des États-Unis après consultation avec le Gouvernement du Japon; et

Saisons de chasse à la baleine en haute mer 1985/1986 et 1986/1987

Baleines minke dans l'hémisphère sud -- limites de prise jugées acceptables par le Gouvernement des États-Unis après consultation avec le Gouvernement du Japon.

II

Le Ministre du Commerce au Chargé d'affaires du Japon par intérim

LE MINISTÈRE DU COMMERCE

WASHINGTON, DC

13 Novembre 1984

Monsieur le Chargé d'affaires,

J'ai l'honneur de vous accuser réception de votre lettre concernant les récentes consultations bilatérales entre des représentants de nos Gouvernements concernant les prises de cachalots effectuées par des Japonais parmi les populations de baleine dans la division occidentale de la partie nord de l'océan pacifique et la possibilité que, en tant que Ministre du commerce, je certifie toute prise confirmée de cachalots par des nationaux japonais.

Après consultation avec le représentant des États-Unis à la Commission internationale de la chasse à la baleine, j'ai conclu que les prises commerciales de baleines effectuées par des nationaux japonais dans les limites et dans les conditions indiquées dans le compte rendu des entretiens mis en annexe à votre lettre ne diminueraient pas l'efficacité de la Convention internationale pour la réglementation de la chasse à la baleine de 1946 ni son programme de préservation.

Les rapports du Comité scientifique de la Commission internationale de la chasse à la baleine, ainsi que la décision prise en 1982 par ladite Commission, visant à autoriser des prises de 450 et 400 baleines pour les saisons de chasse côtière de 1982 et 1983 respectivement, indiquent que lesdites opérations, conformément au paragraphe 1 du compte rendu des entretiens susmentionné ne vont pas à l'encontre des objectifs essentiels de la Commission internationale de la chasse à la baleine en matière de préservation. D'autre part, dans ma décision selon laquelle les opérations commerciales de chasse à la baleine effectuées par des nationaux japonais conformément au paragraphe 2 du compte rendu des entretiens susmentionné ne porteraient pas atteinte aux objectifs essentiels de préservation de la Commission internationale de la chasse à la baleine, j'ai noté l'objectif évident de la Commission dans la décision de cette dernière de reporter la date d'entrée en vigueur du paragraphe 10(e).

Cet arrangement ne signifie pas que les opérations de chasse à la baleine effectuées par des nationaux japonais au-delà des contingents 1984-85 concernant les baleines minke dans l'hémisphère sud échappent à la certification. Je demande instamment au Gouvernement du Japon de respecter ce contingent. En outre, le retrait par votre Gouvernement de ses objections au renvoi 1 au Tableau 3 et au paragraphe 10(e) de l'Annexe seraient irrévocables, nonobstant leurs dates d'entrée en vigueur futures.

Enfin, le Gouvernement des États-Unis, en ce qui concerne sa décision d'accepter ou de rejeter les limites de prises pour les saisons de chasse côtières 1986 et 87 et pour les saisons de chasse en mers profondes 1985/86 et 1986/87 envisagées au paragraphe 2 du comp-

te rendu des entretiens, sera guidé par les derniers en date des contingents adoptés par la Commission internationale de la chasse à la baleine avant lesdites saisons.

Les derniers entretiens que nous avons eus avec le Gouvernement du Japon ont eu pour objectif d'encourager l'application par le Gouvernement du Japon de toutes les dispositions de l'Annexe à la Convention. Nous considérons que les dispositions du paragraphe 10(e) de ladite Annexe sont d'une importance vitale s'agissant de la préservation et de la gestion rationnelles des populations restantes de baleine dans le monde. Cette opinion est exprimée dans la lettre envoyée par le Président Reagan en 1981 à chacun des membres de la Commission internationale de la chasse à la baleine pour les encourager à adopter des mesures allant dans le sens des dispositions du paragraphe 10(e) de l'Annexe.

Veuillez agréer, etc. ...

Le Ministre du Commerce,
MALCOM BALDRIGE

Monsieur Yasushi Murazumi
Chargé d'affaires du Japon par intérim
Ambassade du Japon
Washington, DC

Annex 64: Aide Mémoire, Joint Démarche by Argentina, Australia, Austria, Belgium, Brazil, Finland, France, Germany, Ireland, Italy, Mexico, Monaco, New Zealand, Peru, Portugal, Spain, Sweden, the Netherlands, the United Kingdom, June 2005

AIDE MEMOIRE

JOINT DEMARCHE BY ARGENTINA, AUSTRALIA, AUSTRIA, BELGIUM,
BRAZIL, FINLAND, FRANCE, GERMANY, IRELAND, ITALY, MEXICO,
MONACO, NEW ZEALAND, PERU, PORTUGAL, SPAIN, SWEDEN, THE
NETHERLANDS, THE UNITED KINGDOM

We, the Governments of Argentina, Australia, Austria, Belgium, Brazil, Finland, France, Germany, Ireland, Italy, Mexico, Monaco, New Zealand, Peru, Portugal, Spain, Sweden, the Netherlands and the United Kingdom wish to take this opportunity to inform the Government of Japan of our serious concerns about Japan's reported plans to substantially increase its scientific whaling programme in the Antarctic (JARPA II).

We are extremely disappointed that Japan proposes to more than double the annual take of minke whales, and for the first time, to include a take of 50 fin and 50 humpback whales. We consider the proposed expansion of JARPA II to be unjustified and unnecessary.

We do not believe that such lethal research is necessary – a great deal of information is already available on whale diets and further data, especially on stocks or populations, can be obtained by non-lethal means. We have serious reservations as to the scientific value of the JARPA II programme.

Some humpback populations, which will be targeted by JARPA II, belong to small, vulnerable populations in the South Pacific. Even small takes could have a damaging and disproportionate effect on their recovery and survival. We would like to remind the Government of Japan that Fin and Humpback whales remain classified as 'vulnerable' in the IUCN Red List of Threatened Species. Consequently we have grave concerns that JARPA II will undermine the long-term viability of these whale species. Furthermore, about 1/3 to 1/2 of the humpback whales that will be taken by JARPA II from 2007/08 onwards are known to researchers on the east and west coasts of Australia in catalogued photographs and are part of existing research programs which will be seriously undermined by JARPA II.

While noting Japan's position that its activities are not inconsistent with the International Convention for the Regulation of Whaling, we consider that Japan's scientific whaling undermines the intent of the moratorium on commercial whaling, the Southern Ocean Whale Sanctuary and international efforts to conserve and protect whales. As the Japanese Government will recall, the International Whaling Commission (IWC) has repeatedly adopted Resolutions urging Japan to refrain from carrying out lethal scientific whaling, most recently in 2003 (Resolution 2003-2).

We strongly urge Japan to cease its lethal research on whales.

June 2005.

Annex 65: Aide Mémoire, Joint Démarche by Australia, Brazil, France, Mexico, Portugal, Spain, the United Kingdom et al, January 2006

AIDE MEMOIRE

JOINT DEMARCHE BY AUSTRALIA, BRAZIL, FRANCE, MEXICO, PORTUGAL,
SPAIN, THE UNITED KINGDOM et al

We, the Governments of Australia, Brazil, France, Mexico, Portugal, Spain, the United Kingdom (et al), present our compliments to the Government of Japan and wish to take this opportunity to inform the Government of Japan of our serious concerns about the implementation of the second Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II), which started on November 8, 2005.

We are deeply concerned that the Government of Japan intends to more than double the annual catch of minke whales, and for the first time, include the catch of 50 fin whales and 50 humpback whales under JARPA II. We would like to remind the Government of Japan that fin and humpback whales remain classified as "endangered" and "vulnerable" respectively in the IUCN Red List of Threatened Species. We therefore have grave concerns that JARPA II will undermine the long-term viability of these species.

We deeply regret that more than 6,800 Antarctic minke whales have already been killed in Antarctic waters under the 18 years of JARPA compared with a total of 840 whales killed globally by Japan for scientific research in the 31 year period prior to the moratorium on commercial whaling.

While noting Japan's position that its JARPA programs are not inconsistent with the International Convention for the Regulation of Whaling, we once again emphasize that it is unnecessary to use lethal means in order to obtain scientific information, equally good data can be secured in almost all cases by non-lethal techniques. We therefore consider that Japanese scientific whaling undermines international efforts to conserve and protect whales. For that reason, the International Whaling Commission has adopted several resolutions urging the Government of Japan to refrain from carrying out lethal scientific whaling.

In that sense, we recall the most recent Resolution 2005/1, adopted during the 57th Annual Meeting of the IWC, which urges the Government of Japan to revise its JARPA II programme so that any information needed to meet scientific objectives be obtained using non-lethal means. We also refer to Resolution 2003/3 which affirms that no additional JARPA programs should be considered until the Scientific Committee has completed an in-depth review of the results of JARPA. Through the Buenos Aires Declaration, signed on the very same day the JARPA II fleet sailed, some Latin-American IWC and Southern Hemisphere Member States committed to promote South Atlantic and South Pacific Whale Sanctuaries and reaffirmed that Special Permit whaling should be terminated and scientific research limited to non-lethal methods.

Taking into consideration the environmental concerns of the Government of Japan in several areas, we strongly urge Japan to join the international community, cease all its lethal scientific research on whales and assure the return of the vessels which are implementing JARPA II.

January, 2006.

Annex 66: Aide Mémoire, Joint Démarche by Argentina, Australia, Austria, Belgium, Brazil, Chile, the Czech Republic, Finland, France, Germany, Hungary, Ireland, Italy, Luxembourg, Mexico, Monaco, the Netherlands, New Zealand, Peru, Portugal, San Marino, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and the United States, 15 December 2006

AIDE MEMOIRE

JOINT DEMARCHE BY ARGENTINA, AUSTRALIA, AUSTRIA, BELGIUM, BRAZIL, CHILE, THE CZECH REPUBLIC, FINLAND, FRANCE, GERMANY, HUNGARY, IRELAND, ITALY, LUXEMBOURG, MEXICO, MONACO, THE NETHERLANDS, NEW ZEALAND, PERU, PORTUGAL, SAN MARINO, SLOVENIA, SPAIN, SWEDEN, SWITZERLAND, THE UNITED KINGDOM AND THE UNITED STATES

We, the Governments of Argentina, Australia, Austria, Belgium, Brazil, Chile, the Czech Republic, Finland, France, Germany, Hungary, Ireland, Italy, Luxembourg, Mexico, Monaco, the Netherlands, New Zealand, Peru, Portugal, San Marino, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and the United States, present our compliments to the Government of Japan and wish to express our serious concerns about the departure of Japan's whaling fleet on 15 November to Antarctic waters for a further season of lethal scientific whaling as part of the implementation of the second Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II).

We are deeply concerned that the Government of Japan plans to kill up to 935 Antarctic minke whales and 10 fin whales this year. While noting Japan's position that its JARPA scientific whaling programmes are not inconsistent with the International Convention for the Regulation of Whaling, we emphasise that it is unnecessary to use lethal means in order to obtain scientific information and that adequate data for management purposes can be obtained using non-lethal techniques. We consider that Japan's scientific whaling undermines international efforts to conserve and protect whales. For that reason, the International Whaling Commission (IWC) has repeatedly adopted resolutions urging Japan to refrain from lethal scientific whaling.

We are also alarmed that from next year JARPA II is due to include 50 fin whales and 50 humpback whales. We would like to remind the Government of Japan that fin and humpback whales remain classified as "endangered" and "vulnerable" respectively in the International Union for the Conservation of Nature (IUCN) Red List of Threatened Species. We therefore reiterate our grave concerns that JARPA II will undermine the long-term viability of these species in Areas IV, V and VI of the Southern Ocean.

In addition, an estimated one third to a half of the humpback whales that will be taken by JARPA II from 2007/2008 onwards are known to researchers on the east and west coasts of Australia, New Zealand, New Caledonia and Tonga and have been catalogued in photographs as part of existing non-lethal scientific research programmes. We are seriously concerned that these non-lethal scientific research programmes will be undermined by JARPA II. Furthermore, some of the humpbacks which will be targeted by JARPA II on their summer feeding grounds are likely to belong to small, vulnerable populations that over winter in the South Pacific, including some that remain critically endangered.

We repeat our countries' strong opposition to lethal scientific whaling. We recognise and commend the environmental concern of the Government of Japan in many areas and strongly urge Japan to cease immediately all its lethal scientific research on whales under JARPA II.

15 December 2006

Annex 67: Aide Mémoire, Joint Démarche by Australia, Argentina, Austria, Belgium, Brazil, Chile, Costa Rica, Croatia, Czech Republic, Ecuador, European Commission, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, Mexico, Monaco, the Netherlands, New Zealand, Portugal, San Marino, Slovak Republic, Slovenia, Spain, Sweden, the United Kingdom and Uruguay, “Objection to Japan’s Scientific Whaling”, 21 December 2007

AIDE MEMOIRE

JOINT DEMARCHE BY AUSTRALIA, ARGENTINA, AUSTRIA, BELGIUM, BRAZIL, CHILE, COSTA RICA, CROATIA, CZECH REPUBLIC, ECUADOR, EUROPEAN COMMISSION, FINLAND, FRANCE, GERMANY, GREECE, IRELAND, ISRAEL, ITALY, LUXEMBOURG, MEXICO, MONACO, THE NETHERLANDS, NEW ZEALAND, PORTUGAL, SAN MARINO, SLOVAK REPUBLIC, SLOVENIA, SPAIN, SWEDEN, UNITED KINGDOM AND URUGUAY

Objection to Japan’s Scientific Whaling

We, the Governments of Australia, Argentina, Austria, Belgium, Brazil, Chile, Costa Rica, Croatia, Czech Republic, Ecuador, European Commission, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, Mexico, Monaco, The Netherlands, New Zealand, Portugal, San Marino, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom and Uruguay present our compliments to the Government of Japan and wish to take this opportunity to inform the Government of Japan of our strong objection to the resumption of the second Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II), which started on November 18, 2007.

We recall previous International Whaling Commission (IWC) Resolutions calling for the withdrawal of the JARPA II proposal, and most recently Resolution 2007/01, adopted during the Commission’s 59th Annual Meeting, which urges the Government of Japan to suspend indefinitely the lethal aspects of JARPA II conducted within the Southern Ocean Whale Sanctuary.

We deeply regret the decision of the Government of Japan to disregard repeated requests from the international community to refrain from issuing special permits for research involving the killing of whales within the Southern Ocean Sanctuary, which was established by the IWC in 1994.

We are profoundly concerned that the Government of Japan has endorsed the take of up to 935 minke, 50 fin and 50 humpback whales under JARPA II this season – the largest lethal scientific take ever – despite the IUCN (World Conservation Union) classification of fin whales as ‘endangered’ (at a very high risk of extinction) and humpback whales as ‘vulnerable’ (at a high risk of extinction). The IWC recognised the threatened status of humpbacks several decades ago, enacting a ban on whaling of the species in 1963. We have grave concerns that JARPA II will undermine any future recovery and the long term viability of these species.

We note with concern that the program will target species that are essential to the whale watching industries of several IWC Member States, and the subjects

of long-term non-lethal research programs which are yielding wide-ranging insights into the species' biology and ecology.

We deeply regret the large numbers of whales taken under JARPA programs which, notably, outnumber the whales killed globally by Japan for scientific research in the 31 year period prior to the entry into force of the moratorium on commercial whaling. We are extremely concerned that more than 11,000 whales have been killed under scientific programs since the introduction of the moratorium. We call upon all members of the IWC to fully adhere to the word and spirit of the whaling moratorium, which is intended to protect *all whale species worldwide*.

While we note Japan's position that its JARPA programs are consistent with the text of the International Convention for the Regulation of Whaling, we once again draw attention to the availability of non-lethal research techniques to obtain adequate data for biological, population and management purposes, rendering Japan's lethal research programme unnecessary.

Taking into consideration the Government of Japan's environmental credentials in several areas, we strongly urge Japan to join the international community and cease all its lethal scientific research on whales, and assure the immediate return of the vessels which are implementing JARPA II.

Annex 68: Australian Government Press Release, "Antarctica and Whaling",
24 August 1936

FOR THE PRESS.

24 AUG 1936

ANTARCTICA AND WHALING.

A Proclamation was issued today bringing immediately into operation the Australian Antarctic Territory Acceptance Act 1933. The Commonwealth Whaling Act was proclaimed on 21st August, and regulations thereunder are being issued today.

The main interest of the Commonwealth in the Antarctic at present is the need for the regulation of whaling. At the close of the 1933-34 whaling season, it became apparent that the stock of whales in the Antarctic was becoming seriously depleted, and this position has since become accentuated according to advice recently received. The main cause of this depletion has been the increase of catches due to the establishment and growth of the pelagic system. Under the old method, captured whales had to be taken back to the base for treatment - an operation which limited considerably the scope of whaling - but under the pelagic system mobile factories are sent out accompanied by chasers, and the whales are treated on the spot.

By agreement between the United Kingdom and the Norwegian Governments the 1935/36 whaling season in antarctic waters was curtailed, and a further agreement for the curtailment of whaling south of the Equator is now under consideration.

With a view to the regulation of whaling, an international convention was drawn up under the auspices of the League of Nations in 1931. It was signed on behalf of Australia, and the Commonwealth is now in a position to proceed with ratification so far as it is concerned. The convention has been ratified by 25 countries including the United Kingdom, Norway, United States of America, Finland, France, Canada, South Africa and New Zealand.

Commonwealth

Commonwealth control under the constitution only extends to extra-territorial waters and the Antarctic territory. For the purpose of complete control of whaling the co-operation of the States is necessary, and the Commonwealth has been in correspondence with the States with a view to the adoption by them of ancillary legislation so that whaling within territorial limits may also be effectively regulated. Queensland has passed an Act, and the matter is to be discussed at the Conference between Commonwealth and State Ministers which is to open at Adelaide on 26th August.

The situation in relation to the Antarctic was discussed at the Imperial Conference in 1926, and was subsequently given further consideration by the United Kingdom and Commonwealth Governments. As a result, on 7th February, 1933, an Imperial Order-in-Council was made by His Majesty the late King, affirming sovereign rights over the Antarctic territory, other than Adélie Land, situated south of the 60th degree of South Latitude and lying between the 160th and 45th degrees of East Longitude, and placing such territory under the authority of the Commonwealth of Australia subject to the passing of legislation by the Commonwealth Parliament and the fixing of a date by Proclamation. The coastline of the Australian sector is approximately 2,000 miles in length, and the area is about 3,000,000 square miles.

Apart from whaling, there is need also for some protection of other Antarctic fauna and birds. The Antarctic territory has considerable actual and potential economic importance. The territory now known as Alaska, much of which lies within the Arctic Circle and which yielded such a large quantity of gold, was once regarded as valueless. It is known that there are some fine seams of coal in the Antarctic territory and there may be other important mineral wealth. Further, it is believed that from a study of the melting of ice, reliable inferences could be drawn as to the character of the coming agricultural seasons in Australia, and the amount of rain that may be anticipated.

Annex 69: Memorandum from the Informal Inter-agency Committee on the Regulation of Whaling to the Commodity Problems Committee, 'Draft of American Proposal for the International Whaling Conference, Washington, November 20, 1946', 15 October 1946, [excerpt]

within Department and by CFC.

October 15, 1946

MEMORANDUM

To: THE COMMODITY PROBLEMS COMMITTEE
From: The Informal Inter-agency Committee on the Regulation of Whaling.
Re: Draft of American Proposal for the International Whaling Conference, Washington, November 20, 1946.

The Informal Inter-agency Committee on the Regulation of Whaling was called together by the Department of State during July 1946 for the purpose of developing the preparatory work for the International Whaling Conference, which has been called by the United States Government to meet in Washington on November 20, 1946. The following agencies and officers have participated, at one time or another, in the work of the Committee:

Department of State: William E. S. Flory (IR),
Charles I. Bevans (Ls/T), William L. Breese (IC),
John W. Halderman (OA), Wendell L. Hayes (OA),
Arthur R. Himbert (IR), Warren Kelchner (IC)
Lyle L. Schmitter (IC), Clarke L. Willard (IC).

Smithsonian Institution: Dr. Remington Kellogg

Department of the Interior: Dr. H. J. Deason,
Donald J. Chaney, Dr. Raymond N. Gilmore.

Coast Guard: Captain Harold C. Moore.

Department of Commerce: Charles E. Lund, Miss Dorothy P. Bayles.

Department of Agriculture: Fred J. Rossiter,
Russell S. Kifer.

The Committee herewith submits the American Proposals for a whaling convention (Exhibit 1) for your approval. In view of the early date of the Conference and the necessity that foreign delegations have an opportunity to give this

SECRET

- 9 -

1937 agreement with the following changes: (a) 2 inspectors instead of 1 are required for factory vessels. (b) The penalty, i.e. forfeiture provision involving the proceeds from illegal whales, is established. This is in conformity with U.S. regulations, and it was deemed appropriate to make the penalties of all contracting Governments uniform in their severity. This latter provision will require new domestic legislation in a number of countries. Therefore, in an effort to avoid undue delays in ratification by such Governments, Article 10(5) of these Proposals provides that domestic legislation is not required for a period of two years after ratification or accession by any Government.

Article VII

This is based on a number of paragraphs of earlier agreements and is expanded and revised to cover all statistical reporting requirements. The nature of the data required from the Governments will be specified in the Schedule. The form and manner of reporting will be specified by the Commission.

Article VIII

The first section of this Article is the same as Article 10 of the 1937 agreement. It exempts certain scientific investigations from the conservation regulations applicable to ordinary commercial operations. The last two sentences are new and are administrative in character.

The remainder of the Article is new and stresses the importance of scientific research and encourages dissemination of this information.

Article IX

Annex 70: Speech of Dean Acheson to the Opening Plenary Session of the International Whaling Conference, 20 November 1946

DEPARTMENT OF STATE

FOR THE PRESS

NOVEMBER 20, 1946
No. 830

WELCOMING SPEECH BY ACTING SECRETARY OF STATE
DEAN ACHESON AT THE OPENING PLENARY SESSION OF THE
INTERNATIONAL WHALING CONFERENCE AT 11:30 A.M.,
NOVEMBER 20, 1946.

I am very pleased to have this opportunity of welcoming you here today on behalf of the Government of the United States of America.

The convening of this International Whaling Conference is gratifying not only because it marks an advance in international cooperative effort in whale conservation - but because it illustrates increasing cooperation among the nations in the solution of international conservation problems.

The work of this Conference is - first, to provide for the coordination and codification of existing regulations and - second, the establishment of effective administrative machinery for the modification of these regulations from time to time in the future as conditions may require.

Previous conferences have recognized that there is an urgent need to establish permanent international machinery to deal with whaling questions and to avoid the frequent formal international conferences and protocols which have characterized the history of whaling regulations. The United States proposals for a permanent whaling commission and for codification of existing regulations are a manifestation of the recognized need to place whale conservation on a permanent basis. These proposals have been presented to you as a basis for your deliberations at this Conference.

While the immediate task of this Conference is primarily of an administrative character in establishing the long-range machinery for regulation, the broad objectives of whale conservation must be constantly borne in mind. In wide perspective, all of the nations of the world have responsibility and interest in maintaining and developing the whale stocks. These whale stocks are a truly international resource in that they belong to no single nation nor to a group of nations, but rather they are the wards of the entire world. It is true that the whalers of only a few nations have, during any one period, chosen to exploit this common resource. It has not been so long since this country was the primary exploiter of the world's stocks, and I must admit that I look back, with regret, to the fact that the world in that era did not take its conservation responsibilities more seriously.

Whale conservation must be an international endeavor, and it is our hope that each nation, whatever its direct or indirect interest in whaling, will ultimately participate actively in the great task of fostering and developing this common resource.

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As I turn this meeting over to you I do so with no question as to the outcome. You are not ~~new~~ to this problem of whale conservation and development - many of you are authors of this program - most of you have worked closely together for many years in striving toward the best possible means for preserving international whale stocks and all of you are here with similar purpose and similar aims.

May I then wish you great success in the work of this Conference and a pleasant stay here.

Annex 71: Government of the United States, 1971 Pelly Amendment to the
Fisherman's Protective Act of 1967, 22 USC § 1978

UNITED STATES CODE

1982 EDITION

CONTAINING THE GENERAL AND PERMANENT LAWS
OF THE UNITED STATES, IN FORCE
ON JANUARY 14, 1983

Prepared and published under authority of Title 2, U.S. Code, Section 285b
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VOLUME NINE

TITLE 22—FOREIGN RELATIONS AND INTERCOURSE
TO
TITLE 25—INDIANS

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1983

is made to the separate account under section 1975(b)(2) of this title with respect to an unpaid claim and such claim is later paid, the amount so paid shall be covered into the Treasury as miscellaneous receipts. All payments under this section shall be made first out of such fees so long as they are available and thereafter out of funds which are hereby authorized to be appropriated to such account to carry out the provisions of this section.

(d) Finality of determinations; insured losses

All determinations made under this section shall be final. No payment under this section shall be made with respect to any losses covered by any policy of insurance or other provision of law.

(e) Effective date

The provisions of this section shall be effective until October 1, 1984; except that payments may be made under this section only to such extent and in such amounts as are provided in advance in appropriation Acts.

(f) Definitions

For the purposes of this section—

(1) the term "Secretary" means the Secretary of Commerce;

(2) the term "owner" includes any charterer of a commercial fishing vessel.

(Aug. 27, 1954, ch. 1018, § 7, as added Aug. 12, 1968, Pub. L. 90-482, § 1, 82 Stat. 729, and amended Oct. 26, 1972, Pub. L. 92-569, § 4, 86 Stat. 1183; Oct. 27, 1972, Pub. L. 92-594, § 1, 2, 86 Stat. 1313; Apr. 21, 1976, Pub. L. 94-273, § 3(17), 90 Stat. 377; Nov. 18, 1977, Pub. L. 95-194, § 1, 91 Stat. 1413; Sept. 18, 1978, Pub. L. 95-376, § 1, 92 Stat. 714; Oct. 28, 1981, Pub. L. 97-68, § 1, 95 Stat. 1040.)

AMENDMENTS

1981—Subsec. (c), Pub. L. 97-68, § 1(1), added provision that fees not currently needed for payments under this section be kept on deposit or invested in obligations of, or guaranteed by, the United States and that all revenues accruing from such deposits or investments be credited to the separate account established in the Treasury of the United States to carry out the provisions of this section.

Subsec. (c), Pub. L. 97-68, § 1(2), substituted "October 1, 1984" for "October 1, 1981".

1978—Subsec. (e), Pub. L. 95-376 substituted "October 1, 1981; except that payments may be made under this section only to such extent and in such amounts as are provided in advance in appropriation Acts" for "October 1, 1978".

1977—Subsec. (e), Pub. L. 95-194 substituted "October 1, 1978" for "October 1, 1977".

1976—Subsec. (e), Pub. L. 94-273 substituted "October" for "July".

1972—Subsec. (c), Pub. L. 92-569 added provision that amounts paid subsequent to transfer to the separate account be covered into the Treasury as miscellaneous receipts.

Subsec. (c), Pub. L. 92-594, § 1, extended the provisions of this section until July 1, 1977, and struck and provisions relating to the issuance of regulations.

Subsec. (f)(1), Pub. L. 92-594, § 2, substituted "Secretary of Commerce" for "Secretary of the Interior".

EFFECTIVE DATE OF 1972 AMENDMENT

Amendment by Pub. L. 92-569 applicable with respect to seizure of vessels of the United States occurring on or after Oct. 26, 1972; see section 6 of Pub. L.

92-569, set out as an Effective Date of 1972 Amendment note under section 1972 of this title.

Section Referred to in Other Sections

This section is referred to in section 1975 of this title.

§ 1978. Restriction on importation of fishery or wildlife products from countries which violate international fishery or endangered or threatened species programs

(a) Certification to President

(1) When the Secretary of Commerce determines that nationals of a foreign country, directly or indirectly, are conducting fishing operations in a manner or under circumstances which diminish the effectiveness of an international fishery conservation program, the Secretary of Commerce shall certify such fact to the President.

(2) When the Secretary of Commerce or the Secretary of the Interior finds that nationals of a foreign country, directly or indirectly, are engaging in trade or taking which diminishes the effectiveness of any international program for endangered or threatened species, the Secretary making such finding shall certify such fact to the President.

(3) In administering this subsection, the Secretary of Commerce or the Secretary of the Interior, as appropriate, shall—

(A) periodically monitor the activities of foreign nationals that may affect the international programs referred to in paragraphs (1) and (2);

(B) promptly investigate any activity by foreign nationals that, in the opinion of the Secretary, may be cause for certification under paragraph (1) or (2); and

(C) promptly conclude, and reach a decision with respect to; any investigation commenced under subparagraph (B).

(4) Upon receipt of any certification made under paragraph (1) or (2), the President may direct the Secretary of the Treasury to prohibit the bringing or the importation into the United States of fish products (if the certification is made under paragraph (1)) or wildlife products (if the certification is made under paragraph (2)) from the offending country for such duration as the President determines appropriate and to the extent that such prohibition is sanctioned by the General Agreement on Tariffs and Trade.

(b) Notification to Congress

Within sixty days following certification by the Secretary of Commerce or the Secretary of the Interior, the President shall notify the Congress of any action taken by him pursuant to such certification. In the event the President fails to direct the Secretary of the Treasury to prohibit the importation of fish products or wildlife products of the offending country, or if such prohibition does not cover all fish products or wildlife products of the offending country, the President shall inform the Congress of the reasons therefor.

(c) **Importation of fish products from offending country prohibited.**

It shall be unlawful for any person subject to the jurisdiction of the United States knowingly to bring or import into, or cause to be imported into, the United States any fish products or wildlife products prohibited by the Secretary of the Treasury pursuant to this section.

(d) **Periodic review by Secretary of Commerce or Secretary of the Interior; termination of certification; notice.**

After making a certification to the President under subsection (a) of this section, the Secretary of Commerce or the Secretary of the Interior, as the case may be, shall periodically review the activities of the nationals of the offending country to determine if the reasons for which the certification was made no longer prevail. Upon determining that such reasons no longer prevail, the Secretary concerned shall terminate the certification and publish notice thereof, together with a statement of the facts on which such determination is based, in the Federal Register.

(e) **Penalties; forfeiture; customs laws.**

(1) Any person violating the provisions of this section shall be fined not more than \$10,000 for the first violation, and not more than \$25,000 for each subsequent violation.

(2) All fish products and wildlife products brought or imported into the United States in violation of this section, or the monetary value thereof, may be forfeited.

(3) All provisions of law relating to the seizure, judicial forfeiture, and condemnation of a cargo for violation of the customs laws, the disposition of such cargo or the proceeds from the sale thereof, and the remission or mitigation of such forfeitures shall apply to seizures and forfeitures incurred, or alleged to have been incurred, under the provisions of this section, insofar as such provisions of law are applicable and not inconsistent with this section.

(f) **Enforcement.**

(1) Enforcement of the provisions of this section prohibiting the bringing or importation of fish products and wildlife products into the United States shall be the responsibility of the Secretary of the Treasury.

(2) The judges of the United States district courts, and United States magistrates may, within their respective jurisdictions, upon proper oath or affirmation showing probable cause, issue such warrants or other process as may be required for enforcement of this chapter and regulations issued thereunder.

(3) Any person authorized to carry out enforcement activities hereunder shall have the power to execute any warrant or process issued by any officer or court of competent jurisdiction for the enforcement of this section.

(4) Such person so authorized shall have the power—

(A) with or without a warrant or other process, to arrest any persons subject to the jurisdiction of the United States committing in his presence or view a violation of this section or the regulations issued thereunder;

(B) with or without a warrant or other process, to search any vessel or other convey-

ance subject to the jurisdiction of the United States, and, if as a result of such search he has reasonable cause to believe that such vessel or other conveyance or any person on board is engaging in operations in violation of this section or the regulations issued thereunder, then to arrest such person.

(5) Such person so authorized, may seize, whenever and wherever lawfully found, all fish products and wildlife products brought or imported into the United States in violation of this section or the regulations issued thereunder. Fish products and wildlife products so seized may be disposed of pursuant to the order of a court of competent jurisdiction, or, if perishable, in a manner prescribed by regulations promulgated by the Secretary of the Treasury after consultation with the Secretary of Health and Human Services.

(g) **Regulations.**

The Secretary of the Treasury, the Secretary of Commerce, and the Secretary of the Interior are each authorized to prescribe such regulations as he determines necessary to carry out the provisions of this section.

(h) **Definitions.**

As used in this section—

(1) The term "person" means any individual, partnership, corporation, or association.

(2) The term "United States", when used in a geographical sense, means the continental United States, Alaska, Hawaii, Puerto Rico, and the United States Virgin Islands.

(3) The term "international fishery conservation program" means any ban, restriction, regulation, or other measure in effect pursuant to a multilateral agreement which is in force with respect to the United States, the purpose of which is to conserve or protect the living resources of the sea.

(4) The term "fish products" means fish and marine mammals and all products thereof taken by fishing vessels of an offending country whether or not packed, processed, or otherwise prepared for export in such country or within the jurisdiction thereof.

(5) The term "international program for endangered or threatened species" means any ban, restriction, regulation, or other measure in effect pursuant to a multilateral agreement which is in force with respect to the United States, the purpose of which is to protect endangered or threatened species of animals.

(6) The term "wildlife products" means fish (other than those to which paragraph (4) applies) and wild animals, and parts (including eggs) thereof, taken within an offending country and all products of any such fish and wild animals, or parts thereof, whether or not such products are packed, processed, or otherwise prepared for export in such country or within the jurisdiction thereof. Such term does not include any wild animal or fish if brought or imported into the United States for scientific research.

(7) The term "taking" means—

(A) for purposes of subsection (a)(2) of this section—

- (i) to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or
- (ii) to attempt to engage in any such conduct with respect to,

animals to which an international program for endangered or threatened species applies; and

(B) for purposes of paragraph (B), any conduct described in subparagraph (A)(i), whether or not such conduct is legal under the laws of the offending country, undertaken with respect to any wild animal.

(Aug. 27, 1954, ch. 1018, § 8, as added Dec. 23, 1971, Pub. L. 92-219, 85 Stat. 788, and amended Pub. L. 90-578, title IV, § 402(b)(2), Oct. 17, 1968, 82 Stat. 1108; Sept. 18, 1978, Pub. L. 95-378, § 2, 92 Stat. 714; Aug. 15, 1979, Pub. L. 96-51, § 3(b), 93 Stat. 408; Oct. 17, 1979, Pub. L. 96-88, title V, § 509(c), 93 Stat. 695.)

REFERENCES IN TEXT

The customs laws referred to in subsec. (a)(3) are classified generally to Title 18, Customs Duties.

AMENDMENTS

1979—Subsec. (a): Pub. L. 96-81, § 2(b)(1) added par. (2) and redesignated former par. (2) as (4).

Subsec. (b): Pub. L. 96-81, § 2(b)(2), (3), added subsec. (b) former subsec. (d) (redesignated (e)).

Subsecs. (c) to (h): Pub. L. 96-81, § 2(b)(2), redesignated subsec. (d) through (g) as (e) through (h), respectively.

1978—Subsec. (a): Pub. L. 95-378, § 2(1), designated existing provisions as par. (1), and in par. (1) as so designated struck out a provision enabling the President, upon receipt of certification, to direct the Secretary of the Treasury to prohibit importation of fish products of the offending country for as long as he determines appropriate and to the extent such prohibition is sanctioned by the General Agreement on Tariffs and Trade, and added pars. (2) and (3).

Subsec. (h): Pub. L. 95-378, § 2(2), added "or the Secretary of the Interior" following "Secretary of Commerce" and added "or wildlife products" following "fish products" in two places.

Subsec. (e): Pub. L. 95-378, § 2(3), added "or wildlife products" following "fish products".

Subsec. (d)(2): Pub. L. 95-378, § 2(4), added "and wildlife products" following "fish products".

Subsec. (c)(1): Pub. L. 95-378, § 2(5)(A), added "and wildlife products" following "fish products".

Subsec. (c)(4)(B): Pub. L. 95-378, § 2(5)(B), added "or other conveyance" after "vessel" wherever appearing.

Subsec. (e)(5): Pub. L. 95-378, § 2(5)(A), (C), added "and wildlife products" following "all fish products", and substituted "fish products and wildlife products" for "any fish products".

Subsec. (f): Pub. L. 95-378, § 2(6), added reference to the Secretary of Commerce and the Secretary of the Interior.

Subsec. (g)(2): Pub. L. 95-378, § 2(7)(A), (B), substituted "in effect" for "in force", and "which is in force with respect to the United States" for "to which the United States is a signatory party".

Subsec. (g)(5) to (7): Pub. L. 95-378, § 2(7)(C), added pars. (5) to (7).

CHANGE OF NAME

"United States magistrates" was substituted for "United States commissioners" in subsec. (f)(2), pursuant to Pub. L. 90-578, title IV, § 402(b)(2), Oct. 17, 1968, 82 Stat. 1110. See chapter 43 (431 et seq.) of Title 28, Judiciary and Judicial Procedure.

"Secretary of Health and Human Services" was substituted for "Secretary of Health, Education, and Welfare" in subsec. (f)(3) pursuant to section 509(c) of Pub. L. 96-88, which is classified to section 209(c) of Title 20, Education.

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in title 18 section 421.

§ 1973. Fishermen's Protective Fund

There is created a Fishermen's Protective Fund which shall be used by the Secretary of the Treasury to reimburse owners of vessels for amounts certified to him by the Secretary of State under section 1973 of this title. The amount of any claim or portion thereof collected by the Secretary of State from any foreign country pursuant to section 1975(a) of this title shall be deposited in the fund and shall be available for the purpose of reimbursing vessel owners under section 1973 of this title, except that if a transfer to the fund was made pursuant to section 1973(b)(1) of this title with respect to any such claim, an amount from the fund equal to the amount so collected shall be covered into the Treasury as miscellaneous receipts. There is authorized to be appropriated to the fund (1) the sum of \$3,000,000 to provide initial capital, and (2) such additional sums as may be necessary from time to time to supplement the fund in order to meet the requirements of the fund.

(Aug. 27, 1954, ch. 1018, § 9, as added Oct. 26, 1972, Pub. L. 92-569, § 5, 86 Stat. 1183.)

EFFECTIVE DATE

Section applicable with respect to seizure of vessels of the United States occurring on or after Oct. 26, 1972, except that reimbursements under section 1973 of this title may be made from the fund established by this section with respect to seizure of vessels occurring after Dec. 31, 1970 and before Oct. 26, 1972, if no reimbursement was made before Oct. 26, 1972, see section 6 of Pub. L. 92-569, set out as an Effective Date of 1972 Amendment note under section 1972 of this title.

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in sections 1974, 1975, 1980 of this title.

§ 1980. Compensation for loss or destruction of commercial fishing vessel or gear

(a) Definitions

For purposes of this section—

(1) The terms "fishery", "fishery conservation zone", "fishing", "fishing vessel", "Secretary", and "vessel of the United States" shall each have the same respective meaning as is given to such terms in section 3 of the Magnuson Fishery Conservation and Management Act (16 U.S.C. 1802).

(2) The term "fishing gear" means any equipment or appurtenance which is necessary for the carrying out of fishing operations by a fishing vessel, whether or not such equipment or appurtenance is attached to such vessel.

(3) The term "fund" means the Fishing Vessel and Gear Damage Compensation Fund established under subsection (f) of this section.

Annex 72: Government of the United States, 1979 Packwood-Magnuson Amendment to the *Fishery Conservation and Management Act of 1976*, 16 USC § 1821

UNITED STATES CODE

1982 EDITION

SUPPLEMENT IV



CONTAINING THE GENERAL AND PERMANENT LAWS OF
THE UNITED STATES, ENACTED DURING THE
98TH CONGRESS AND 99TH CONGRESS

Prepared and published under authority of Title 2, U.S. Code, Section 285b,
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JANUARY 15, 1983, TO JANUARY 5, 1987

VOLUME TWO

TITLE 11—BANKRUPTCY

TO

TITLE 18—CRIMES AND CRIMINAL PROCEDURE

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1987

98-002 D-87 — 1 (Vol. 2)

AMENDMENTS

1986—Par. (4), Pub. L. 99-659, § 101, in provisions under heading "Mollusks" substituted "Arctica islandica" for "Arctica islandica" and under heading "Sponges" substituted "Spongia cheiris" for "Hippopongia canaliculata".

PARS. (6) to (8), Pub. L. 99-659, § 101(a), added par. (6), redesignated former pars. (6) and (7) as (7) and (8), respectively, and struck out former par. (8) which defined "fishery conservation zone" as the fishery conservation zone established by section 1811 of this title.

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in sections 917a, 3377, 3601 of this title; title 22 sections 1971, 1980; title 46 App. section 1371.

SUBCHAPTER II—UNITED STATES RIGHTS AND AUTHORITY REGARDING FISH AND FISHERY RESOURCES

§ 1811. United States sovereign rights to fish and fishery management authority

(a) In the exclusive economic zone

Except as provided in section 1812 of this title, the United States claims, and will exercise in the manner provided for in this chapter, sovereign rights and exclusive fishery management authority over all fish, and all Continental Shelf fishery resources, within the exclusive economic zone.

(b) Beyond the exclusive economic zone

The United States claims, and will exercise in the manner provided for in this chapter, exclusive fishery management authority over the following:

(1) All anadromous species throughout the migratory range of each such species beyond the exclusive economic zone; except that that management authority does not extend to any such species during the time they are found within any foreign nation's territorial sea or exclusive economic zone (or the equivalent), to the extent that that sea or zone is recognized by the United States.

(2) All Continental Shelf fishery resources beyond the exclusive economic zone.

(As amended Pub. L. 99-659, title I, § 101(b), Nov. 14, 1986, 100 Stat. 3706.)

REFERENCES IN TEXT

This chapter, referred to in text, was in the original "this Act", meaning Pub. L. 94-265, Apr. 13, 1976, 90 Stat. 331, as amended, known as the Magnuson Fishery Conservation and Management Act, which is classified principally to this chapter. For complete classification of this Act to the Code, see Short Title note set out under section 1801 of this title and Tables.

AMENDMENTS

1986—Pub. L. 99-659 amended section generally. Prior to amendment, section read as follows: "There is established a zone contiguous to the territorial sea of the United States to be known as the fishery conservation zone. The inner boundary of the fishery conservation zone is a line coterminous with the seaward boundary of each of the coastal States, and the outer boundary of such zone is a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured."

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in sections 773, 1021, 1812, 1827 of this title; title 46 section 12101.

§ 1812. Exclusion for highly migratory species

The sovereign rights and exclusive fishery management authority asserted by the United States under section 1811 of this title over fish do not include, and may not be construed to extend to, highly migratory species of fish.

(As amended Pub. L. 99-659, title I, § 101(b), Nov. 14, 1986, 100 Stat. 3707.)

AMENDMENTS

1986—Pub. L. 99-659 amended section generally. Prior to amendment, section read as follows: "The United States shall exercise exclusive fishery management authority, in the manner provided for in this chapter, over the following:

"(1) All fish within the fishery conservation zone.

"(2) All anadromous species throughout the migratory range of each such species beyond the fishery conservation zone; except that such management authority shall not extend to such species during the time they are found within any foreign nation's territorial sea or fishery conservation zone (or the equivalent), to the extent that such sea or zone is recognized by the United States.

"(3) All Continental Shelf fishery resources beyond the fishery conservation zone."

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in section 1811 of this title.

§ 1813. Omitted

CODIFICATION

Section, Pub. L. 94-265, title I, § 103, Apr. 13, 1976, 90 Stat. 336, which related to exclusion of highly migratory species of fish from exclusive fishery management authority, was omitted in the general revision of this subchapter by section 101(b) of Pub. L. 99-659. See section 1812 of this title.

SUBCHAPTER III—FOREIGN FISHING AND INTERNATIONAL FISHERY AGREEMENTS

§ 1821. Foreign fishing

(a) In general

After February 28, 1977, no foreign fishing is authorized within the exclusive economic zone, or for anadromous species or Continental Shelf fishery resources beyond the exclusive economic zone, unless such foreign fishing—

[See main edition for text of (1) to (3); (b)]

(c) Governing international fishery agreements

Foreign fishing described in subsection (a) of this section may be conducted pursuant to an international fishery agreement (other than a treaty) which meets the requirements of this subsection if such agreement becomes effective after application of section 1823 of this title. Any such international fishery agreement shall hereafter in this chapter be referred to as a "governing international fishery agreement". Each governing international fishery agreement shall acknowledge the exclusive fishery management authority of the United States, as

set forth in this chapter. It is the sense of the Congress that each such agreement shall include a binding commitment, on the part of such foreign nation and its fishing vessels, to comply with the following terms and conditions:

[See main edition for text of (1)]

(2) The foreign nation, and the owner or operator of any fishing vessel fishing pursuant to such agreement, will abide by the requirement that—

[See main edition for text of (A) to (C)]

(D) United States observers required under subsection (1) of this section be permitted to be stationed aboard any such vessel and that all of the costs incurred incident to such stationing, including the costs of data editing and entry and observer monitoring, be paid for, in accordance with such subsection, by the owner or operator of the vessel;

[See main edition for text of (E) to (G)]

and will abide by any other monitoring, compliance, or enforcement requirement related to fishery conservation and management which is included in such agreement.

[See main edition for text of (3) and (4)]

(d) Total allowable level of foreign fishing

[See main edition for text of (1) to (3)]

(4) If with respect to any harvesting season for any United States fishery for which the total allowable level of foreign fishing is determined under paragraph (2)(B), the Secretary, in consultation with the Secretary of State, approves the determination by any appropriate fishery management council that any portion of the optimum yield for that harvesting season will not be harvested by vessels of the United States, the Secretary of State, in accordance with subsection (e) of this section, may allocate such portion for use during that harvesting season by foreign fishing vessels; except that if—

[See main edition for text of (A) and (B)]

then such portion or part may be allocated for use by foreign fishing vessels in such succeeding harvesting season. The determinations required to be made under subparagraphs (A) and (B) of the preceding sentence shall be made by the Secretary in consultation with the Secretary of State and on the basis of any recommendation¹ of any appropriate fishery management council.

¹So in original. Probably should be "recommendation".

(e) Allocation of allowable level

(1)(A) The Secretary of State, in cooperation with the Secretary, may make allocations to foreign nations from the total allowable level of foreign fishing which is permitted with respect to each fishery subject to the exclusive fishery management authority of the United States.

[See main edition for text of (B) to (D)]

(E) The determinations required to be made under subparagraphs (A) and (D)(ii), and the apportionments required to be made under subparagraph (C), with respect to a foreign nation shall be based on—

(D) whether, and to what extent, such nation imposes tariff barriers or nontariff barriers on the importation, or otherwise restricts the market access, of both United States fish and fishery products, particularly fish and fishery products for which the foreign nation has requested an allocation;

(ii) whether, and to what extent, such nation is cooperating with the United States in both the advancement of existing and new opportunities for fisheries exports from the United States through the purchase of fishery products from United States processors, and the advancement of fisheries trade through the purchase of fish and fishery products from United States fishermen, particularly fish and fishery products for which the foreign nation has requested an allocation;

[See main edition for text of (iii)]

(iv) whether, and to what extent, such nation requires the fish harvested from the exclusive economic zone for its domestic consumption;

[See main edition for text of (v) to (viii), (2)]

(f) Foreign allocation report

The Secretary and the Secretary of State shall prepare and submit a report to the Congress and the President, not later than July 1 of each year, setting forth—

[See main edition for text of (1) and (2); (g) and (h)]

(1) Full observer coverage program

(1)(A) Except as provided in paragraph (2), the Secretary shall establish a program under which a United States observer will be stationed aboard each foreign fishing vessel while that vessel is engaged in fishing within the exclusive economic zone.

(B) The Secretary shall by regulation prescribe minimum health and safety standards that shall be maintained aboard each foreign fishing vessel with regard to the facilities provided for the quartering of, and the carrying out of observer functions by, United States observers.

(2) The requirement in paragraph (1) that a United States observer be placed aboard each foreign fishing vessel may be waived by the Secretary if he finds that—

(A) in a situation where a fleet of harvesting vessels transfers its catch taken within the exclusive economic zone to another vessel, aboard which is a United States observer, the stationing of United States observers on only a portion of the harvesting vessel fleet will provide a representative sampling of the by-catch of the fleet that is sufficient for purposes of determining whether the requirements of the applicable management plans for the by-catch species are being complied with;

(B) the time during which a foreign fishing vessel will engage in fishing within the exclusive economic zone will be of such short duration that the placing of a United States observer aboard the vessel would be impractical; or

[See main edition for text of (C), (3) to (5)]

(6) If at any time the requirement set forth in paragraph (1) cannot be met because of insufficient appropriations, the Secretary shall, in implementing a supplementary observer program:

(A) certify as observers, for the purposes of this subsection, individuals who are citizens or nationals of the United States and who have the requisite education or experience to carry out the functions referred to in paragraph (3);

(B) establish standards of conduct for certified observers equivalent to those applicable to Federal personnel;

(C) establish a reasonable schedule of fees that certified observers or their agents shall be paid by the owners and operators of foreign fishing vessels for observer services; and

(D) monitor the performance of observers to ensure that it meets the purposes of this chapter.

(j) Recreational fishing

Notwithstanding any other provision of this subchapter, foreign fishing vessels which are not operated for profit may engage in recreational fishing within the exclusive economic zone and the waters within the boundaries of a State subject to obtaining such permits, paying such reasonable fees, and complying with such conditions and restrictions as the Secretary and the Governor of the State (or his designee) shall impose as being necessary or appropriate to insure that the fishing activity of such foreign vessels within such zone or waters, respectively, is consistent with all applicable Federal and State laws and any applicable fishery management plan implemented under section 1855 of this title. The Secretary shall consult with the Secretary of State and the Secretary of the Department in which the Coast Guard is operating in formulating the conditions and restrictions to be applied by the Secretary under the authority of this subsection.

(Pub. L. 94-265, title II, § 201, Apr. 13, 1976, 90 Stat. 337; Pub. L. 95-354, § 4(1)-(4), Aug. 28, 1978, 92 Stat. 519, 520; Pub. L. 96-61, § 3(a), Aug. 15, 1979, 93 Stat. 407; Pub. L. 96-118, § 5, Nov. 16, 1979, 93 Stat. 860; Pub. L. 96-561, title II, §§ 230, 231(a), 236, Dec. 22, 1980, 94 Stat. 3296, 3297, 3299; Pub. L. 97-453, § 2(a), Jan. 12, 1983, 96 Stat. 2481; Pub. L. 98-623, title IV,

§ 404(1), (2), Nov. 8, 1984, 98 Stat. 3408; Pub. L. 99-386, title II, § 206(a), Aug. 22, 1986, 100 Stat. 823; Pub. L. 99-659, title I, §§ 101(c)(2), 103(a), Nov. 14, 1986, 100 Stat. 3707, 3708.)

REFERENCES IN TEXT

This chapter, referred to in subssecs. (c), (d)(2)(A), (e)(2)(C)(iii), (h), and (i)(3), (6)(D), was in the original "this Act", meaning Pub. L. 94-265, Apr. 13, 1976, 90 Stat. 331, as amended, known as the Magnuson Fishery Conservation and Management Act, which is classified principally to this chapter. For complete classification of this Act to the Code, see Short Title note set out under section 1801 of this title and Tables.

AMENDMENTS

1986—Subsecs. (a), (e)(1)(E)(iv), Pub. L. 99-659, § 101(c)(2), substituted "exclusive economic zone" for "fishery conservation zone" in two places.

Subsec. (f), Pub. L. 99-386 substituted "The Secretary and the Secretary of State shall" for "The Secretary of the Treasury, in cooperation with the Secretary and the Secretary of State, shall".

Subsec. (i)(1), Pub. L. 99-659, § 101(c)(2), 103(a)(1), (2), designated existing provisions as subpar. (A), substituted "exclusive economic zone" for "fishery conservation zone", and added subpar. (B).

Subsec. (i)(2)(A), Pub. L. 99-659, § 101(c)(2), substituted "exclusive economic zone" for "fishery conservation zone".

Subsec. (i)(2)(B), Pub. L. 99-659, § 103(a)(3), amended subpar. (B) generally. Prior to amendment, subpar. (B) read as follows: "with respect to any foreign fishing vessel while it is engaged in fishing within the fishery conservation zone—

"(i) the time during which the vessel engages in such fishing will be of such short duration that the placing of a United States observer aboard the vessel would be impractical; or

"(ii) the facilities of the vessel for the quartering of a United States observer, or for the carrying out of observer functions, are so inadequate or unsafe that the health or safety of an observer would be jeopardized; or"

Subsec. (j), Pub. L. 99-659, § 101(c)(2), substituted "exclusive economic zone" for "fishery conservation zone".

1984—Subsec. (d)(4), Pub. L. 98-623, § 404(1), substituted "may allocate" for "shall allocate" in provisions preceding subpar. (A).

Subsec. (e)(1)(A), Pub. L. 98-623, § 404(2)(A), substituted "may make allocations to foreign nations from" for "shall determine the allocation among foreign nations of".

Subsec. (e)(1)(E)(i), Pub. L. 98-623, § 404(2)(B), substituted "both United States fish and fishery products" for "United States fish or fishery products" and inserted ", particularly fish and fishery products for which the foreign nation has requested an allocation".

Subsec. (e)(1)(E)(ii), Pub. L. 98-623, § 404(2)(C), amended provisions generally, thereby substituting "in both the advancement of existing and new opportunities for fisheries exports from the United States through the purchase of fishery products from United States processors, and the advancement of fisheries trade through the purchase of fish and fishery products from United States fishermen, particularly fish and fishery products for which the foreign nation has requested an allocation" for "in the advancement of existing and new opportunities for fisheries trade, particularly through the purchase of fish or fishery products from United States processors or from United States fishermen".

1983—Subsec. (c)(2)(D), Pub. L. 97-453, § 2(a)(1), amended par. (D) generally, substituting "United States observers required under subsection (i) of this section be permitted to be stationed aboard any such vessel and that all of the costs incurred incident to

Annex 73: Government of the United States, Subcommittee on Human Rights and International Organizations of the Committee on Foreign Affairs, United States House of Representatives, *Review of the 34th International Whaling Commission Meeting*, (16 September 1982) [evidence of Mr John Byrne, United States IWC Commissioner extracted]

**REVIEW OF THE 34TH INTERNATIONAL WHALING
COMMISSION MEETING**

HEARING
BEFORE THE
SUBCOMMITTEE ON HUMAN RIGHTS
AND INTERNATIONAL ORGANIZATIONS
OF THE
COMMITTEE ON FOREIGN AFFAIRS
HOUSE OF REPRESENTATIVES
NINETY-SEVENTH CONGRESS
SECOND SESSION

SEPTEMBER 16, 1982

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STATEMENT OF HON. JOHN V. BYRNE, ADMINISTRATOR, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION AND U.S. COMMISSIONER TO THE INTERNATIONAL WHALING COMMISSION

Mr. BYRNE. Thank you, Mr. Bonker. It is a pleasure to be here.

I think that before I discuss the testimony, I really should say that it was a pleasure to participate on the delegation with a great many very dedicated, very competent people. I think we all felt at the conclusion of the meeting a sense of satisfaction, having achieved a number of our objectives, and I want to go on record as saying that I appreciate the efforts of all of those who were involved.

It is a pleasure to be here to present comments on the Whaling Commission activities.

I have a prepared statement which I would like to include in the record, I will just summarize it at this point; I will respond to questions following the statement.

In one sense we have achieved a great deal. It is also very obvious to me and I think to those of us who were at the meeting that there is considerable work that needs to be done to insure that the objectives achieved in Brighton will, in fact, be implemented.

Before the Brighton meeting I had the opportunity to visit with you to discuss three of our objectives: the moratorium, the procedures for establishing whale sanctuaries, and the creation of an aboriginal whaling management scheme. Essentially all of these objectives were achieved at the Brighton meeting.

I should point out, however, that this was not solely a U.S. achievement. Over the past several years the United States has been acting in the company of a number of expert delegations who are devoted to these same goals and objectives, and it was a collective effort that succeeded in Brighton.

During the next few years further action will be required on the part of all of the nations attempting to achieve those goals.

Ten years ago, as you pointed out, we first proposed the moratorium. At that time the IWC was significantly different than it is now. It has increased in membership. It has increased in scope. I think the character and the quality of the membership has changed. At the present time the vast majority is essentially a whale conservation majority, and I think the results of the recent meeting demonstrate that.

On July 23, by a vote of 25 to 7 with 5 countries abstaining, a cessation of commercial whaling was adopted, to take effect as of 1985-86 for the pelagic and 1986 coastal whaling seasons. The Commission's decision was taken with the understanding that catch limits will be established during the 3-year transition period, in accordance with the recommendations of the Scientific Committee and the provisions of the current management procedures.

The postponement of a moratorium for 3 years will provide the whaling industries in affected nations with the time needed to cease their effort in whaling in what we hope will be an orderly fashion.

The cessation, as it is called, is to be reviewed by 1990 to determine its effect on whale stocks. I am submitting, for the record

tables which reflect the newly established catch limits and the trend in catch limits over time.¹

I think that we face several challenges in the next 3 years as we attempt to implement the moratorium. One is to maintain the integrity of the International Whaling Commission. The second is to achieve the cessation of commercial whaling, which was passed in Brighton. I suspect that the affected countries may very well file objections to the decisions that were made. As of today, it is our information that no nations have filed objections.

The deferral of the cessation will serve to encourage the whaling countries to continue to participate in the IWC as the appropriate forum for whale conservation. It will also make it possible for us to maintain the dialogs and to exert influence that we believe will be essential to achieve the cessation at the time projected.

With respect to sanctuaries, there was substantial discussion and effort at the IWC meeting to establish guidelines for creating sanctuaries. The prime objective set forth was to identify areas in which individual or groups of whale species would be protected from whaling for specified periods of time in order to insure the long term conservation of whales as well as to enable us to conduct research and collect information in a systematic fashion.

The guidelines will be used to review proposals for sanctuaries which may be submitted to the IWC in the future.

I might mention here that this was an item which was discussed in a very intense fashion. There was considerable concern on the part of many nations that the IWC would impose pressure on them to develop sanctuaries in their own coastal waters. There was a strong expression of the right of the coastal nation to maintain jurisdiction over the waters off its coast, and so although the sanctuary issue may at one time seem a rather simple issue, it in fact turned out not to be so.

With respect to the aboriginal subsistence whaling scheme, we again were successful in having a system established which would provide management principles and procedures to govern aboriginal subsistence whaling. This formally recognized the distinction between commercial and aboriginal subsistence whaling. These guidelines codify the IWC's practice of attempting to strike a proper balance between the needs of aboriginal people who depend on limited whaling to meet subsistence cultural and nutritional needs, and the conservation needs of the whales.

The guidelines require the management of such hunting so as to provide for the recovery of depleted whale populations. The Commission agreed to establish a standing subcommittee of the Technical Committee to review aboriginal subsistence whaling needs and provide this information to the Commission in much the same way that the Scientific Committee provides its advice.

I should point out that in the activities at the Brighton meeting, the Alaska Eskimo Whaling Commission contributed substantially to the effort, and we regard that particular Commission as essential to the implementation of the scheme as it pertains to aboriginal whaling along the North Slope of Alaska.

¹ See appendixes 8 and 9.

There is one fundamental conclusion that I personally came to during the course of the meeting: It was that although we achieved significant strides at the IWC meeting, the efforts needed to really achieve a moratorium will take place outside the IWC forum and during the time between meetings.

For this reason, we have taken several actions since the July meeting to prepare to implement the moratorium. Within my agency, we have designated Mr. Dean Swanson to serve as the International Whaling Commission coordinator, or lieutenant to me, in continuing to pursue activities on a regular basis to achieve the moratorium.

We regard the cooperation of all countries that are currently IWC members as essential, not only those that may be classified as the conservation countries, but also the whaling countries, if we are to achieve the cessation.

I have personally written letters to all of the IWC Commissioners, regardless of their position on whaling, indicating the need for continued cooperation, stressing to those conservation-minded nations that it is essential that they maintain their activity level within the IWC, and stressing to the whaling countries that it is our very serious intent to achieve the moratorium and to use the tools available to us to do that.

I do not expect any significant changes in the membership of the IWC over the next year or so. It is my hope that any changes would be an increase in the membership rather than a decrease.

The matter of objection is one which must be addressed. It is quite likely that a number of whaling countries will object. Perhaps we can address this topic more fully in the question period which will follow.

With respect to the issues that will greet us as we meet again in Brighton in July 1983, it would not surprise me at all to see rather creative measures taken by the whaling countries to erode the position we have taken with respect to the cessation. We will be faced with a major issue with respect to the implementation of the aboriginal whaling management scheme, and I think the U.S. delegation will have a significant chore in determining catch limits for bowhead whaling in 1984 and beyond.

With respect to the aboriginal whaling management scheme, I have been in contact with the chairman of the Technical Committee whose responsibility includes the establishment of the standing Subcommittee on Aboriginal Subsistence Needs, to express our interest in this particular activity, and to assist in the conduct of the work of this new group.

It is too early to predict what will happen with respect to sanctuaries, but I believe the meeting which I must say was generated by the activity of the Connecticut Cetacean Society concerning the nonconsumptive use of whales, will be a very valuable meeting with respect to addressing matters pertaining to sanctuaries and other nonconsumptive uses of whales.

In your statement, Mr. Chairman, you mentioned the matter of the cold harpoon with respect to taking minke whales. The prohibition on the use of this weapon becomes effective beginning with the 1982-83 pelagic and the 1983 coastal whaling seasons. As you know, the ban is the subject of objections by Brazil, Iceland, Japan,

Norway, and the Soviet Union. I believe the U.S. position on this matter is fairly clear. We support the moratorium and will continue to do so.

We have attempted to determine the extent to which these countries will be in compliance with the prohibition. To date, the only information we have is of a secondary nature from Japan, indicating that with respect to the Antarctic minke whaling operations, they do anticipate a very extensive, but not total, use of exploding harpoons. With respect to coastal whaling, the exploding harpoon is apparently not ready for use by the Japanese at this time.

We have explained to these countries the provisions of the Pelly and Packwood-Magnuson amendments which provide for sanctions in the event the Secretary of Commerce determines that a country's nationals are conducting fishing operations, which includes whaling, in a manner that diminishes the effectiveness of an international fishery conservation program, including that of the IWC.

In your letter of invitation, Mr. Chairman, you indicated four questions you would like addressed. I believe these have been addressed, but to insure that the record is complete, I would like to address them specifically in summary.

The first was whether any countries are expected to file objections to the decision to enact a cessation of commercial whaling following a 3-year delay. My personal view is that there will be objections filed. It is difficult to say which countries will file them. I would not be surprised to see the major whaling countries do so, certainly the Japanese, possibly the Norwegians, the Icelanders, the South Koreans, and the Soviets.

The second question pertained to whether we foresaw any significant changes in the Commission's membership in the coming year. I do not anticipate any significant change in membership. We will certainly do what we can to insure that this does not happen, that there is not a change which affects the character of the Commission.

The third question pertained to the matter of the cold harpoon and questioned whether the United States should invoke the Pelly and Packwood-Magnuson amendments against violators on the cold harpoon issue. It is my personal belief at this time that this is an issue which we must look at very carefully in view of the importance of the two amendments to achieving the moratorium; I am prepared to discuss this with you following the completion of this statement.

The fourth question concerned the major issues the IWC will face at its next annual meeting in July. I have indicated that I think the moratorium will be an issue until it is implemented. I think that we will see for the United States at least the implementation of the aboriginal whaling scheme and the bowhead whale quotas as significant issues.

It would be an oversight on my part if I did not recognize the importance of the U.S. Congress in helping us to achieve these goals. We have appreciated, and I know that those of the delegation who have been involved much longer than I have, have appreciated the support received by this subcommittee and by the Congress of the United States. It makes the job much easier to know that we have total support behind us.

We will continue to rely upon that support. I am confident we will have it. It has been for me one of the most challenging and the most rewarding experiences to participate on the U.S. delegation in the International Whaling Commission.

This concludes my statement. I would be pleased to address any questions you might have.

[Mr. Byrne's prepared statement follows:]

PREPARED STATEMENT OF HON. JOHN V. BYRNE, ADMINISTRATOR, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, AND U.S. COMMISSIONER, INTERNATIONAL WHALING COMMISSION

Mr. Chairman and members of the subcommittee: Mr. Chairman, it was my pleasure to appear before this subcommittee recently to discuss our preparations and positions for the 34th Annual Meeting of the International Whaling Commission, which was held during the week of July 19 in Brighton, England. It is an even greater pleasure for me to discuss with you today the results of these efforts. I would also like to share my sense of the considerable work that will be required to implement fully the decisions that have been taken by the IWC.

I would like to begin by addressing each of the issues raised in my testimony of a few months ago—the moratorium, the establishment of whale sanctuaries as an IWC management tool, and the IWC aboriginal whaling management scheme. The objectives we had defined around these three issues were all substantially achieved. This accomplishment is a credit to the U.S. Delegation and the indispensable support it has received from you, Mr. Chairman, this subcommittee and other contributors in both Houses of Congress, and representatives of concerned Federal agencies, nongovernmental conservation and animal welfare groups, and the public at large. I should also note that we in the United States have not been alone in these efforts. We have been joined, over the past several years, by dedicated and skilled delegations from other conservation-oriented nations who have exercised leadership and devoted substantial efforts to our common purpose. As a result, the IWC has at last adopted effective conservation goals. The next few years leading to the implementation of these IWC decisions will, however, require continued diligence. I sincerely believe that we can and will meet this challenge.

THE MORATORIUM

Mr. Chairman, 10 years ago, the IWC was a far different organization than it is today. It had 14 members, employed a single staff person year round at half time, and had an annual budget of less than \$20,000. It did not regulate whaling in the North Atlantic at all, it had no international observer scheme, it established catch limits in terms of the Blue Whale Unit—a measure of whale oil production rather than a whale conservation concept, and it was responsible for the commercial harvesting of approximately 46,000 whales.

Expressing its grave concern over declining whale stocks and the operation of the IWC, the 1972 United Nations Conference on the Human Environment in Stockholm adopted a resolution calling for a strengthened IWC and a 10-year moratorium on commercial whaling by vote of 53 in favor, none opposed, and three abstentions. At the IWC meeting that was held only ten days after the conclusion of the Stockholm meeting, the United States proposed the same 10-year moratorium, but the measure was rejected by a vote of only 4 in favor, with 6 opposed, and 4 abstentions. However disappointing this initial result, the United States was not discouraged. We instead initiated a process of reform which continues to this day. The 1972 IWC meeting agreed to abolish the Blue Whale Unit in favor of management by species and, later, by stocks, to implement an international observer scheme, and establish catch limits for the first time for minke and sperm whales in the Southern Hemisphere. In the ensuing decade, catch limits were established for all stocks of large whales worldwide and reduced by some 73 percent. Factory ships were prohibited from taking whales other than minke, a large whale sanctuary was established in the Indian Ocean, and the use of the inhumane cold harpoon was banned. Over the same period, the Commission Secretariat was expanded to include a full time data analysis staff and accommodate the growth of IWC membership to 39 countries. The vast majority of the current membership, either by change in policy or upon becoming members, has joined the whale conservation cause.

This group of conservation-oriented countries succeeded at the July 1982 meeting in achieving IWC recognition of the need to cease commercial whaling. The poor

state of knowledge about whales and the downward trend in IWC catch limits throughout the 1970's clearly supported our view that the available data base and previous IWC Management practices are totally inadequate to manage whales without incurring unacceptable risks.

The moment came on July 23 when the IWC, by a vote of 25 to 7 with 5 countries abstaining, adopted a cessation of commercial whaling to take effect as of the 1985-86 pelagic and 1986 coastal whaling season.

The Commission's decision was taken with the understanding that catch limits will be established during the 3-year transition period in accordance with the recommendations of the Scientific Committee and the provisions of the current management procedures. The postponement of three years will provide the industry with the time necessary to cease whaling in an ordinary fashion. The "cessation," as it is called, is to be reviewed by 1990 to determine its effect on whale stocks. I am submitting for the record tables reflecting the newly established catch limits and the trend in catch limits over time.

The goals we are striving for will not be realized until we have successfully implemented the cessation. In the meantime, we will face challenges to maintain the integrity of the IWC while achieving the orderly cessation of all countries from commercial whaling. Affected countries may well file objections to the cessation in the period provided for such action in order to preserve their options while considering measures necessary to comply. None have done so to date. The deferral of the cessation serves to encourage these countries to continue to participate in the IWC as the appropriate forum for whale conservation and makes it possible for us to maintain the dialogues and exert the influence that will be essential to achieve the cessation in practice. We are and should be optimistic. The success achieved in Brighton is the best evidence we could have that whales will receive that protection we have urged for so long.

SANCTUARIES

The July 1982 IWC meeting also devoted substantial effort to the development of guidelines for the establishment of IWC whale sanctuaries. The prime objective set forth in the guidelines is to identify areas in which individual or groups of whale species are protected from whaling for a specified period to provide for long-term conservation. Additional objectives related to research and the collection of information are also articulated. The guidelines will be used to review and assess any proposals for sanctuaries that may be submitted to the IWC in the future and should place the process of establishing IWC whale sanctuaries on a firm basis.

ABORIGINAL SUBSISTENCE WHALING SCHEME

Finally, as a result of determined U.S. efforts since 1979, including intensive work over the past 2 years, the IWC established management principles and procedures to govern aboriginal subsistence whaling. These principles and procedures formally recognize the distinction between commercial and aboriginal subsistence whaling and codify the IWC's practice of attempting, where necessary, to strike a proper balance between the needs of aboriginal people who depend on limited whaling to meet subsistence, cultural, and nutritional needs and the conservation needs of the affected whales. They require the management of such hunting so as to provide for the recovery of depleted whale populations. To assist with the implementation of these procedures at the next meeting of the IWC in July 1983 and thereafter, the Commission agreed to establish a standing subcommittee of the Technical Committee to review aboriginal subsistence whaling needs and provide this information to the Commission in much the same way that the Scientific Committee provides advice. The Alaska Eskimo Whaling Commission contributed substantially to achieving this result and we look forward to its continued contributions in helping to implement the scheme.

ACTIVITIES SINCE THE JULY MEETING

Mr. Chairman, our activities since the July 1982 meeting provide an indication of the major issues that can be anticipated for next year's meeting and beyond. As I have indicated, one major challenge for us and our colleagues within the Commission is to facilitate the efforts of the IWC and particularly the whaling countries in implementing the cessation. In this regard, the cooperation of all countries will be required to reflect what I regard as the clear expression of world opinion in favor of a cessation. I have therefore written letters to all Commissioners of countries that joined us on the cessation vote expressing appreciation for their support and

urging continued efforts to achieve our common goal. I expressed U.S. commitment to this result and our desire to work intensively with all IWC members to achieve it.

I do not expect any significant changes in the IWC's membership over the next year. We will work with the existing membership to maintain the integrity and viability of the IWC and its decisions. In this regard, my letters to conservation-oriented Commissioners, as well as letters to their counterparts in the whaling countries expressing our desire to facilitate their compliance with the cessation decision, are being reinforced by personal visits by our embassy officials abroad. We have also been in regular contact with the IWC Secretariat to monitor any official reactions to the July 1982 meeting. To date, there has been no such reaction, but we have been able to be of assistance to the Secretary in clarifying the correct text of several decisions reached last July. The 90-day period to object to these decisions expires on November 4.

A second major issue anticipated for the July 1983 IWC meeting is the implementation of the aboriginal whaling management scheme and the establishment of catch limits to govern bowhead whaling in 1984 and beyond. We are working closely with the concerned Federal agencies, particularly the Department of the Interior, and the Alaska Eskimo Whaling Commission (AEWC) to develop information that will be critical to implementing the management scheme. I have been in contact with the chairman of the IWC Technical Committee, whose responsibility it is to establish the standing subcommittee on aboriginal subsistence need, to express our interest in participating in the planning and conduct of the work of this new body. Within NOAA, we will continue to work with the AEWC to manage the bowhead whale hunt jointly, as provided for under our Cooperative Agreement, with a mind to the need to establish new catch limits for the bowhead whale hunt at the next meeting.

On the matter of sanctuaries, it is too early to predict whether there will be proposals to establish additional IWC whale sanctuaries. I believe, however, that the IWC co-sponsored meeting on the nonconsumptive uses of whales that we proposed should help to develop useful information that complements efforts relating to sanctuaries. This meeting is not yet scheduled but should occur before the July 1983 IWC meeting.

Finally, Mr. Chairman, I would like to make reference to the IWC's ban on the use of cold grenade harpoons to take minke whales. The ban was adopted at the July 1981 IWC meeting and becomes effective beginning with the 1982-83 pelagic and 1983 coastal whaling seasons. The 1982-83 pelagic season starts this November in the Southern Hemisphere. The ban is the subject of objections filed by Brazil, Iceland, Japan, Norway, and the Soviet Union.

The U.S. position on this matter is clear. We supported the ban and continue to do so. We have communicated this position and our concern to each objecting country, urging that every means be explored that would allow the withdrawal of objections. We have also carefully explained the provisions of the Pelly and Packwood-Magnuson Amendments which provide for sanctions in the event the Secretary of Commerce determines that a country's nationals are conducting fishing operations, including whaling, in a manner that diminishes the effectiveness of an international fishery conservation program, including that of the IWC.

CONCLUSION

The achievements at the July 1982 IWC meeting were unmatched in its history. There is a clear and long sought expression of world opinion in the matter of whale conservation. The United States will continue its efforts in the next years to bring the decisions of the IWC into practice and, with the cooperation of all IWC members, enter what I consider to be a bright chapter in the history of conservation.

Mr. Chairman, I want to express to you our appreciation and thanks for your sustained interest and support as we work to achieve the cessation we have sought for so long. We will continue to face challenges to hold the IWC together and to bring into practice the conservation measures already adopted. We will need to rely on the support of the Congress and the American people as we face these challenges.

I would be pleased to answer your questions.

Mr. BONKER. Thank you, Commissioner Byrne. On behalf of the subcommittee I would like to express our appreciation to you as head of the delegation for the extraordinary job you did in this last session, and also our congratulations for finally accomplishing what we have been striving to accomplish all these years in terms

of actually obtaining the necessary three-quarters vote to impose a moratorium.

All of the people who have been involved in this issue came back very excited and optimistic about at last putting an end to commercial whaling in the world. I think for someone who has come in relatively new, you have developed knowledge and competence in this field quickly.

Mr. GEJDENSON. That must be because he is from the Northwest. [Laughter.]

Mr. BONKER. Also, as one who served as part of the delegation in past years, I know how complex and often volatile these issues are. Many people believe that it is just simply a matter of working toward a moratorium. But when you get into the various committees and the scientific data that is necessary, and all of the procedural maneuvers that are involved, it takes someone with total command of the issues if the person is going to be effective in achieving our goals.

So, the subcommittee does appreciate your contribution, Mr. Byrne, and we hope to support your efforts fully to be sure that that moratorium sticks when the critical time comes in late 1985.

I would also like to commend you on your statement. You have anticipated all of my questions and have dealt with them, I think, effectively. But, for the record, it would be wise to pursue in a dialog some of the remaining issues. I guess all of us are interested to see what will happen once we reach the schedule to implement the moratorium.

We are going to have something of a preliminary look at what will happen when the cold harpoon comes into effect in November 1982. Two big events this November, the election and the cold harpoon ban.

Mr. GEJDENSON. It is kind of difficult to decide which one should hold the most priority. [Laughter.]

Mr. BONKER. Well, we will concentrate on whales for the moment. As I understand it, several countries last year filed objections to the ban on the cold harpoon.

You mention in your statement that it might be premature for us to go the distance with certification should this issue be tested. We discussed this the last time you were before the subcommittee. I would really be interested in hearing once again your probable scenario if there is a violation of IWC policy on use of the cold harpoon, and just how far the Department of Commerce would be willing to go in issuing that certification.

Mr. BYRNE. One of the strongest tools the IWC has is that which is in the hands of the United States, notably, the two amendments that include certification and sanctions under certification. The amendments, as I understand them, are brought into effect when it is obvious that an activity on the part of a national of one country or another diminishes the effectiveness of an international fisheries conservation program. In this case we are talking about the conservation of whales.

I do not think there is any issue that faces the IWC which is more important than the total commercial whaling cessation and it would be my position that we should carefully consider using what-

ever sanctions we have before we reach the point of violations of the cessation.

I have a concern that use of the sanctions for anything less than that would diminish the value of the sanctions in insuring that we achieve the total cessation. So I would be very cautious, very careful before proposing that we implement either the Pelly or the Packwood-Magnuson amendments for the cold harpoon issue, even recognizing that it is an important issue, and that we do need to apply pressures on the countries which are involved. We do need to assist them, if that is necessary, in achieving total compliance with the prohibition. But I am not sure that I would be very comfortable in using our strongest tool on this particular issue at this time.

Mr. BONKER. In your statement you say the ban is the subject of objections filed by Brazil, Iceland, Japan, Norway, and the Soviet Union. As I understand it, the ban will be applied first in the context of the 1982 pelagic season in the Southern Hemisphere.

I think there is clear indication that these countries intend to circumvent in whatever way possible the implementation of that ban.

Procedurally, what will happen once that occurs? You say that the ban is the subject of objections filed by these countries. So they file their objections with the IWC, but if they continue to use the cold harpoon during the pelagic season, then they would be in direct violation of the IWC ruling.

Mr. BYRNE. Yes. I do not want to find myself in the position of playing with the wording. My understanding is that the sanctions are really designed to insure the effectiveness of the conservation activities. There is a prescribed procedure for following up on the matter of certification which I very well recall you brought to my attention at our last hearing.

I could, I suppose, take the time to read it from the record, but it is in the record. The prescription is clearly spelled out. We would propose to follow it.

I think the issue does, however, come down to a decision or a judgment as to whether or not certification should be imposed.

Mr. BONKER. I can appreciate your interest in avoiding a preliminary confrontation on the cold harpoon when the real big issue is down the road. But I am also concerned about precedent-setting: what signals we send to whaling nations if we do not fully intend to back IWC quotas and decisions with the only leverage that we have, whether that would be viewed as a weakening of our commitment.

I also wonder if there are not alternatives available to the administration in dealing with this issue. For example, we now import from Japan about \$321 million in fishery products. That is the 1981 figure. And if we are also going to talk about the Packwood-Magnuson amendment and concern ourselves with the total value of landed fish taken within our 200-mile zone, that would amount to \$425 million in value.

So, is it not possible to send the right signal by a partial limitation on fishery product imports, or by a decreased amount of foreign catch within our 200-mile zone, subject to the permit process administered by the Department of Commerce? In other words, rather than going all the way with the ban or de facto of fishing op-

portunities, go at least partially with something to send the right message to Japan?

Mr. BYRNE. I think there are a number of areas of negotiation with these other countries in which the United States does hold some authority that could be used to send a very strong signal to them without actually involving a formal certification process. You have implied that we might use the allocation process itself. It has been suggested that we might use the international fisheries agreements, which do come to the Congress before final approval, to get the attention of these countries.

Mr. GEJDENSON. Certainly, we do not want to leave that impression. You do not want to fire all of your shots in what may be a preliminary battle. But on the other hand, we do not want people to leave here today with a message that says we are going to ignore it because we are going to wait for the final round.

Mr. BYRNE. I suspect that there will be a very strong debate, a very visible debate which will indicate to any country that cares to observe that there is a very strong segment of this population that is very serious about the whaling issue, and that it would be a mistake on their part to assume the nonuse of certification at this time as a sign of weakness; and that when we come to the cessation I think we will find that this country marches fairly closely together and there will not be any question.

Mr. GEJDENSON. I certainly think that for countries exporting significantly into the United States, that this is clearly the kind of issue that could affect all of their products, not simply imports of fish products.

Mr. BONKER. But this is in the context of the two amendments to which he refers. The Pelly amendment applies only to fishery products.

Mr. GEJDENSON. I was thinking more of the public response rather than the government-to-government response. Besides what you do and what we do here, the American people respond in their purchasing habits as the result of, I think, cooperation on this issue. I think if there is a feeling that there is a flagrant abuse of the situation in rejecting what is a reasonable course of action, that the American people may simply boycott to a degree, who knows how large a degree, but to a degree, products from those countries.

Mr. BONKER. Well, I wonder, Mr. Byrne, if you could prepare for the subcommittee a list of policy options that we could anticipate as we move toward November. In other words, we should not be limited to just full implementation of the Pelly and Packwood-Magnuson amendments or no implementation, but maybe some alternatives within our discretion that would make effective our existing laws.

You know, the Foreign Affairs Committee also oversees the Foreign Assistance Act, one provision of which is when we provide credit sales or armaments to another country, it can only use them for defensive purposes; any nondefensive use of those weapons would put that country potentially in violation of our law. We have seen several instances now where once that law was broken, we ignored our own response to it, and clearly set a precedent for other abuse and circumvention of that law. If the law is to have any

effect, it has got to be applied consistently; otherwise it is not going to be effective.

Mr. BYRNE. We would be pleased to provide you with a number of policy steps.

Mr. GEJDENSON. If the chairman would yield for a moment.

Mr. BONKER. Yes, this is your time.

Mr. GEJDENSON. For the great northeast, Connecticut being, I think, the only State that has the whale as its State animal—

Mr. BONKER. Animal or mammal?

Mr. GEJDENSON. Animal. Dr. Barstow led that effort very successfully and very early in Connecticut. Could you tell me a little bit about the global conference that was his idea and what you see happening there?

Mr. BYRNE. Robbins Barstow proposed to us before we went to Brighton that a meeting on the nonconsumptive uses of whales be proposed as an agenda item. We were pleased to do that. We asked him to present it to the Commission, which he did. The Seychelles picked up on the idea and will cooperate with the IWC, and we intend to use Mr. Barstow in this activity, in setting up this conference.

It is not yet scheduled, but it will be prior to the next meeting.

The motivation for this meeting came from the great State of Connecticut, and we were pleased, the United States was pleased, to step in behind Connecticut in achieving this meeting. We think it will be an important meeting.

There are a number of nonconsumptive uses of whales for recreation and research and so on, and it should be a very interesting session.

I might point out, sir, that I grew up in New York State. [Laughter.]

Mr. BONKER. Mr. Byrne, time is running out on the question of aboriginal subsistence whaling and the continuing U.S. dilemma on that issue. Your statement reflects some legislative craftwork that must have come from some of our staff because it is so well done. You stated that the IWC has established management principles and procedures to govern aboriginal subsistence whaling, and you go on to say that it formally recognizes the distinction between commercial and aboriginal subsistence whaling, that you must strike a proper balance between the two.

The Commission has agreed to establish a standing subcommittee, something that we are quite fond of doing here in Congress, to review it further. But other than setting up procedures to deal with it, I still do not know where we stand with respect to aboriginal whaling and particularly the dilemma with bowheads.

Is that subcommittee another way of more or less just providing further review of the issue, or do you foresee more confrontation as we go into next July's session?

Mr. BYRNE. What we were attempting to do was to systematize what had been a rather ad hoc type arrangement with respect to aboriginal subsistence whaling and to set up some guidelines that would be used in allocating whales for this purpose, not only for the Eskimos but for other aboriginal subsistence whaling groups in other countries.

The standing subcommittee on subsistence was designed to provide an impartial overview that would focus on the actual needs, so that needs would be fully understood and could become a factor in determining the quota. The setting of quotas then recognizes that in some cases the whales involved are in some jeopardy as species; but it also recognizes the needs of the aboriginal people.

It was our hope to have the scheme agreed to before we address the next bowhead whale quota, and we were successful in bringing that about. The determination of quotas next year will be the first test of this scheme, and we will have the opportunity to see whether or not we were wise in our adoption of those guidelines.

Mr. BONKER. What do you expect to happen next year when the 3-year block quota on bowheads expires?

Mr. BYRNE. I suspect we are going to have difficulties in establishing quotas for the future. We are attempting to maintain our research effort on bowhead whales to get a better idea of the size of the population and to improve our knowledge of recruitment rates. This knowledge is essential if we are to continue with the aboriginal whaling activities, and we are pursuing this very vigorously.

Mr. BONKER. As I understand it, the U.N. Food and Agriculture Organization observer statement seemed to justify the present position of the whaling countries. Do you find their recommendations having much influence at these sessions?

Mr. BYRNE. The statement that Mr. Gulland made, not only at this session but also at the March session, did not serve the interest of the conservationist nations at all. I regard that personally as his statement and not an endorsed statement by the FAO.

Mr. BONKER. I wonder why he was over there doing it.

Mr. BYRNE. I cannot answer that. I do not know the answer to that.

Mr. BONKER. You made one statement that I appreciated. You said that you were going to continue to monitor any official resolutions to the 1982 meeting, and I think that is terribly important so as to anticipate future developments and what probable actions we will have to take. The chairman would appreciate it if you would keep the subcommittee informed as you monitor these activities so that we can work in concert with you.

Mr. BYRNE. I would be pleased to do that.

Mr. BONKER. I think especially as it relates to the cold harpoon, because that is an issue that is forthcoming and I rather imagine that we will be in something of a confrontation on that. But we will continue to appreciate your own personal commitment, Mr. Byrne, and the really fine work that you have done as the Commissioner of our delegation.

The chairman has a way of picking up all of the little nuances as to what kind of leadership we have had at the various IWC sessions, and by and large it has been very critical. It is a terribly critical group that we send over there in terms of the representation. We know that your work is not lessening regarding the moratorium, but that it will probably intensify over the next couple of years. So we will look forward to continuing to work with you on these matters.

Mr. BYRNE. Thank you very much, Mr. Chairman. It has been a pleasure to be here.

Mr. BONKER. Thank you.

We have three more witnesses. I think we will have them come up as a panel: Craig Van Note, executive vice president of Monitor, Inc.; Phoebe Wray, former executive director and now senior consultant of the Center for Action on Endangered Species and Fran Lipscomb of the Society for Animal Protective Legislation. All three are distinguished and knowledgeable representatives on the whale issue.

Those who are standing, I think we have enough seats in the committee room if you want to find a place.

Welcome, once again, to the subcommittee. I think the last time we heard from you was prior to the 34th session of the IWC when we had an opportunity to hear about your expectations of that session. Now that it is behind us, we are very interested in hearing your remarks and suggestions as we proceed in the postsession period.

The subcommittee would also like to recognize Bob Eisenbud, who is General Counsel of the Marine Mammal Commission, who has been such an important factor in our deliberations at the IWC.

I think, Mr. Van Note, we will begin with you. You are no stranger before the subcommittee, and I am very much looking forward to your testimony this afternoon.

**STATEMENT OF CRAIG VAN NOTE, EXECUTIVE VICE PRESIDENT,
MONITOR, INC.**

Mr. VAN NOTE. Thank you, Mr. Bonker.

As executive vice president of the Monitor Consortium, I am speaking on behalf of 15-member organizations listed in my testimony. We are pleased to appear before this congressional subcommittee today to discuss the momentous decision made by the IWC in July.

Mr. BONKER. Mr. Van Note, excuse me, I am sorry to do this, but I am informed that our other subcommittee hearing picks up at 2:30. So that all witnesses have an opportunity, would you please summarize your remarks?

Mr. VAN NOTE. Yes. I think it would take 1 hour for me to read this, anyway.

By holding these oversight hearings on the whaling issues and by adopting and passing laws and prodding the administration and foreign nations, and acting as a moral force, the Congress has provided the leadership and clout to help the international conservation community hasten the whale-killers out of their deadly business.

There is a certain irony that we are here today, in sight of an end to commercial whaling, 10 years after the U.N. Conference on the Human Environment called unanimously for a 10-year moratorium on whaling. In those 10 years, more than 300,000 whales have been chased down and harpooned.

I would like to address the Pelly amendment. We in the conservation community feel that it has been the Pelly amendment and then, in the last few years, the Packwood-Magnuson amendment as

well, which have given the IWC some teeth for the first time and have brought about the steady reduction of the whale kill from more than 50,000 10 years ago to some 14,000 this year. We would urge that the United States continue to use its full power to pressure the whaling nations to comply with the regulations.

Unfortunately, we see the whaling nations voicing open defiance once again, threatening to file objections to the 1986 whaling ban, and already to the cold harpoon ban. Japan and Norway in particular seem bent on continuing the whale slaughter no matter what. The powerful commercial and labor interests in the fishing industries of those two nations are able to virtually dictate government whaling policy.

The only appropriate response, we feel, is for the United States to impose the Pelly and Packwood-Magnuson amendments on violators of the cold harpoon ban as well as the 1986 whaling ban, and also to immediately respond to any objections that they may file in November to the 1986 ban by reducing their fisheries allocations in our 200-mile zone.

I would call your attention to a recent letter that was sent to Secretary of Commerce Baldrige, signed by 66 Senators, in which they support those actions. I recall that the House sent a similar letter in June to President Reagan, also asking for such strong actions.¹ We commend you highly.

The victory achieved at Brighton resulted from the leadership of the United States, Australia, and the Seychelles, and the strong support of 22 other nations that withstood the considerable pressures from the whaling nations. We are particularly grateful for the dedicated efforts of U.S. Commissioner John Byrne and Deputy Commissioner Tom Garrett in building this whale-saving coalition of nations.

The 1983 whaling quotas set on the last day of the IWC meeting were a major disappointment, however. Instead of following the recommendations of the majority of the Scientific Committee, the Commission set higher quotas on virtually every whale stock. Low quotas adopted by the technical committee in the preliminary action were ignored in favor of high quotas demanded by the whalers.

The conservation countries, which control the majority of votes, all too readily granted the whalers what they wanted. What happened in those cynical final hours of the IWC was that the hard-won scientific basis for determining whale quotas or protection—the new management procedure—was thrown out the window.

By ignoring the scientific recommendations this year, the IWC has set a dangerous precedent for the quota battles in the next 2 years. For example, will the IWC seek to avoid conflict and give the whalers high, unjustified quotas in the hope of winning compliance with the cessation of commercial whaling in 1986?

We fear that such appeasement will only signal weakness to the Japanese, Soviets, Icelanders, and Norwegians. To let up the pressure on the whalers would be a disservice to the 10-year campaign to save the whales, which millions of persons around the world have joined with extraordinary passion. We must not allow politi-

¹ See appendices 2 and 3.

Annex 74: P Birnie, "Legal Aspects of Non-Consumptive Utilisation of Cetaceans" (1983), extracts of unpublished paper presented at the Global Conference on the Non-Consumptive Utilisation of Cetacean Resources, 1 and 5

LEGAL ASPECTS OF NON-CONSUMPTIVE UTILISATION OF CETACEANS

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 - V. Conclusion
- Footnotes

Prepared for Global Conference on the Non-Consumptive Utilisation
of Cetacean Resources - Boston, Massachusetts, USA - June 1983

the recent actions of the European Economic Community (EEC) illustrate these possibilities. As long as any states that are members of such organizations and are also members of the IWC conform to the requirements of the latter, there is considerable scope for regional initiatives, as recently recommended by the International Symposium on Marine Mammals in the Indian Ocean.⁸ Cognisance would have to be taken of such rights as participating states may have over waters within the region that are subject to their sovereignty or jurisdiction, but there is no legal reason why such developments should not take place.

II. Does the International Convention on Regulation of Whaling Become Inapplicable on Termination of Commercial Whaling?

1. Objects and Purposes of the ICRW

Article 5(1) of the ICRW gives the Commission it established (the International Whaling Commission (IWC)), the power to adopt regulations "with respect to the conservation and utilization of whale resources" (emphasis added) without specifying or defining the uses concerned. The Preamble to the Convention, which sets out its objects and purposes, in the light of which the above power, if ambiguous, must be interpreted, states, amongst other things, that the Governments party to it desire:

- (i) to establish a system of international regulation of the whale fisheries to ensure proper and effective conservation and development of whale stocks on the basis of the principles embodied in an earlier agreement and Protocols
- (ii) to conclude a Convention to provide for the proper conservation of whale stocks and thus to make possible the orderly development of the whaling industry.

It would seem that the primary purpose is conservation and development of whale stocks for the secondary objective of enabling the whaling industry to continue in a more orderly fashion. The other parts of the Preamble are directed to recognizing the main problem of that industry - over-exploitation - and the best means for achieving stock development.

Annex 75: G Satake, *Japanese Fisheries and Overseas Fisheries Cooperation in the Era of Globalisation* (Seizankdo-Shoten Publishing Co. Ltd, 1997) [excerpts]

Japanese Fisheries and Overseas Fisheries Cooperation in the Era of Globalisation

By Goroku Satake
(Seizando-Shoten Publishing Company Limited, 1997) [excerpts]

Chapter III Background to the Implementation of Scientific Whaling
– A Suggested Approach to Fisheries Diplomacy –

[113] Between January 1980 and July 1982, I served as Department Head (Fisheries Promotion) and Department Head (Fisheries Policy) at the Japan Fisheries Agency (JFA), after which, between July 1986 and December 1982, I served as the Director-General of the organisation. During this period, I participated in five major rounds of international negotiations. These were the two rounds of negotiations with the Republic of Korea (ROK) on the issue of ROK vessels operating off the coast of Hokkaido; two rounds of negotiations with the United States over liberalisation issues surrounding herring and Alaskan Pollock; and one round of negotiations with the United States over research whaling. Until that time I had no experience in the Japan Fisheries Agency and I had been “domestic use only”, so for me these were extremely valuable experiences. Since I undertook the role of battle commander for two rounds of negotiations, of the five rounds, I still have vivid impressions of the negotiations over the Hokkaido offshore ROK vessel operations problem, which were the first negotiations I led after joining the JFA, and the negotiations over the scientific whaling problem, which was the last job I did in my bureaucratic career.

I consider the events leading up to the implementation of research whaling as worthy of an explanatory lesson in how a chief decision-maker in a central government agency thought and acted with regard to a diplomatic issue that appeared on a daily basis in newspaper headlines and on television.

The implementation of scientific whaling was viewed as the only method available to carry on with the traditions of whaling. Scientific whaling was also suspected by the anti-whaling commentators as being commercial whaling in disguise; it also got the attention of the relevant people worldwide. And, in terms of the administrative process, scientific whaling was able to be managed only by the authority of the Director-General, who was operating on what was pretty much an open test basis.

Added to this, was the fact that the special rights of member countries under Article 8 of the IWC Convention were stated very clearly. The fact was that from a legal point of view it was extremely straightforward and simple, and there were also no barriers whatsoever to its implementation. But as much as this was the case, for the decision maker at the JFA the issue was a troublesome one. As Director-General it was no easy matter for me to make a decision that ran the risk of hearing caustic remarks from the Agriculture Minister or the Prime Minister or the Foreign Minister thanking me for creating a totally unnecessary friction point in the relationship with the United States.

[115] A more intractable problem was the difficulty of having to take on the intangible mood of international public opinion, and, in particular, American public opinion.

With respect to scientific whaling the prime minister at the time, Mr Nakasone instructed me that, "My gut feeling is that 875 whales is somewhat excessive. Don't create an impression that we're being unfair". That was immediately before his visit to the United States at the end of April. The Prime Minister raised the incident in which Japanese officials were met by environmental groups carrying paper-maché models of whales and said, "That was not a good look. Make sure that doesn't happen". I took that as an instruction to mean "Listen, don't go upsetting the American environmental groups too much". We were dealing with public opinion, which was intangible, and so this was a problem to which we had no means of responding other than by using the system of checks that I have outlined above.

Naturally, this international climate surrounding Japan was also directly reflected in the domestic mood within Japan. The Asahi Shimbun newspaper titled its editorial of 20 July "Don't ram through scientific whaling". The following day the article was translated into English and transmitted to Washington. So while we had been trying to explain the "feelings of the Japanese people" to the officials in the Department of State and the Department of Commerce, our American counterparts had already been making their own well-considered assessments of the mood developing in Japan.

In April, when the last commercial factory ship returned to Shibaura, as the chief decision maker at the Japan Fisheries Agency, I addressed the crew with the words "We will make every effort to strive for the continuation of whaling, with its long history and traditions". The crew were rather older, their furrowed faces battered by the elements and burnt by the sun. I honestly felt that "Whatever the issues for which Japan's past whaling deserves criticism the crew are not to blame. I want to somehow retain the work and workplaces, where these men have spent their whole lives, in the form of scientific whaling". But at the time, when the IWC general meeting closed in July, the hard truth was that there were absolutely no prospects for a positive breakthrough.

In these circumstances we could see no way of implementing the research without upsetting the Prime Minister's Office and the Ministry of Foreign Affairs. Just as many foreign affairs problems are also domestic problems, so this was true with the scientific whaling issue. Although initially, in Diet responses, it had been said that a decision would be made by sometime during July, the date, bit by bit, slipped to the middle of August, and then to early September. During this time, Commissioner Shima and Mr Umino, Department Head, Ocean Fisheries Department, made approaches to the relevant parties in the United States, but they were unable to gain any hint of a breakthrough in the situation. Consideration was given to a plan that would give the FAO prime carriage of the project [116] but, in deference to the United States, the FAO did come on board.

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[unnumbered back page] Author Details

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Japanese Fisheries and Overseas Cooperation in the Era of Globalisation

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Ⅲ 調査捕鯨実施願本記

——水産外交の一つのあり方——

下者は、昭和55年1月から58年7月まで振興部長、漁政部長として、61年2月から62年12月まで長官として水産庁に在職した。この間5回の外交交渉——北海道沖韓国船操業問題で対韓交渉2回、ニシン・スケトウ自由化問題で対米交渉2回、調査捕鯨問題では対米交渉1回——を経験した。それまで、水産庁の経験がなくドメスティック・コース・オンリーだった小生にとってまことに得難い経験であった。なかんずく、水産庁にきて初めて担当した道沖韓国船操業問題と没入生活最後の仕事となった調査捕鯨問題には、自ら陣頭指揮に当たっただけに強烈な印象がある。それぞれの交渉の節目の一齣一齣を、今でも鮮やかに思い浮かべることができる。

この調査捕鯨実施に至る経緯は、日々新聞・テレビを賑わす外交案件について、中央省庁の責任者がどのような考えでいかに行動するか、の1つの凡例たけらうものと思える。

調査捕鯨の実施は、捕鯨の伝統を承継する唯一の方法として期待され、外国の反捕鯨論者からは擬似商業捕鯨ではないかと疑われ、世界中の関係者から注目されたが制度上は一般試験操業同様長官限りの権限でできることとなっていた。また、IWC条約8条には加盟国の固有の権利であると明記されている。法

府には極めて簡明瞭であり、実施に何等支障はないわけである。それだけに、かえって水産庁の責任者には厄介な問題だったのである。実施後、農水大臣が総理や外務大臣から、「アメリカとの間に余計な火種をまいてくれたねえ」と嫌味を言われる恐れのある決断を下すことは、長官としては簡単にはできなかったのである。当時の外務省渡辺経済局長——小生とは道沖韓国船操業問題対韓交渉で苦楽を共にした仲であり、長官になってからも、ニシン・スケトウ自由化交渉で、しばしば有益な助言をしてもらった。——は、「佐竹さん、貴方との仲だから大抵の事はきくが、鯨だけは勘弁してくれ。これ以上、アメリカとの間でもめごとを増やされてはたまらない。」と節を合わせることに言われた。

反捕鯨国の旗頭であるアメリカは、捕鯨阻止のため、捕鯨国に対する漁獲割当削減（P・M修正法）、あるいは輸入規制（ベリー修正法）といった制裁措置を用意していた。82年（昭和57年）IWCモラトリアム決定後も、条約上異議申し立てをすれば商業捕鯨操業の継続はできたのであるが、P・M修正法発効

このキャリオ提案によるチェックシステムにより、既に調査計画を提出していた日本、アイスランド、韓国に対し、「調査のための許可書の発給を差し控えるように」との勧告が決議された。アメリカ側からすれば、制裁措置発動のお話立てが整い、日本が条約8条を根拠に調査を強行すれば、「国際世論に背く日本」という大合唱を盛り上げる素地ができあがったわけである。調査船を出航させるためには、このチェックシステムの網を通りぬけていかなければならなかったのである。

より困難な問題は、国際世論、なかんずくアメリカの世論という掴みようのない莫とした雰囲気と相手にならなければならないことであった。

時の中曽根総理からは、調査捕鯨について、「875 頭は素朴な感じとして多過ぎる。アシファア—という印象を与えないように」との指示があった。4月末訪米される直前のことである。総理は、ホワイトハウス周辺で日本の要人を迎える環境団体の鯨のハリボテを取りあげられ、「あれはあつともない。あんなことのないようにせよ。」といわれた。「まあ、あまり、アメリカの環境団体を刺激するな」との御趣旨と受けとった。実体の掴みようのない世論であるから、先きのチェックシステム以上に対応のすべのない問題であった。

このような日本を取りまく国際的環境は、当然国内の風向きにもストレートに反映する。朝日新聞の7月20日の社説は、「調査捕鯨の強行は避けよ。」とあった。記事は、即日、英語に訳されてワシントンに送られる。我々が国務省や商務省の担当官に対して、「日本の国民感情」を云々してみても、相手は冷静に日本国内の風向きを測定していたのである。

4月、最後の商業捕鯨の母船が芝浦に戻ってきた際、水産庁の責任者として乗組員の皆さんに、「歴史と伝統のある捕鯨の存続を図るため精一杯努力する」と挨拶した。乗組員の方々は相当に高齢で、潮風にたたかれ日焼けした顔には深いシワが刻まれていた。「過去の日本の捕鯨に批判されるべき問題点があったにもせよ、乗組員に罪はない。この人達が一生を賭けた仕事と職場を調査捕鯨の形で何とか確保してあげたい。」というのが、筆者の嘘偽りのない気持ちであったが、IWC 総会の終わった7月の時点では全く成算はなかったというのが真相である。このような状況の下で、官邸や外務省の寝癖を悩ますことなく調査を実施することなど到底不可能と思わざるを得なかった。多くの外交問題が即内政問題であるように、調査捕鯨問題も実体は内政問題であった。国会答弁等で当初7月中に結論を、といていたが、段々ずれ込んで、8月中旬から9月上旬となった。この間、島審議員、海野海洋漁業部長等がアメリカの関係者と接触したが、事態打開のヒントは得られなかった。FAO を事業主体とする案も

検討されたが、アメリカに対する配慮からFAOは棄ててこなかった。

「11月下旬に船を出航させるためには9月中旬から船体をドックで整備する必要がある。和戦何れの途を選ぶのか、9月上旬には絶対はっきりさせてもらわないと困る。」船の所有主体である共同船舶——商業捕鯨の主体であった共同捕鯨は解散し、船の管理会社として、新しく共同船舶が設立された。——からは激しく突きあげられた。

このような状況の下で、どんどん時間が経過していった。「水産庁の責任者として、とにかくワシントンに飛んで、打開の方途の有無を自ら確認した上で結論をだそう」と覚悟をきめ、次官、大臣に相談した。皆さん、同じような事を考えておられたとみえて、「行ってくるか。」ということになり、9月12日成田をたった。

中央省庁の投入にとって、ワシントンへの出張は気が重いことが多いのであるが、この時は特にそうであった。日本側からすれば、調査捕鯨の内容についてアメリカ側の理解を深め、制裁措置の発動抑制について確証をとることが協議の目的ということになるが、アメリカ側からすれば、日本の調査実施を阻止するために制裁措置が有効に機能するよう、キャリオ提案、それに基づく中止勧告と着々とお積立てを整えてきたわけであるから、日本側の説明によって既定方針を変える可能性は万に1つもなかった。そもそも、アメリカ側は、この問題はIWCの枠組で処理すべきであって、2国間協議になじまない、としていたのである。門前払いを喰わされるおそれすらなしとしかなかった。正直に言って幕引きのための渡米と考えざるを得なかった。

ところが、「世の中、一寸先は闇」と言われている。まことに何が起こるか分からない。ワシントン滞在中に急転直下、かすかではあったが、展望が開けてきたのである。

折衝相手の本命は商務省のNOAAであった。第1回目の協議の時であった。約束の時間になっても相手方が会議室に現われなかった。30分位遅れて漸くはじまったが、アメリカ側には頻りにメモ入れがあり、どうも落ち着かなかった。それでも、1時間位やりとりがあった後、アメリカ側から、「まことに申し訳ないが、緊急の用件が入った。中断してもらえないか」との発言が長官代行のマックからあった。「何か、もめごとがあるな。もしかすると、アイスランドの調査捕鯨問題では。」アイスランドとの交渉が平行して進んでいることはわかっていたから、ピーンときた。その日の協議は打ち切れ、早速、大使館の宮原書記官を通じてアイスランド大使館から、ロビーストを使ってアメリカ政府内部から、それぞれ情報を収集した。このような情報収集力にかけては水産

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昭和30年 東京大学法学部卒
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水産庁振興部長、漁政部長等を経て
昭和61年 水産庁長官
昭和63年 財団法人海外漁業協力財団理事長
現 在 財団法人配合飼料供給安定機構理事長

国際化時代の
日本水産業と海外漁業協力

定価はカバーに表
示してあります。

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Annex 76: T Kasuya, “Considering the Whaling Problem”, (2005) 16 *Ecosophia* 56 [excerpts]

‘Considering the Whaling Problem’

By Dr Toshio Kasuya

Source: *Ecosophia* 16 (2005) 56 [excerpts]

...

[56] Toshio Kasuya was born in 1937, and in 1961 he graduated from the Fisheries Department, Agriculture Faculty, the University of Tokyo, and entered the Cetacean Research Centre, Japan Whaling Association. In 1966, he joined, as an assistant, the Atmosphere and Ocean Research Institute, the University of Tokyo, and in 1983 he entered the Far Seas Fisheries Research Institute, Japan Fisheries Agency, where he led resources research including serving as Head, Cetacean Resources Research Department. In 1997, he became professor, Faculty of Bioresources, Mie University. In 2001, he joined, as professor, the Science & Engineering Faculty, Teikyo University of Science, where he currently conducts research. His research interests include manatees and river dolphins. In 1982, and from 1997 to date, the Scientific Committee, International Whaling Commission (IWC), has invited Dr Kasuya as a guest expert, and from 1982 to 1993 Dr Kasuya participated in the Scientific Committee, IWC, as a scientist. He has also contributed his expertise to the International Union for the Conservation of Nature. He holds a Ph D in the field of agricultural science.

...

Japan’s Research Whaling

[61] At about the same time that the decision was made to terminate commercial whaling, the Government and the whaling industry began to consider research whaling in the Southern Ocean. They created the following mechanisms with the view that, if they used research whaling to maintain the whaling organisations and techniques, they would be able to resume commercial whaling after about ten years. These mechanisms were: (1) establishing the Institute of Cetacean Research (ICR) using a number of personnel from Kyodo Hogeï (at the time, Japan’s only factory-ship whaling company) and with cooperation from the Research Institute of the Japan Whaling Association; (2) establishing Kyodo Senpaku using the remaining personnel from Kyodo Hogeï and the ships that it had owned; (3) the ICR would obtain a permit to catch whales from the Government and would sub-contract Kyodo Senpaku to manage the process from whale-catching through to whale meat sales; and, (4) the profits from the sale of the by-product of the research, the whale meat, would be used to pay for the operating expenses of the ICR and of the whaling operations.

At present, the ICR is being supported by the sales of whale meat, which amount to approximately ¥6 billion, and Government assistance and commission payments of ¥1 billion. Since the latter is earmarked for research and public-relations activities aimed at the resumption of commercial whaling, it would be difficult for the ICR to abandon the policy of seeking the resumption of whaling.

[62] At the time, they selected a research topic that would require prolonged time-periods and large specimens: the estimation of natural mortality rates for each age group. Japan initially proposed an annual quota of 826 whales [Sic. TN: the real number was 825 whales] to the Scientific Committee, but this number was reduced following discussions between Japan and

the United States, and the research commenced with a quota of 300 whales in the 1987-88 Southern Ocean whaling season. When it was realised that this number would not be enough to achieve the original objectives, the research objectives were changed to focus on better understanding average natural mortality rates, stock identify, and elucidating the whale ecosystems.

The substantially expanded plan for Southern Ocean research whaling submitted to the Scientific Committee this year fits the trend, and puts forward as its aim the collection of data to build a model of the ecological system (see Table 5 [TN: not translated]). Scientific whaling began in the northern Pacific Ocean in 1994 with the primary objective of shedding light on whale eco-systems and continues to this day, on an increased scale (Table 6 [TN: not translated]). No date for completion has been indicated for either one of these programs.

Formerly, there was a Japanese scientist who made statements at the Scientific Committee that conducting scientific whaling to pay for research costs could also be possible. This kind of statement is no longer made, but the majority of scientists on the Scientific Committee view Japan's research whaling in such terms.

Many Scientific Committee scientists who previously had commented on the research whaling programs from a scientific viewpoint have desisted this year citing the futility of doing so. It is difficult to gauge the intentions of scientific whaling from outside the research project, so the questions we need to ask in order to make an assessment of it include the following: (1) Do the scientists have the autonomy to decide on the research programs themselves? (2) Are the scientists free to use their own judgment and choose non-lethal methods? And, (3) Is there any external pressure to keep on continuing with the whaling research?

The answers are: (1) It is questionable whether the scientists have the autonomy to decide on the research programs themselves; (2) It appears the scientists have almost no freedom to use their own judgement and use non-lethal methods; and (3), It appears that there is considerable external pressure to continue with the whaling research.

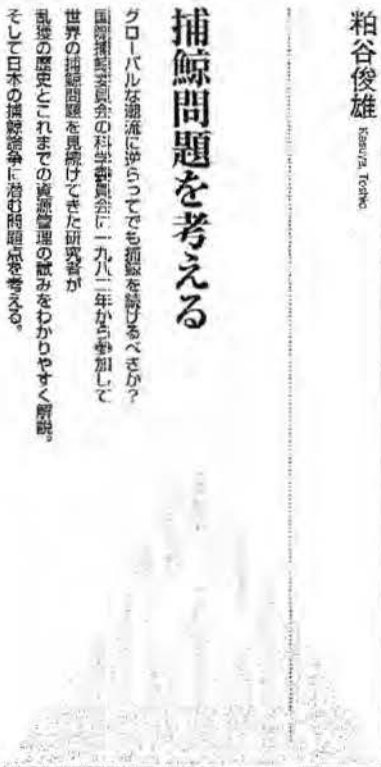
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論争を断る

粕谷俊雄
Shun'ya Toshio

捕鯨問題を考える

グローバルな潮流に流らなくても捕鯨を続けるべきか？
国際捕鯨委員会(科学顧問会)に一九八一年から参加して
世界の捕鯨問題を見続けてきた研究者が
乱獲の歴史とこれまでの資源管理の試みをわかりやすく解説。
そして日本の捕鯨競争に潜む問題を考える。



私は一九六一年から民間研究所(大気
水産研究所などで産卵研究に従事し、国
際捕鯨委員会の科学委員会には招待専門
家なし政府科学者として八一年からは
毎年参加した。この経験をもとに日本
の捕鯨問題を考える。

〇〇〇

捕鯨の歴史は乱獲の歴史

捕鯨事業の歴史は一世紀のバスター
のヤミクワラ捕鯨に遡る。ヒゲ板は工書

材料は、鯨油は灯火や工需用に、鯨肉は
食用になった。沿岸の鯨が減少と彼らは
沖に出た。一六世紀中ごろにはニニ
ファウンドランドでセミ(以下、種名未
定のクワラを省略する)とホッキョクを
捕獲し、一六〇七年にヨーロッパ諸国が
スウェーデン諸島で捕鯨を始めると
競争として雇われた。さらにホッキョク
を求めて、グリーンランド沿岸やハドソ
ン湾にも進出したが、一〇世紀初頭に貴
族船により終息した。

トビでヤミを捕っていた人びとがマッコ
ウを捕り始めた。油はロウソク原料と
なった。沿岸の鯨が減ると帆船に捕鯨
ボートと浮油庫を載せて遠征一航路を始め
た。アメリカ式捕鯨である。ヨーロッパ
諸国も参入し、一八世紀末に南太平洋
に、一八二〇年には日本沿岸にも現れた。
マッコウを追って東西に進み、同じ年に
極東に到着したのである。日本沿岸の最
南端は一八四六年で三〇度近くが氷漁
した。

彼らが日本沿岸に来たとき、そこでは



作者の経歴
一九三〇年、東京生まれ。一九五〇年、東京大学理学部物理学科卒業。一九五二年、東京大学理学部物理学科助教授。一九五七年、東京大学理学部物理学科助教授。一九六一年、東京大学理学部物理学科助教授。一九六二年、東京大学理学部物理学科助教授。一九六三年、東京大学理学部物理学科助教授。一九六四年、東京大学理学部物理学科助教授。一九六五年、東京大学理学部物理学科助教授。一九六六年、東京大学理学部物理学科助教授。一九六七年、東京大学理学部物理学科助教授。一九六八年、東京大学理学部物理学科助教授。一九六九年、東京大学理学部物理学科助教授。一九七〇年、東京大学理学部物理学科助教授。一九七一年、東京大学理学部物理学科助教授。一九七二年、東京大学理学部物理学科助教授。一九七三年、東京大学理学部物理学科助教授。一九七四年、東京大学理学部物理学科助教授。一九七五年、東京大学理学部物理学科助教授。一九七六年、東京大学理学部物理学科助教授。一九七七年、東京大学理学部物理学科助教授。一九七八年、東京大学理学部物理学科助教授。一九七九年、東京大学理学部物理学科助教授。一九八〇年、東京大学理学部物理学科助教授。一九八一年、東京大学理学部物理学科助教授。一九八二年、東京大学理学部物理学科助教授。一九八三年、東京大学理学部物理学科助教授。一九八四年、東京大学理学部物理学科助教授。一九八五年、東京大学理学部物理学科助教授。一九八六年、東京大学理学部物理学科助教授。一九八七年、東京大学理学部物理学科助教授。一九八八年、東京大学理学部物理学科助教授。一九八九年、東京大学理学部物理学科助教授。一九九〇年、東京大学理学部物理学科助教授。一九九一年、東京大学理学部物理学科助教授。一九九二年、東京大学理学部物理学科助教授。一九九三年、東京大学理学部物理学科助教授。一九九四年、東京大学理学部物理学科助教授。一九九五年、東京大学理学部物理学科助教授。一九九六年、東京大学理学部物理学科助教授。一九九七年、東京大学理学部物理学科助教授。一九九八年、東京大学理学部物理学科助教授。一九九九年、東京大学理学部物理学科助教授。二〇〇〇年、東京大学理学部物理学科助教授。二〇〇一年、東京大学理学部物理学科助教授。二〇〇二年、東京大学理学部物理学科助教授。二〇〇三年、東京大学理学部物理学科助教授。二〇〇四年、東京大学理学部物理学科助教授。二〇〇五年、東京大学理学部物理学科助教授。二〇〇六年、東京大学理学部物理学科助教授。二〇〇七年、東京大学理学部物理学科助教授。二〇〇八年、東京大学理学部物理学科助教授。二〇〇九年、東京大学理学部物理学科助教授。二〇一〇年、東京大学理学部物理学科助教授。二〇一一年、東京大学理学部物理学科助教授。二〇一二年、東京大学理学部物理学科助教授。二〇一三年、東京大学理学部物理学科助教授。二〇一四年、東京大学理学部物理学科助教授。二〇一五年、東京大学理学部物理学科助教授。二〇一六年、東京大学理学部物理学科助教授。二〇一七年、東京大学理学部物理学科助教授。二〇一八年、東京大学理学部物理学科助教授。二〇一九年、東京大学理学部物理学科助教授。二〇二〇年、東京大学理学部物理学科助教授。二〇二一年、東京大学理学部物理学科助教授。二〇二二年、東京大学理学部物理学科助教授。二〇二三年、東京大学理学部物理学科助教授。二〇二四年、東京大学理学部物理学科助教授。二〇二五年、東京大学理学部物理学科助教授。二〇二六年、東京大学理学部物理学科助教授。二〇二七年、東京大学理学部物理学科助教授。二〇二八年、東京大学理学部物理学科助教授。二〇二九年、東京大学理学部物理学科助教授。二〇三〇年、東京大学理学部物理学科助教授。

1946年の条約前文に「鯨という偉大な天然資源……」とあるように、当時は鯨を工業原料や食料として利用することを目指していた。しかし、鯨の漁獲が減少した七〇年ころから別の考えの人びとが増えてきた。それは鯨を食べ物とは考えない人びとであり、鯨を保護資源あるいは観光資源とみる人びとである。鯨観光の普及もこれを助長し、こうなると他国で行われる自然破壊にも興味をもちたい。異質な価値観が存在すると国際摩擦の種になる。これがいまの捕鯨問題の核心であるが、日本ではあまり報道されていない。

いま、水産庁と業界は外国の鯨観の変化を無視し、国民には「捕鯨と鯨食は日本の文化」と宣伝し、習俗的感懐をあらゆる「経済産業」の維持、拡大に努めている。大國の他國と批判されながら、極東の海嶺でひとり鯨を食べることが国民の幸せにつながるのか。その必要があるのか疑問である。

日本の調査捕鯨
 調査捕鯨停止を決定したころ、行政と捕鯨業界は南極海調査捕鯨の検討を始めた。調査捕鯨は調査船と技術と漁具を温存すれば、一〇年ほどで商業捕鯨が再開できるとみて次の仕組みを作った。①当時の唯一の船舶式捕鯨会社である共同捕鯨

(株)の人員の一部と(財)日本捕鯨協会(以下「協会」)を設立する。②共同捕鯨の残り人員と保有船舶で共同船(株)を設立する。③前者は政府から捕鯨許可を受け、後者に捕鯨から販売までを委託する。④調査後の残肉(肉)の販売収益をもつて

表5 日本の調査捕鯨計画回数 (南極海、共同船捕鯨船団)

| 時期 | ミンククジラ | オガスズクジラ | ザトウクジラ |
|-----------------|--------|---------|--------|
| 1987/88-1988/89 | 300 | - | - |
| 1989/90-1994/95 | 300±30 | - | - |
| 1995/96-2004/05 | 400±40 | - | - |
| 2005/06* | 850±85 | 10 | - |
| 2006/07** | 850±85 | 10 | - |
| 2007/08~(無期限) | 850±85 | 50 | 50 |

(注)*1 南極海調査船の調査はアルスマールの調査をしない。

表6 日本の調査捕鯨計画回数 (北西北太平洋)

| 時期 | ミンククジラ | タリクジラ | ゴッロウクジラ | ザトウクジラ |
|-----------|--------|-------|---------|--------|
| 1994-1999 | 100** | - | - | - |
| 2000-2001 | 100** | 80 | 10 | - |
| 2002-2003 | 100** | 50 | 10 | 50 |
| 2004 | 50** | 100** | 10 | 100 |
| 2005- | 100** | 60 | 10 | 100 |
| (無期限) | 120** | 50 | 10 | 100 |

(注)*1 共同船捕鯨船団を用いる場合調査。
 *2 十隻船団を用いる場合調査。



南極海で調査捕鯨船団が日本に引き上げられるミンククジラ(二〇〇〇年一月、共同船捕鯨船団)。写真は共同船捕鯨船団の調査船。

日産の運営費や施設委託費とする。いま船内の売り上げ約六〇億円と、政府の補助金・委託費約一〇億円が日産研を支えている。後者は商業捕鯨再開のための調査や広域費なので、捕鯨再開の看板はおろしにくい。

この時、長期間と大資本を必要とする

Conservation Biology (Subject Editor: Ding Wang)

Japanese Whaling and Other Cetacean Fisheries

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Abstract

Background, Aim and Scope. Discussions on management of whales and whaling are facetiously monopolized by the International Whaling Commission (IWC), resulting in a limitation of information flow to outside communities. With an aim to improve the situation, this article briefly reviews whaling and dolphin/porpoise fisheries in Japan, which is recognized to be the world largest cetacean exploitation.

Main Features. The Japanese government grants an annual take of 22,647 cetaceans of 15 species for scientific whaling and various kinds of active dolphin/porpoise fisheries by the national. Further, over 100 baleen whales and numerous small cetaceans are taken in passive net fisheries. They are used mostly for human consumption and some for aquarium display.

Results. Sustainability of the take is not evident and some populations have shown a historical decline. The Japanese program of scientific whaling has been reviewed by IWC and its Scientific Committee (SC) although they have arrived at no consensus.

Discussion. The current scientific whaling program invites arguments from the view points of science as well as concerning the ethics of scientists, economy, and interpretation of the International Convention for Regulation of Whaling (ICRW) of 1946. The scientific whaling and other Japanese cetacean fisheries are benefited from nationalistic public attitude, and ambiguity and weakness of the ICRW.

Conclusions. Japanese cetacean harvest will continue supported by domestic demand for whale products as long as the proceeds can sustain the operation, even with criticisms from outside communities.

Recommendations and Perspectives. For safe management of small cetaceans exploited by Japan, studies are urgent on the population structure, abundance and validity of catch statistics. The results should be open to scientific communities.

Keywords: Conservation; dolphin; International Whaling Commission (IWC); marine ecosystem; porpoise; whale; whaling

Introduction

Hunting cetaceans with hand harpoons and driving schools into harbors have been practiced since prehistoric time in Japan. Documents indicate taxation on dolphin driving in the 14th century and commercial hunting of large whales using hand harpoons in the late 16th century (Keshiro and Kasuya 1993, Kasuya 2000). As reviewed by the Scientific Committee (SC) of the International Whaling Commission (IWC), Japan today retains the world top position in the annual harvest of cetaceans for human consumption (IWC 1992). Here, I will briefly review the recent status of Japanese cetacean

fishery and problems on the management viewed from a whale biologist who worked for the Fisheries Agency of Japan (1983–1997) and used to attend SC meetings (since 1992).

1 Historical Aspects of Extant Japanese Fishery for Cetaceans

For the convenience of a brief historical review of current Japanese fisheries for cetaceans, I grouped them into the following four categories. Omitted are extinct whale fisheries, e.g. traditional net-whaling, large-type coastal whaling, pelagic whaling (see Kasuya 2000 for a brief review of these fisheries). So called 'scientific whaling' is dealt with separately. The major, or only, products of these fisheries are meat, blubber, and peripheral connective tissues for human consumption.

1.1 Small-type whaling

This is a whaling operation using vessels below 50 gross tons and a whaling cannon smaller than 50 mm in caliber. This fishery started in the early 20th century, and was allowed to take northern minke whales (*Balaenoptera arctica*) and toothed whales other than sperm whales (*Physeter macrocephalus*). It had no additional regulations until December 1947, when the Fisheries Agency placed it (about 50 vessels in operation) under a licensed system and started efforts to decrease the licensee (Kasuya 2000). History of this fishery is given in Ohsumi (1975). In 1988, the take of minke whales was prohibited by the government that accepted the moratorium of commercial whaling by the IWC (see below). Currently, five Japanese, small-type whaling vessels operate with a total annual quota of 62 Baird's beaked whales (*Berardius bairdii*), 100 short-finned pilot whales (50 southern and 50 northern forms) (*Globicephala macrorhynchus*) and 20 Risso's dolphins (*Grampus griseus*), using land stations at Abashiri (44°02'N, 144°17'E), Hakodate (41°47'N, 140°45'E), Aomori (38°18'N, 141°31'E), Wadaura (35°02'N, 140°03'E) and Taiji (33°37'N, 135°55'E). Since the 2002 season, four of them are participating in minke whale catch as the coastal component of Japanese scientific whaling in the North Pacific. Their whaling operation is diurnal, i.e. they depart the port in the morning and return to the port by evening even with no catch.

1.2 Drive fishery for dolphins

Until the late 19th or early 20th century, opportunistic dolphin driving for local consumption was operated widely along the coasts of the Sea of Japan, East China Sea, and Pacific south of 40°N latitude, where gregarious species inter-

able for driving migrated (Kishiro and Kasuya 1993). However, villages along the Sea of Japan and Pacific coasts north of Tokyo (about 35°30'N) gradually ceased the operation, and such operation was limited to villages on the coast of Izu Peninsula (34°35'–35°05'N, 138°45'–139°10'E, Shizuoka Pref.), Taiji (Wakayama Pref.), Nago (26°38'N, 127°58'E, Okinawa Pref.), and islands in the Nagasaki Prefecture (32°35'–34°40'N, 128°40'–129°50'E, Northern Kyushu) shortly after the World War II. Such changes could have been a reflection of various social and natural factors, including a possible decline in dolphin populations, a decline in the demand for dolphin meat and oil for light, an increased supply of whaling products, a change in community structure necessary for co-operation among villagers, and in constructions that destroyed beaches suitable for driving. The last two factors have been indicated by the locals or scientists, although there have been few attempts made to evaluate them.

The declining trend is most clear on the coast of Izu Peninsula, although the social environment of the fishery and cause of the decline may not necessarily be the same with other places. Earliest record of the operation on Izu coasts was found in the early 17th century. The driving was operated by 18 villages in the late 19th century (Kawashima 1894) or by 8 in the early 20th century (Bureau of Fisheries 1911). Significance of difference between the two figures is undetermined. The number further declined to five villages (including one established recently) during the post-World War II period (Nakamura 1988) when the demand for food was extremely high. When I started studying catches of this fishery in 1960, there were only three villages operating the driving, but one of them (i.e. Arari) operated in an opportunistic way to conduct driving only when a suitable dolphin school was sighted incidental to other fishing operations, and it carried out the last recorded operation in 1973. Another village, Kawana, performed the last operation in 1983 leaving Futo as the only village of dolphin driving on the Izu coast (Kasuya 1985).

Active searching for dolphin schools could have started on the Izu coast some time after the introduction of motor driven vessels that occurred in the 1920s. Searching area expanded with an introduction of several high speed boats in 1962 and further expanded with the improvement of vessel speed (Kasuya 1985, Kishiro and Kasuya 1993). The last two villages cooperatively operated the hunting during the 1968 to 1983 seasons.

They mostly hunted striped dolphins (*Stenella coeruleoalba*) in the late 19th century (Kawashima 1894) and this was also true in the post war operation, i.e. 96% of the catches in the 1960s were striped dolphins (Kishiro and Kasuya 1993). The catch was consumed in the nearby three prefectures (Shizuoka, Yamanashi, and Kanagawa). Catch statistics are incomplete before 1960, but often recorded 10,000 to 22,000 dolphins (mostly striped dolphins) during 1942–1960. The annual catch of striped dolphins has declined from 3,300–12,000 in the early 1970s to less than 1,000 in the early 1980s, during which the number of hunting groups had remained the same (Kasuya 1985, Kishiro and Kasuya 1993). The declining supply of dolphin meat was substituted by Dall's porpoises (*Phocoenoides dalli*) taken by hand harpoon fishery in northern Japan. This importation continues to exist.

I interpret the changes above as being due to the fact that only villages that rigorously pursued the fishery did survive. The decline in the catch could not be explained only by a decreasing number of operating villages. The searching range increased during the period, and female age at sexual maturity declined. The latter is a change expected to accompany a density decline (Kasuya 1985). One of the factors behind the catch decline must be the decline in availability of striped dolphins to the fishery due to a decline in the abundance of coastal components of the species. The most recent estimate of the abundance of the coastal element of this species is only a few times greater than the past annual catch (see Table 1).

Taiji, which is situated about 260 km south-west of the Izu Peninsula, also had a long history of opportunistic dolphin drive, but the operation ceased and renewal of the license discontinued sometime around 1960. The current driving team was established by several fishermen using a technique learned from the Izu fishermen. They conducted their first operation on short-finned pilot whales (southern form) in 1969, started the regular operation in 1971, and expanded hunting to striped dolphin and other species in 1973. Further details are given in Kishiro and Kasuya (1993).

Prefecture governments placed various dolphin drive fisheries under control using licensing systems (Izu in 1959, Taiji in 1982, Nago in unknown year), by forcing autonomous limits to their total catch (not by species; Izu in 1991, Taiji in 1982), or by limiting fishing seasons (Izu in 1959, Taiji in 1982). The year 1993 was the first season when the Izu and Taiji hunters received a catch quota by species decided by the Fisheries Agency. Villages in the Nagasaki Prefecture and Nago in Okinawa did not receive an allocation of the quota in 1993. This indicates that they have already ceased the operation before the date.

Several villages in Nagasaki Prefecture, Katsumoto in particular, were known of culling of dolphins in the late 1970s (Kasuya 1985). The culling continued at a low level until 1995 at an opportunistic base. Further details are available in the Japanese progress report to IWC published annually in the Report of the International Whaling Commission.

1.3 Hand harpoon fishery for dolphins and porpoises

Hunting of cetaceans using hand harpoons is known from prehistoric times, as portrayed by drawings on bird bone tubes and harpoon heads excavated in central and northern Japan (e.g. Kasuya 1975). Main targets of recent Japanese hand harpoon fishery have been billfish and tuna (Ohsumi 1972). However, because of the simple, inexpensive and multipurpose nature of the instrument, most Japanese fishing vessels used to furnish hand-harpoons on board and attempt to use them if a chance arises to harpoon billfish, sunfish or small cetaceans for on board consumption and occasionally for selling. Statistics of such opportunistic hunting have been incomplete and are not dealt with here.

Iwate fishermen in northern Japan started a large scale operation of this method for small cetaceans. It was around 1917 when fishermen of Oruchi region in Iwate Prefecture (38°55'–40°25'N, Pacific coast) started hand harpoon fishery for dolphins and porpoises using techniques learned from billfish hunters who seasonally migrated from Chiba Prefecture

(34°50'–35°50'N, Pacific coast). This accompanied an introduction of motor driven fishing vessels. They soon introduced shot-guns to use before harpooning, and expanded the operation range to Chiba Prefecture in the south and to the coasts of Sakhalin and Kuril Islands in the north during the 1933–34 seasons (Anou, 1983). This method expanded before and after World War II to villages on the Sea of Japan, Okhotsk Sea and Pacific coast for various dolphins and porpoises for meat, oil and leather (Wilke et al. 1953, Kasuya 1982), but the post war expansion soon shrunk to Iwate Prefecture and the surrounding area probably due to the end of food crises or to an increased whale meat supply from the whaling industry.

During the 1960s to 1970s, hand harpoon fishery was limited to villages in Iwate and Miyagi (37°50'–38°55'N) Prefectures in the northern Japan, and to Choshi (35°55'N, Chiba Pref.) and Taiji. All of these places are on the Pacific coast. In the first two prefectures, they mainly took Dall's porpoises in winter when other fishing items were scarce, and the latter two villages also took striped dolphins and some other delphinids (Ohsumi 1972, Kasuya 1982, Miyazaki 1983). Annual catch of Dall's porpoises by this fishery during the period noted above fluctuated between 5,000 and 10,000 individuals, and the total catch of the latter two places fluctuated between 2,000 and 3,000. In the early 1980s the Dall's porpoise fishery again expanded the geographical range to Hokkaido coasts (northernmost Japan) of the Pacific, the Sea of Japan, and the Okhotsk Sea, and the operation season to summer, presumably accompanied by decline in whale meat supply and by an abundance decline of a Dall's porpoise population wintering off the Iwate and Miyagi coasts (Kasuya and Miyashita 1989). It recorded a huge peak catch estimated at 45,600 Dall's porpoises in 1988 (Kasuya 1992). This coincided with the period from the cessation of commercial whaling to the establishment of a national quota for small cetacean fisheries.

At Nago in Okinawa Prefecture, southernmost Japan, there is a so-called cross-bow fishery for dolphins. Although this fishery is classified as hand harpoon fishery for regulation purposes, it uses a kind of cross-bow or catapult powered by rubber strings to discharge harpoons of steel pipe. Six or seven fishermen started the fishery in 1975 to respond to the local demand for pilot whale meat, which was not satisfied since the cessation of opportunistic driving at Nago. The rubber powered harpoon was probably more powerful than the hand harpoon. This functioned in order to avoid the use of a whaling cannon, which was allowed for 'whaling' only by the Japanese government. Six cross-bow fishermen obtained prefecture licenses in 1989, and set an autonomous catch limit of 100 individuals (not determined to species). In 1993, they received a quota by species.

The number of hand harpoon fishermen in the 2000/01 season was 255 for Dall's porpoises (Hokkaido: 17; Iwate: 223; Aomori: 8; and Miyagi: 7), 16 for Chiba, 100 for Wakayama, and six for Okinawa.

1.4 Trap-net fishery

Trap net is a passive fishing gear of a large structure, with fish guide extending from shore to offshore and a fish box attached on the offshore end of the fish guide to keep fish

inside. Fish boxes may or may not have fish pockets. The size is variable, but a fish guide can measure over 1 km long. They are classified into large-scale and small-scale trap nets, the former having fish box deeper than 27 m (over 17 m in Okinawa Pref.) and the latter fish box less than the depth. The number and season of operation vary between years and between nets, but there were 1,742 large-scale and 15,005 small-scale trap nets operated in 1989 (Tobayama et al. 1992). The nets are usually visited twice a day for fish. Some of the trap nets are equipped with fish detectors. The size and position of trap nets are described in licenses and no arbitrary alteration is possible. So, it is unlikely for fishermen to move their trap nets to places where cetaceans are likely to be captured. This makes the trap net fishery different from other Japanese cetacean fisheries.

Traditionally, Japan considered cetaceans taken in the trap nets as 'incidental catch', while any kind of fish with a commercial value were dealt as the 'catch'. This can be accepted when Fisheries Agency prohibited fishermen from commercially utilizing the whale carcasses found in the trap nets, but the Agency changed the rule in July 2001 to permit the selling of whales found in trap nets, with a condition that the fishermen present DNA samples and provide the cost for registration. Although the new rule does not apply to blue whales (*Balaenoptera musculus*), bowhead whales (*Balaena mysticetus*) and finless porpoises (*Neophocaena phocaenoides*), which are protected separately (see below), any other cetaceans taken in Japanese trap nets are now authorized to be sold for profit. This situation is the same for other fish species taken in the trap nets. The trap net fishery is in nature a multi-species fishery, and whales should now be considered as one of the target species.

Tobayama et al. (1992) observed that an average number of minke or other baleen whales (dead or alive) found in the Japanese trap nets was only seven animals per year, which was too small as compared with the results of some trap nets monitored by them. Considering the extremely high value of minke whales taken in trap nets and sold secretly, 6,400 to 40,200 US dollars per whale (when the US dollar was equal to 140 yen), they speculated that most of the minke whales taken in such nets were processed unreported and that the real number of minke whales taken in the trap nets would be close to 100 or more in the entire Japan. If this is the case, the mortality of minke whales in Japanese trap nets can have a significant effect on management.

This new rule of 2001 resulted in a sudden increase of minke whales reported as being taken in trap nets to 120–130 individuals a year. In addition to minke whales and other small cetaceans, trap nets occasionally take other large baleen whales. Species of particular concern are gray whales (*Eschrichtius robustus*), humpback whales (*Megaptera novaeangliae*), and right whales (*Eubalaena japonica*) (e.g. Kasuya et al. 2002, IWC 2006a).

2 Commercial Exploitation of Cetaceans in Japan

2.1 Background

The Japanese government accepted the decision of a moratorium on commercial whaling as established by the IWC, and banned so-called commercial whaling on 1 April 1988

Table 1: Calculation of quota for small cetaceans in 1993, together with comparison against earlier catches (modified from unpublished document of the Fisheries Agency dated January 1993)

| Species/Stocks | Abundance | Increase rate | Safety factor | Special allocation | Quota 1993 | Annual catch (1989-1992) |
|--------------------------------|-----------|---------------|---------------|--------------------|------------|----------------------------|
| Dall-type ^a | 226,000 | 0.04 | | | 9,000 | 12,265-29,048 ^a |
| True-type ^b | 217,000 | 0.04 | | | 8,700 | |
| Striped d. | 22,500 | 0.03 | | +50 | 725 | 749-1,225 ^c |
| Bottlenose d. | 35,100 | 0.03 | | +50 | 1,100 | 171-1,298 |
| Spotted d. | 30,100 | 0.03 | | +50 | 950 | 6-636 |
| Risso's d. | 42,000 | 0.03 | | +50 | 1,300 | 13-298 |
| S ^d , s.f. pilot w. | 20,300 | 0.02 | | +50 | 450 | 149-296 ^e |
| N ^d , s.f. pilot w. | 5,000 | 0.02 | 0.5 | | 50 | 10-50 ^f |
| False killer w. | 5,000 | 0.02 | 0.5 | | 50 | 30-91 |
| Baird's bkd w. | | | | | | 54 ^g |

^a One of two stocks of Dall's porpoises off Japan; ^b Southern and northern stocks of short-finned pilot whales off Japan; ^c Quota started in 1991 with a combined figure of 17,600; ^d Quota started in 1992 with 1,000; ^e Quota started in 1992 with 400; ^f After several management attempts in 1983-85, a quota of 50 was started in 1986; ^g Quota was set at 40 in 1983, 60 (in 1988) and 54 (in 1989) for the Pacific and Okhotsk Sea, then to the current quota of 62 for the Pacific, Okhotsk Sea and Sea of Japan (IWC 1992)

(see below for further details). The prohibition applies only to baleen whales and sperm whales. Unintended or accidental kills are accepted with no penalty. Mortality of cetaceans is known to occur incidentally to various net fisheries within the Japanese EEZ such as using trawl nets, fixed trap nets (also called 'set nets', a literal translation of the Japanese term), drift gill nets, bottom gill nets, and purse seines. These are thought to be unavoidable and no particular action has been taken at present to decrease the mortality.

Reasons for continuing commercial hunting of some small cetaceans is based on an interpretation of the ICRW. Biologically speaking there is no distinction between 'dolphins/porpoises' and 'whales', and biologists may have trouble in classifying some cetacean species into either of the groups. However, it is also true that many human communities have some kind of ethnological distinction between the two words. The distinction may not be the same between communities. Arguments of IWC on competence come from the ambiguity of terms in the ICRW signed in 1946. It seems to define 'whaling' as an activity of hunting whales, but there is no definition of 'whales'. It is probably true that almost no delegates at the meeting in 1946 have thought about small cetaceans, or have expected small cetaceans to be listed in the agenda of future annual meeting of IWC. However, it is true that some of the small cetacean stocks are so heavily hunted or killed incidentally that invite conservation concerns. Some IWC commissioners now wish to place the hunting of small cetaceans (e.g. Baird's beaked whale which grows over 10 m, and Dall's porpoise which is hunted heavily) under the control of the IWC, but others, including Japan, reject it. Currently many of the small cetaceans are not managed by the IWC, and they are not bound by the moratorium of commercial whaling adopted in 1982.

In 1993, the Fisheries Agency of the Government of Japan placed three cetacean species, blue whales, bowhead whales and finless porpoises, under the umbrella of the Fisheries Resources Protection Act. One now requires a special permit to take these species, and it demands the reporting of

individuals killed incidentally. The basis for selecting the three species is unclear, and the significance of the listing for conservation is dubious.

The commercial hunting of cetaceans is allowed only for species and stocks where an annual catch quota is set by the Fisheries Agency (Table 1). Exceptions to this rule are trap-net fishery, the culling of harmful marine organisms and the take for a scientific purpose.

2.2 Objective species and quota

The nation-wide quota system by species/stocks came into effect in 1993 and continued to exist with almost no changes in the numbers as well as involving other regulation measures such as vessels and fishing seasons. This stable management policy will benefit detecting a trend in the affected cetacean populations. The quotas were calculated for species and stocks for which an abundance of estimates was available, by multiplying abundance, an increase rate of the population and safety factor, and then adding a figure associated with specific allocations.

The abundance was estimated by sighting surveys (Miyashita 1991 and 1993, IWC 1992 and 1993). They were usually accompanied by broad 95% confidence intervals often exceeding 50% on each side of the mean estimate. The use of a mean value of such estimates is accompanied by a large risk. Another concern of the abundance estimate is related to the discrepancy between the operation area of a fishery and coverage of the abundance estimates. Care is made to exclude individuals offshore of the fishing ground, although the near-shore waters included for the estimation are still too broad. For example, Japanese pilot whale driving usually operates within a radius of 15-20 nautical miles (28-37 km) from the harbor, while the abundance estimates include entire coastal waters approximately within 200 nautical miles (370 km) from the shore. Information on movement of cetaceans or on stock structure within the range is needed before the abundance estimates are accepted as a basis for quota calculation.

The increase rate was assumed at 4% for Dall's porpoises (partially sympatric, two color morphs), 3% for bottlenose dolphin (*Tursiops truncatus*), striped dolphin, spotted dolphin (*Stenella attenuata*) and Risso's dolphin, and 2% for short-finned pilot whales (two geographical forms) and false killer whales (*Pseudorca crassidens*). The order of these figures (from the greatest to the smallest) was as suggested by biologists based on their understanding of the life history, but the actual figures were above the level suggested by biologists of the Far Seas Fisheries Research Laboratory including myself. It was also true that no scientists would have been able to present such figures with certainty. A quota for Baird's beaked whale started in 1983 (IWC 1992) based on political judgment, and was eventually found to be about 1% of abundance estimates obtained later (IWC 2001). This process ignores the difference in population levels between stocks. Most of the currently exploited cetacean stocks off Japan have a long history of harvest, and the levels of depletion cannot be the same.

The safety factor of 0.5 was set for the northern form of short-finned pilot whales and false killer whales, and functioned as a safeguard for such small populations. The special allocation of +50 contributed to increasing the quota above figures obtained from abundance estimates and assumed increase rates, and functioned to tune the quota close to the previously reported catches. Comparison of the quota against catches of preceding seasons will find similarity between the two sets of figures.

2.3 Allocation of quota and results of operation

The national quota in Table 1 is first differentiated by the Fisheries Agency to each prefecture, and then by the prefecture governor to each fishery of the prefecture (Table 2). Not all of the national quotas seem to be shared by prefectures. For example, the prefecture total of the Risso's dolphin quota is only half of the national quota.

The process of allocating the quota to individual fishermen is unknown. It will be easier for drive fisheries, where each prefecture has only one group of drive fishermen who work

together. However, difficulties are to be expected in dividing the quota among numerous hand harpoon fishermen as well as collecting catch statistics from them. Collecting catch statistics is also a responsibility of the prefectures, but the prefectures usually request that the tasks be attributed to the fishery cooperative unions. In cases of Dall's porpoise fishery in northern Japan, a 'cease hunting' order is issued by an association of hunters or by the prefecture governor (Thornton 2000), probably based on landing records of fishery cooperative unions.

Catch statistics of Dall's porpoise fisheries was once found to contain significant underreporting (Kasuya 1992). Fishermen usually landed their catch at their mother port or some other ports near the place of operation, but they could sell their catch directly to dealers. In the last case the catch was unlikely to be included in the statistics of the cooperative unions (Kasuya 1992). The recent process of collecting catch statistics seems to be the same, in principle, with the one examined by Kasuya (1992). All the hand harpoon fishermen mentioned above can either process their catch in the ocean or bring them to the port. In the former case numbers have to be estimated from the weight of meat and identification of species/stocks must rely on reports of fishermen or geographical region of the operation. It seems to be important, however, to validate the accuracy of the catch statistics of small cetacean fisheries.

Annual takes of small cetaceans in recent 10 years are listed in Table 3. An interpretation of these figures is often difficult, because single species are taken by multi type fisheries of different locations. For example, striped dolphins are hunted in Chiba (hand harpoon), Shizuoka (driving) and Wakayama (driving and hand harpoon), southern form short-finned pilot whales in Chiba (small-type whaling based at Wadaura), Wakayama (small-type whaling at Taiji and driving), and Okinawa (cross-bow fishery at Nago), and Baird's beaked whales in the Pacific, Okhotsk Sea and Sea of Japan. It is urgent to determine if fisheries of different locations are hunting the same population, or if hunters in different locations are hunting different populations. Such questions have been resolved for none of the three species mentioned above.

Table 2: Allocation of catch quota in Table 1 to individual fisheries (2004/05 season)

| Species and stocks | Allocation to fisheries and prefectures | | | | National total |
|-----------------------|---|------------------|--------------------|-------|----------------|
| | hand harpoon | driving | small-type whaling | total | |
| Dall's p., dalli-type | 9,000 | | | 9,000 | 9,000 |
| Dall's p., truei-type | 8,420 | | | 8,420 | 8,700 |
| Striped dolphin | 180 ^a | 520 ^b | | 700 | 725 |
| Spotted dolphin | 70 ^c | 855 ^c | | 925 | 950 |
| Bottlenose dolphin | 110 ^b | 965 ^d | | 1,075 | 1,100 |
| Risso's dolphin | 250 ^e | 300 ^f | 20 | 570 | 1,300 |
| N, short-f. pilot w. | | | 50 | 50 | 50 |
| S, short-f. pilot w. | 100 ^g | 300 ^h | 50 | 450 | 450 |
| False killer whale | 10 ⁱ | 40 ^h | | 50 | 50 |
| Baird's beaked w. | | | 62 | 62 | 62 |

^a 80 for Chiba and 100 for Wakayama; ^b 70 for Shizuoka and 450 for Wakayama; ^c for Wakayama; ^d 450 for Shizuoka and 400 for Wakayama; ^e 100 for Wakayama and 10 for Okinawa; ^f 75 for Shizuoka and 890 for Wakayama; ^g for Okinawa; ^h for Wakayama

Table 3: Recent catch of small cetaceans by small-type whaling, drive and hand harpoon fisheries in Japan, culling not included^a

| Species | Dall's porpoise | | Striped d. | Spotted d. | Bottle-nose d. | Risso's d. | Short-f. p. w. | | False k.w. | Baird's bk. w. |
|---------|-----------------|--------|------------|------------|----------------|------------|----------------|-------|------------|--------------------|
| | dalli | truii | | | | | south | north | | |
| Quota | 9,000 | 8,420 | 700 | 925 | 1,075 | 570 | 450 | 50 | 50 | 54-62 ^b |
| 1995 | 7,002 | 5,394 | 539 | 105 | 975 | 405 | 189 | 50 | 49 | 54 |
| 1996 | 8,038 | 8,062 | 303 | 67 | 314 | 372 | 434 | 50 | 40 | 54 |
| 1997 | 8,533 | 10,007 | 802 | 23 | 352 | 228 | 297 | 50 | 43 | 54 |
| 1998 | 5,303 | 6,082 | 449 | 460 | 266 | 445 | 194 | 38 | 48 | 54 |
| 1999 | 6,379 | 8,428 | 596 | 38 | 749 | 489 | 334 | 60 | 5 | 62 |
| 2000 | 7,513 | 8,658 | 300 | 39 | 1,426 | 506 | 254 | 50 | 8 | 62 |
| 2001 | 8,430 | 8,220 | 484 | 10 | 247 | 474 | 344 | 47 | 45 | 62 |
| 2002 | 7,614 | 8,335 | 642 | 418 | 801 | 387 | 129 | 47 | 7 | 62 |
| 2003 | 8,308 | 7,412 | 450 | 132 | 180 | 378 | 118 | 42 | 21 | 62 |
| 2004 | 4,614 | 9,175 | 661 | 2 | 632 | 511 | 163 | 13 | 3 | 62 |

^a Quota is given for fishing season which varies between fisheries but usually starts in summer and ends in the spring of the next year, but catch statistics are given for calendar year; ^b see footnote in Table 1

2.4 Management of small cetaceans and IWC competence

The Sub-committee on Small Cetacean was established by the IWC in June 1973, and had their first meeting in April 1974. In June 1975, SC recommended that it should continue the activity on management of small cetaceans as the Standing Sub-Committee on Small Cetaceans (SM), and this was approved at the IWC meeting of the same month.

The SM had great concern, since the first meeting on the status of small cetaceans harvested by Japanese fisheries, and reviewed their status frequently. Conclusions of SM were always approved by SC and became SC advices for Japan. The Japanese government accepted much of this advice and attempted to respond to them in faithful manner, but SC is still unconvinced that the current Japanese exploitation of small cetaceans is sustainable.

Although it appears to me that the SM has been authorized to work for management of small cetaceans by IWC in June 1975, Japan used to express its view, at least since 1982 when I first attended the SC, that activities of SC (and of SM) on small cetaceans should be limited to biological matters and shall not include advice on management. And this view is copied in the current activities of SM. However, I do not know the details of this background.

To make the situation worse, Japan started to boycott all the activities of the SM in 2001, including the participation of scientists, and submission of statistics and research results. This is probably the easiest way to avoid criticism on Japanese management policy of small cetaceans, but escaping from criticism increases the risk of management failing.

Following is a brief review of considerations of the SC made on some selected cetacean species taken by Japan. Further information is available in the references.

(1) **Short-finned pilot whale.** This species has two, morphologically distinct, geographical forms, the 'northern form' and the 'southern form' off Japan, and is known to have a matrilineal social structure and a long post-reproductive life time of females (Kasuya and Tai 1993). The former inhabits the Pacific coasts at latitudes of 36°-44°N and is harvested by small-type whaling at an annual level of about one percent of the stock. The latter inhabits a broad area south of

the northern form and west of 155°E, and is hunted by drive fishery at Taiji, cross bow fishery at Nago and small-type whaling. The wide geographical ranges of the southern form and of fisheries harvesting it warrant further study on the population structure. This form has highest commercial value among dolphins off Japan, and has been pursued rigorously. While the catch was greater in the past, e.g. mean annual catch was 450 individuals in the 10 year period of 1976-1985 (most of which were taken off Taiji, Wakayama Pref.), the recent 10 year annual catch has never reached the quota of 450/year (see Table 3). This species was last reviewed by the SC in 1992 (IWC 1992 and 1993).

(2) **Striped dolphin.** This species off Japan inhabits south of 40°N and the range extends offshore to 180°, and has been taken in large numbers by drive fishery off Izu coasts. A small number is currently taken off Choshi (hand harpoon), off Izu (drive), and off Taiji (drive and hand harpoon) and nearby villages of Taiji (hand harpoon). The population structure is undetermined, but the SC considered it to be likely that almost vanishing coastal fishery for this species and the presence of large aggregation (497,000 individuals, with CV=0.18) in offshore waters and available biological information suggest the presence of heavily depleted coastal population(s). SC first expressed concern on this stock in 1975, and last reviewed it in 1993 (IWC 1992, 1993, 1994, 1995 and 1998).

(3) **Baird's beaked whale.** This species of Japan inhabits western North Pacific north of 34°30'N, Okhotsk Sea, and the Sea of Japan, and is hunted by small-type whaling in each area. Population structure and seasonal movement is to be clarified and catch quotas need to be evaluated based on that information. Post-war statistics before the mid-1970s are believed to contain poached and mislabeled sperm whales, so that statistics overreport the true catch (Kasuya 1999). A biological explanation is still sought for the unusually greater male longevity (85 years vs. 55 years) (Kasuya et al. 1997). Last reviewed in 2000 (IWC 1992, 1994, 2001).

(4) **Dall's porpoise.** Two populations represent this species off Japan. The one, *dalli*-type color morph, winters in the Sea of Japan and migrates to the summer breeding ground in southern Okhotsk Sea via the east and west coasts of Hokkaido. Another population, the *truii*-type color morph, winters off

the Pacific coast of Japan north of 35°N and breeds in the central Okhotsk Sea. They are known to be geographically segregated by growth and reproductive stages as well. Both populations are hunted by Japanese hand-harpoon fishery. Few *dalli*-type individuals of other population(s) mingle with Japanese populations along the Pacific coasts of northern Japan. The accuracy of catch statistics and reliability of current reporting systems needs to be confirmed. This species was first listed for SC consideration in 1975, and was last reviewed in 2001 (IWC 1992, 1993, 2002, 2003, 2004).

(5) **Finless porpoise.** This species inhabits coastal waters south of 36°30'N. At least five local populations are known off Japan from their morphology and genetic analysis. An abundance is known for some of the stocks. The density of Inland Sea population has declined to less than 10% (central and eastern region) or to 50–60% (western region) of the level of the late 1970s. Entanglements in bottom gillnets and accumulations of pollutants are possible threats to their survival (Kasuya et al. 2002). This situation is comparable to that of conspecific species in the Yangtze River (Wang et al. 2005) and perhaps to other populations of the coastal/riverine species. Last reviewed in 2005 (IWC 2001, 2006b).

(6) **Minke whale.** An apparently recent decline of Antarctic minke whales (*Balaenoptera bonaerensis*) is a great concern of the SC. In the western North Pacific, two stocks migrate seasonally along the coasts of Japan (Sea of Japan/Yellow Sea/East China Sea stock, and Okhotsk Sea/west Pacific stock). A discussion has been continuing by the SC concerning the additional stock structure for these populations. They are currently taken by Japanese scientific whaling and trap net fishery in Japan and Korea. This species has been discussed annually by the SC. Effort continues to estimate incidental mortalities using market survey and DNA testing (see 'revised management procedure', 'bycatch and other human induced mortality', and 'DNA testing' in SC Reports).

3 Scientific Whaling

3.1 Moratorium of commercial whaling

IWC first received a proposal for the moratorium of commercial whaling in 1972, and adopted it with three-quarter majority at the 34th annual meeting in 1982 to end commercial whaling from the 1985/86 pelagic season and the 1986 coastal season.

Japan lodged objections to this decision for a moratorium of commercial whaling (IWC 1984). 'Objection' is a right of minorities allowed by the ICRW, and has functioned to diminish management measures supported by majorities. Then, due to international pressures, Japan withdrew the objections in July 1986, with the effects from 1 May 1987 (Antarctic), 1 October 1987 (coastal baleen whales) and 1 April 1988 (coastal sperm whales) (IWC 1988a), and Japan presented its plan of scientific whaling to start in the Antarctic season of 1987/88 (IWC 1988b) at the meeting of the IWC in June 1987.

The Japanese government and the industry group criticized the moratorium by saying that the decision was not based on scientific evidence. And this view has been accepted by

general public in a nationalistic manner. The criticism means that some whale populations were considered by the SC to be at or above 55% of the initial population level, a commercially exploitable level defined by the 'new management procedure' implemented since the 1975/76 Antarctic season and the 1976 coastal season.

The SC was expected to advise the IWC annually on the management of whale stocks, but it recognized the difficulty in applying the new management procedure to whale stocks due to the lack of sufficient scientific data, and there were often diverse views, which were both optimistic and pessimistic. If the SC failed to advise the IWC on quotas, the IWC would maintain past quotas which were often high or make any arbitral decision to delay effective management. To avoid such situation to happen, the SC often created advice using every data available at the time. This was called 'best scientific advice' based on 'best available information'. Such advice could eventually be found wrong after a few years accumulation of additional data. Antarctic sei whale (*Balaenoptera borealis*), which was protected since the 1978/79 season, represented one of such cases. Even if SC provided correct advice and the IWC accepted it, there were possibilities that the decision was not followed reliably. Some governments could object it for a right of free whaling, or industry might ignore the regulation and make illegal operations. This was not a matter of natural science, but a problem of human skill to use science or to control industries. Under such situations, human wisdom could only stop any further depletion of some remaining whale stocks. This kind of background information has not been well understood in Japan.

3.2 Emergence of current scientific whaling program

Article VIII of the ICRW signed in 1946 authorizes for member governments to grant nationals to take any number of any whale species for scientific purpose independently of any other decision of the commission. The article also requests a full utilization of whale carcasses thus taken. This has been used by various governments as the basis for their scientific whaling programs (see Gambell 1999 for such cases). Japanese first scientific whaling occurred in 1956 and took two North Pacific right whales, which was followed by several other scientific whaling programs of Japan. These programs were different from the current series of Japanese scientific whaling program in the shorter duration and smaller numbers of whales to be taken.

Preparation for the current series of Japanese scientific whaling program started in 1984, two years before the withdrawal of objections against the moratorium on commercial whaling. In July of the year, a private advisory group of the Director General of the Fisheries Agency produced a report on the future of Japanese whaling, which included a proposal of scientific whaling in the Antarctic. A few months prior to this, the IWC commissioner of Japan convened a small meeting at the Far Seas Fisheries Research Laboratory in Shimizu. According to my notes, the attendants were staff from the whaling section of the Fisheries Agency, whale scientists of the Lab (including myself) and personnel of the Kyodo Hoge Co. Ltd. (only pelagic whaling company of the time in Ja-

pan), and the agenda included feasibility of scientific whaling in the Antarctic and North Pacific. These are the earliest I know of Japanese actions for the current series of scientific whaling program.

Then, a group of whale scientists of the Japanese government was asked to create the plan. Members of the group, chaired by the late Dr. I. Ikeda, were almost identical to Japanese scientific delegates to the SC. The conditions given to the group included that the project (1) shall be self-sustainable and (2) shall require long period perhaps until the reopening of commercial whaling. Scientists created an objective to estimate age-specific, natural mortality rate of Antarctic minke whales, and considered that the annual take of 1,500 minke whales will be ideal, but could be almost halved depending on sampling strategy (IWC 1988c). In April 1987 the industry side judged that 825 minke whales could sustain the operation, but the figure was rejected by government, by way of political reasons and the take of 300 minke whales was decided in October 1987.

Whaling and research systems were also reorganized for the current series of scientific whaling program. Half of the staff of the Kyodo Hogeï merged with the then existing institute, the Whales Research Institute, to form a new institute named the 'Institute of Cetacean Research (ICR)'. Remaining staff and vessels of the Kyodo Hogeï moved to the Kyodo Senpaku Co. Ltd., a shipping company newly established by Japanese major whaling companies (Kasuya 2000). The ICR received a government grant to take whales for science, and the Kyodo Senpaku carried out whaling and selling of the products on commission. Since the 2002 season, small-type whaling vessels were chartered to capture minke whales in the Japanese coastal waters. Recently, the ICR has acquired some shares of the stocks of the Kyodo Senpaku and started offering cooperation to a newly established company for whale meat marketing and promotion of consumption. Thus, involvement of the ICR with whaling business seems to be increasing. The budget of ICR for the fiscal year of 2003/04 (October 2003 to September 2004), with a proposed take of 660±40 whales, amounting to about six billion yen (US dollar equals 100–120 yen), of which five billion yen came from the whaling products and 1 billion yen from Government subsidiaries (ICR 2004). Budgets for more recent years are not available in the annual reports.

Vessels used for the current Japanese scientific whaling include one whaling factory ship which processes the catch and serves as a research base, three whale catcher and sighting vessels, and a dedicated whale sighting vessel. These are used both in the Antarctic and North Pacific. In addition to these, another dedicated sighting vessel, a trawler equipped with scientific echo sounder and four small-type whaling boats are used in the North Pacific (IWC 2005).

3.3 Expansion of the scientific whaling program

The current series of Japanese scientific whaling first started in the 1987/88 Antarctic season with an annual take of 300 'Antarctic' minke whales. The primary objective was to estimate age-specific, natural mortality rate, and the secondary objective to understand the marine ecosystem. The duration was expected to last for 12 years, but Japan stated also that it will be continued endlessly (IWC 1988b). The main research objective gradually shifted to average natural mortality of recruited age classes, and then to understanding the marine ecosystem, apparently because it became clear that the sample size was insufficient to estimate age-specific natural mortality rate with desired precision. This program came to the end with the 2004/05 Antarctic season, and, in 2005, Japan presented to the SC meeting a plan of new scientific whaling to be started in the 2005/06 season. The new plan retained the similar objectives (ecosystem studies) and the area of operation unchanged (from 70°E eastward to 160°W, and south of 50°S), but it increased both whale species and number of individuals to be taken. It will start with a catch of 850±85 minke whales and 10 fin whales (*Balaenoptera physalus*), but at the full scale operation to be started in the 2007/08 season it will take 50 fin and 50 humpback whales, in addition to 850±85 minke whales (Table 4). Japan stated that the project will continue for unlimited period.

In 1994, Japan expanded the scientific whaling into the western North Pacific for understanding of marine ecosystem, with a catch of 100 northern minke whales. Then, in the year 2000, the second phase of the project started also as an endless project, with a catch of 100 minke, 50 Bryde's (*Balaenoptera edeni*) and 10 sperm whales. This project further expanded to sei whales in 2002. The current series of Japanese plans of scientific whaling, at the full scale operation, will annually take a maximum of 1,415 whales of seven species in the Antarctic and western North Pacific (see Table 4).

Table 4: Number and species of whales proposed for the current series of Japanese scientific whaling

| Season | Ocean | Minke | Fin | Humpback | Bryde's | Sei | Sperm | Total |
|----------|------------|-------------------------|-----|----------|---------|-----|-------|--------|
| 1987/88- | Antarctic | 300 | | | | | | 300 |
| 1989/90- | Antarctic | 300±30 | | | | | | 300±30 |
| 1995/96- | Antarctic | 400±40 | | | | | | 400±40 |
| 2005/06- | Antarctic | 850±85 | 10 | | | | | 860±85 |
| 2007/08- | Antarctic | 850±85 | 50 | 50 | | | | 950±85 |
| 1994- | N. Pacific | 100 | | | | | | 100 |
| 2000- | N. Pacific | 100 | | | 50 | | 10 | 160 |
| 2002- | N. Pacific | 100 50 ^a | | | 50 | 50 | 10 | 260 |
| 2004 | N. Pacific | 100 110 ^a | | | 50 | 100 | 10 | 370 |
| 2005- | N. Pacific | 100 120 ^a | | | 50 | 100 | 10 | 380 |

^a This is taken by four small-type whaling catcher boats in the coastal waters and processed at land stations. Others are taken by pelagic operation using vessels of the Kyodo Senpaku Co. Ltd.

3.4 Criticism of Japanese scientific whaling

The SC has annually reviewed scientific aspects of proposals and research results of scientific whaling of various countries, using 18 partially overlapping guidelines. For convenience I have grouped them into the following five large categories; (1) if the proposal is likely to achieve the stated objectives, (2) if the objective really requires lethal method, (3) if the proposal is likely to produce information useful for management of whale stocks by IWC, (4) if the effect of proposed take on whale stocks is acceptable, (5) if arrangement for participation of scientists from other nations is acceptable.

Reviews of SC thus conducted on the current series of Japanese scientific whaling were always extremely controversial and reached at no consensus. This difficulty is reasonable, as identified by SC, because proponents of their own proposal or report participate in the review. SC once proposed to use independent reviewers, but it could not be reached at agreement (IWC 2006c). Another difficulty in the review comes from the fact that scientific aspects cannot be isolated from other elements in the evaluation (IWC 2006c). It is my opinion that some additional, non-scientific aspects will be needed to correctly understand the nature of Japanese scientific whaling, which are (1) ethics of scientists, (2) system that carries out the program, (3) gap between ICRW and public views on whales and (4) interpretation of Article VIII of ICRW.

Fishery science is probably exceptional in accepting massive slaughter of animals for research purposes, e.g. to test fishing gear, to explore new fishing ground, to collect abundance data, or to obtain data free from bias of particular gear. Such massive slaughter may not be accepted in other fields of biology or in studying other wildlife. Scientific whaling apparently relates to the two fields, i.e. fishery science and wild mammal studies. However, the great whales being taken by the project are mammals of long life, slow growth and low reproductive rate, and attract public attention. So it is likely that annual kill of about 1,400 individuals of such species for unlimited time period is considered as a selfish utilization of common property by scientists or an activity causing unacceptable pain to the wildlife. Some scientific community may refuse it.

Article VIII of ICRW allows the taking of whales for scientific purpose, and requests utilization of the carcasses. However, this does not permit the whale hunting aimed at raising fund for research or for other political purposes (Gales et al. 2006). We do not know how great the economic incentives are behind the current Japanese scientific whaling. However, if scientific whaling should be planned and conducted, it is essential to ensure independence of those scientists from political pressures and to separate scientists from monetary benefit which might come from processing the carcasses. The institute or its scientists shall be rewarded for scientific information produced, not for whale carcasses collected. This does not seem to be satisfied for the system that is pursuing the current Japanese scientific whaling. There are risks of corruption of scientists and industry control over science.

It is perfectly clear that the ICRW of 1946 considers whales as food or a source of materials, i.e. fishery resources. However, almost 60 years have passed since that time, and the situation has also changed. Many recent communities do not consider whales as fishery resources, but evaluate them

as one of the elements of our environment. Such a position will find it difficult to compromise with the old concept retained by some economically significant countries, and will ask for Japan to live with a similar sense of values. Under such circumstances, the current Japanese scientific whaling program will not be accepted, because it considers whales as fisheries resources and, as often stated by ICR personnel, intends to contribute reopening of commercial whaling. Although, IWC or SC is not structured to resolve such controversy, they are actually becoming the place of such confrontation. And scientists suffer from the situation as well.

The Article VIII of ICRW states "Notwithstanding anything contained in this Convention ... kill, take and treat whales for purpose of scientific research ... shall be exempt from the operation of this Convention". However, Article VIII does not seem to have expected such large-scale and long-lasting scientific whaling as comparable to the commercial whaling (Claphan et al. 2003), but the words could have meant taking a small number of whales for a short duration, perhaps accompanied by ordinary commercial whaling operations. If this had not been the case, Article VIII itself must then have contradicted the intent of ICRW, stated in the preamble "desiring to establish a system of international regulation for the whale fisheries". Therefore, in both the annual take and period to be covered, the current Japanese scientific whaling program does not seem to be consistent with the Article VIII of the Convention.

4 Conclusions

Japan has a long history of utilizing cetaceans for human consumption, and has experienced a decline of several cetacean populations thus exploited. The government currently grants three types of fisheries to be operated for cetaceans, which are considered to be exempt from the IWC decision of moratorium of commercial whaling established in 1982. The total annual catch allowed for these fisheries is over 20,000 individuals covering eight species of small toothed whales. The quota was calculated in 1993 based on then available abundance estimates and arbitrarily selected population growth rates of 2–4%, and the sustainability has not been demonstrated. Some catch statistics reported by fishermen have not been validated, and changes in the abundance in these populations during the 13 years since the implementation of current quota has not been studied. However, there are apparent symptoms of population decline for some of the small toothed whales that have been harvested or killed incidental to fishery operations. Current attitude of Japan to refuse cooperation with SC on management of these small cetaceans is of extreme concern.

The current series of Japanese program of scientific whaling started in the 1987/88 Antarctic season by utilizing the system of previous commercial whaling, expanded to North Pacific, and now plans to take about 1,400 individuals of seven species of large cetaceans for unlimited period. The operation is sustained mainly by the proceeds. The project has been discussed by IWC and its SC with no consensus. The SC made an annual review of the project with an attempt to limit itself within the scientific aspect, but it recently experienced difficulties in ignoring other elements

being the project, i.e. ethics of scientists, economy of the system, and interpretation of ICRW.

Current Japanese cetacean harvests of various types, including scientific whaling and small cetacean fisheries, seem to be utilizing ambiguity and lack of enforcement in ICRW and IWC, and support the domestic food habits for whale products.

5 Recommendations and Perspectives

- (1) Scientific activities are not free from mistakes or errors, but the risk will be decreased through rigorous discussions with other parties. To ensure sustainable utilization of small cetaceans by Japanese coastal fisheries, Japan should be encouraged to reestablish cooperation with SM on the management.
- (2) The following studies should be conducted with urgency for the management of small cetaceans exploited by Japan: stock structure, abundance, biology of the species, and validation of catch statistics.
- (3) Various large and small cetaceans are killed in Japanese passive coastal net fisheries, and such kills are believed to have significant effects on some of the populations. Efforts made to decrease such mortality are urgent.
- (4) Observing that the current Japanese scientific whaling is supported by the proceeds of the whaling products, deficits of the ICRW admitting the situation, and public indifference to international criticisms, I would expect that the program will continue until such situations change, perhaps until there is a change in such food customs or a reopening of commercial whaling which could result in a flood of whale products.

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Annex 78: S Ohsumi, *Half a Century in Pursuit of the Whale – Proposals for a New Era in Whaling* (Seizando-Shoten Publishing Co. Ltd, 2008) [excerpts]

Half a Century in Pursuit of the Whale – Proposals for a New Era in Whaling

By Dr Seiji Ohsumi
(Seizando-Shoten Publishing Company Limited, 2008) [extracts]

Chapter 20: Cetacean Capture Research

...

[157] For a number of reasons scientific whaling has a vital significance during the period of the moratorium on commercial whaling.

First, is the obvious reason of developing the scientific basis for the resumption of whaling. [158] Scientific whaling also contributes to the development of whaling management technologies and methods.

Second, is the handing on and development of whaling technologies. Factory ship whaling in particular requires the use of large-scale equipment and sophisticated techniques that require long periods of training by whaling crews. This is why, should whaling ever be stopped (even were resumption to be granted shortly afterward), restarting the whaling vessels, whaling machinery and the whaling crews would be extremely difficult. Scientific whaling is enabling whaling facilities and technical crews to be retained, making it possible to respond quickly to any decision to resume whaling.

Third, is the contribution that the scientific whaling is making to the development of theories with respect to the sustainable and holistic use of marine living resources. Amidst current fears of a food crisis accompanying the explosion in world population, production from living resources in the oceans which cover three-quarters of the world will be an important means of solving the food problem. For that reason the holistic and sustainable use of these marine living resources is imperative, and in turn, there is a need for a thorough knowledge of the whale, which takes its place at the top of the marine ecosystem. Scientific whaling makes a significant contribution to that knowledge.

Fourth, is the handing on and development of a culture of whale cuisine. Once it has been lost, culture is difficult to revive. Surrounded by the sea and limited in landmass, Japan has used the whale as food from ancient times and has developed an outstanding culture of whale cuisine. The use of cetaceans is imperative if marine living resources are to be used in a sustainable and integrated manner, and for that a culture of whale cuisine must exist. Scientific whaling supports and advances a culture of whale cuisine through the supply of by-products from its research.

[159] Fifth, is that scientific whaling contributes to the dissemination among the general public of accurate information with respect to cetaceans. Scientific whaling can make a contribution here as advances in whale biology have been insufficient; the knowledge based on the results of whaling operations that were subject to many restrictions has been biased.

[Unnumbered back page] **Seiji Ohsumi – Background Resume**

- 1930 Born in Isesaki City, Gunma Prefecture.
- 1958 Graduated PhD (Agriculture), Tokyo University Graduate School of Biological Sciences. Researcher, Institute of Cetacean Research.
- 1966 Research Manager, Tokai Region Fishery Research Laboratory, Japan Fisheries Agency.
- 1967 Research Manager, and, subsequently, Head (Research); Head (Planning & Coordination); Head, Far Seas Fisheries Research Laboratory, Japan Fisheries Agency.
- 1991 Director, and, subsequently, Executive Director; Chairman (1995 to 2004), Institute of Cetacean Research. As at 2008, Senior Advisor, ICR.
- 2006 Honorary Director, Taiji Whale Museum, Taiji, Wakayama Prefecture.

Dr Ohsumi has attended meetings of the Science Committee, International Whaling Commission (IWC), since 1967.

Awards

- 1999 Fisheries Service Medal from Japan Fisheries Association.
- 2002 Fourth Order of the Sacred Treasure.
- 2006 Kingdom of Norway Service Medal (for work in promoting research in scientific technology in cetacean resources).

Publications include 'Whales once walked on land' (PHP Institute), Whales and the Japanese (Iwanami Shoten), Ecology of Whales and Dolphins (University of Tokyo Press), Encyclopaedia of Aquatic Life I Mammalia (Asakura Shoten) and many others (List of authors' books related to this book at end).

Bibliographic Details

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成山堂

以上の捕獲調査の計画と実施に私が大きく関わり、調査の拡大、発展に私なりに貢献してきたことを誇りにしている。

反捕鯨勢力は、調査の副産物が市場で完売されていることを理由にして、捕獲調査は擬似商業捕鯨であると宣伝している。しかし、ICRW第八巻第二項は「前記の特別許可書に基づいて捕獲した鯨は、実行可能な限り加工し、また、取得金は、許可を与えた政府の発給した指令書に従って処分しなければならぬ」と規定している。このことはすなわち、捕獲調査によって捕獲したクジラは、鯨類資源を利用する条約の精神に照り、調査を終えた後は、鯨体を可能な限り加工して、その生産物を販売しなければならぬことが定められているのである。

商業捕鯨のモラトリアム時代における捕獲調査の意義は大きい。

第一はいうまでもなく捕鯨の再開のための科学的根拠を作ることである。そして、捕獲調査は捕鯨

の管理技術と手法の発展にも貢献する。

第二は、捕鯨技術の継承と発展である。捕鯨、特に母船式捕鯨は大規模な設備と、捕鯨従事者の、長い訓練の期間をかけての高度の技術を必要とする。そして、いったん捕鯨が停止されると、その後しばらくしてから捕鯨の再開が許されても、捕鯨船舶や機械にしろ、捕鯨従事者にしろ、それを復活させるのは極めて困難である。捕鯨調査は捕鯨設備と捕鯨技術者を確保できるから、捕鯨の復活の決定に即応できる。

第三は、海洋生物資源の総合的、持続的利用の理論の発展への貢献である。世界の人口爆発とそれに伴う食料危機が憂慮される今日、世界の四分の三を占める海洋の生物資源からの生産は、食料問題の解決の手段として重要である。それには海洋生物資源の総合的、持続的利用がなされなければならない。海洋生態系の頂点に立つ鯨類について、しっかりした知識が必要であり、捕鯨調査はそれに大きく貢献する。

第四は、鯨食文化の継承と発展である。文化は一度失われると、復活が困難である。四面を海に囲まれ、国土の狭い日本では、太古の昔からクジラを食料として利用し、倦れた鯨食文化を発展してきた。そして、海洋生物資源を総合的、持続的に利用するには、鯨類の利用がなされなければならない。それには鯨食文化が存在する必要がある。捕鯨調査は調査副産物を供給することによって、鯨食文化を維持し、発展させることができる。

第五に、捕獲調査は鯨類に対する一般の人々の正しい知識の普及に貢献する。捕鯨採業にはこれまで多くの制約が課せられ、捕鯨採業の結果だけでは知識が偏り、クジラの生物学の発展は不十分であり、それには捕獲調査が貢献する。

IWCのSCは南極海において、一九七八年から国際鯨類調査一〇年計画（IDCR）、そして一九九五年から南大洋鯨類生態系調査（SOWER）の旗の下で、国際共同により鯨類の資源調査を継続して実施して、大きな成果を挙げ、南極海の鯨類資源の実態について国際的な理解の増進に大きく貢献している（本書第一八章参照）が、この調査を実質的に支えているのは、当初から日本であり、政府は性能のよい調査船と優秀な乗組員をこの莫大な費用のかかる国際調査に提供している。それができるのも、日本政府が捕鯨再開を期して多額の調査費を支出して鯨類捕獲調査を継続して、船舶と乗組員を確保してきたからである。商業捕鯨のモラトリアムによって、日本が捕鯨を諦めて、捕獲調査を開始しなかったならば、IDCR・SOWER調査は一九八七年以後継続せず、南極海は鯨類理解の暗黒海域となってしまうに違いない。

最近IWCの正常化の機運が醸成されつつあるのは、大変に喜ばしいが、捕鯨が再開されても、鯨類捕獲調査は種々の形で実施されなければならないことを、今から自覚しておくべきである。

以上に述べてきたように、日本が実施している鯨類捕獲調査は、ICRWで許されており、捕鯨の再開のために、重要な社会的貢献をしているにも拘らず、悪質な反捕鯨団体は、南極海で調査船団を

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- 1930年 群馬県伊勢崎市生まれ。
 - 1958年 東京大学大学院生物系研究科博士課程修了。農学博士。
財団法人日本鯨類研究所に研究員として就職。
 - 1966年 水産庁東海区水産研究所に研究室長として転職。
 - 1967年 水産庁遠洋水産研究所に転勤し、研究室長、研究部長、企画連絡室長、
所長を歴任。
 - 1991年 財団法人日本鯨類研究所に就職。常勤理事、専務理事を経て
 - 1995-2004年同研究所理事長。現在、同研究所顧問。
 - 2006年より和歌山県太地町立くじらの博物館名誉館長を委嘱される。
 - 1987年から連続して国際捕鯨委員会 (IWC) 科学小委員会に出席。
- 【叙賞】
- 1999年 大日本水産会から水産功労賞。
 - 2002年 熱田等瑞宝章
 - 2006年 ノルウェイ「日丹功労勲章(鯨類資源に関する科学的技術研究振興の業績)

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―新捕鯨時代への提言―

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Annex 79: T Taniguchi, “Opinion. The Inside Story of Japan’s Whaling – What the Media Doesn’t Tell Us. Taxpayer’s Money Spent, Friends Lost”, *Wedge* (20 January 2009) <<http://wedge.ismedia.jp/articles/-/721>> on 15 April 2011 [excerpts]

‘Opinion. The Inside Story of Japan’s Whaling – What the Media Doesn’t Tell Us. Taxpayer’s Money Spent, Friends Lost.’

By Tomohiko Taniguchi, Visiting Professor, Graduate School of System Design and Management, Keio University

Source: *Wedge* (20 January 2009) available at <<http://wedge.ismedia.jp/articles/-/721>> on 15 April 2011 [excerpts]

...

Before rushing to any conclusions, let’s look at the position that whaling occupies in the Japanese economy.

These days, the place of whale meat on the Japanese dinner table is only as a delicacy. The size of the whale meat market is around ¥7 billion, and even the most generous of market estimates would not put it at more than ¥10 billion.

If this were the annual turnover of a single company, there would be more than 10,000 companies of that size in Japan. Ministry of Agriculture, Forestry and Fisheries research puts the value of marine fisheries production at just over ¥1 trillion, so whaling does not even account for 1% of that total.

The only entity to hunt whaling in the far seas outside of Japanese waters is, essentially, the Government; there is not a single private-sector company involved. The regular workforce of this government-run operation is around 330, including both the contracting party and the sub-contractor, the Institute of Cetacean Research, and Kyodo Senpaku, respectively.

Coastal whaling, meanwhile, is in a critical state. Nationwide, there are currently only five vessels still in operation. Crew numbers total just 31. The annual catch per vessel is worth approximately ¥64.6 million, but costs average ¥95 million, so the more these vessels operate, the more money they lose (FY2007 figures).

...

Calls are already being heard here in Japan for us to withdraw from the IWC.

If we were to do that, however, we would lose our grounds for the legitimacy of far seas whaling, namely, the banner of scientific whaling. Australia and New Zealand would strictly enforce the law on Japan, including with respect to whale sanctuaries.

So even were we to withdraw from the IWC, expeditionary whaling would still not be possible. As soon as we forged ahead with it, we could be inviting a diplomatic crisis.

On the other hand, although an inconceivable scenario, let’s imagine that our wish came true in the IWC. Even then, no “commercial” whalers would, in fact, emerge in Japan. That is how harsh the economic situation surrounding whaling is.

The fact that the ICR essentially has a monopoly on the supply of whale meat but its business is by no means stable is evidence of the lack of economic viability of whaling.

The ICR's financial statements show a conspicuous blow-out in long-term borrowings – ¥2.1 billion posted as long-term liabilities.

The assets column is lacking in items that could cover these liabilities, leading to concern about the soundness of the ICR's financial status. In fact, these loans to the ICR were made by the Overseas Fishery Cooperation Foundation of Japan, which is an extra-government organisation of MAFF (its President is a former Fisheries Agency Director-General), on either zero or extremely low interest terms. The meaning of these loans in real terms is more in the way of a capital injection.

The ICR posted ordinary losses of just over ¥778 million for the year ending September 2008. It received subsidies of ¥980 million of taxpayers' money, 70% more than the previous year, but this has done nothing to recoup those losses.

The finances of Kyodo Senpaku, the company to which the ICR sub-contracts whaling operations, are unknown, but a credit research company estimates that it probably makes a profit of ¥10-20 million a year. Even if it is not operating at a loss, it is unlikely that its profit levels are sufficient to meet the company's equipment renewal demands. The whaling factory ship, incidentally, is reaching the limit of its useful life.

To sum up the above, Japan's whaling is lacking in substance economically and as an industry. The chances of Japan's fervent wish for the resumption of commercial whaling being realised within the IWC are virtually nil. Even if the wish were to be granted, given the almost complete lack of economic viability, no actual entrants into the industry would emerge.

【OPINION】メディアが伝えぬ日本捕鯨の内幕 税を投じて友人をなくす (谷口智彦/慶應義塾大学大学院SDM研究科特別招聘教授)

2009/01/20 WEDGE 4717 文字

その他の書誌情報を表示

日本が抱える2つの捕鯨

日本は広く国益を再考し、遠洋で続けてきた調査捕鯨から手をひくべきだ。代わりに日本沿岸で赤字を出しつつ操業している零細捕鯨を何とか採算に乗せ、鯨内流通と、鯨の食文化を共に残す方途を探りたい。

今しも日本の捕鯨船団は、南氷洋上で愚連隊もどきの反捕鯨団体に追われている。これの圧力に屈すると思えば片腹痛いから、もっと大きな国益の収支を見るのである。

捕鯨には船団を連ね数カ月遠洋に出て捕るタイプと、沿岸から日帰り圏内で捕る種類の2つがある。

国際捕鯨委員会(IWC)の措置によって、この両方とも商業目的である限り一律停止となつて久しい。

日本だけは両方を続けてきた。遠洋型はIWCが例外扱いする科学調査目的のためとして、沿岸小型捕鯨は、IWCが保護対象としない鯨種に限って捕ってきたものだ。

日本はIWCの場で、遠洋調査捕鯨の正当性を主張し、調査によって十分な個体数を確認できた鯨種について商業捕鯨の再開を唱えている。同時に、沿岸小型捕鯨の捕獲対象として利幅の見込める鯨種を加えるのを認めさせようとしてきた。

具体的にはミンキー(ミンク)鯨で、これの捕獲を許すのは商業捕鯨の是認となり、IWCの合意を得るのは難しい。ただし少数社会集団に特有の捕鯨に、民俗性維持の観点から認められた実例がある(デンマークやアイスランド)。それと同等の処遇を、日本の零細捕鯨にも与えるべきだと主張している。

つまり日本は調査捕鯨から商業捕鯨に至る道と、沿岸小型捕鯨存続の道の両方を追求している。が、実は両者は並び立たない。調査捕鯨が大量に捕り日本にもたらしているのが、ほかならぬミンキー鯨だ。「高級鯨種」が大量に出回ることによって鯨肉市況は軟化する。それが一因となり、沿岸小型捕鯨の採算が改善しないという悪循環が生まれるのである。

本稿の言うのは、無理を重ねて続けても本来目的である商業捕鯨再開につながらない調査捕鯨をやめ、それを交渉のテコとし、引き換えに地域の文化風土に根ざした沿岸小型捕鯨がせめても採算に乗るようはからったらどうかということである。

遠洋捕鯨は世界中で日本しかしていない。IWCを無視して商業捕鯨を続けるノルウェーに比べ、科学調査活動なのに日本の捕鯨がとりわけ激しい批判的となるのはそこに起因する。ノルウェーの捕鯨は、自国領海内ではほぼ完結するのである。

そもそも文化とは相対的なもので、特定の価値観を強要されてはかなわない。鯨を憐れみ日本人を野蛮視する見方にくみするわけにはいかない—と考えるのはいかにも人情であるが、そう思う人の多くも、本稿がこれから記す実態を知ると再考の余地ありと思うのではないか。

この問題くらい、豪州や英国における大衆レベルの対日感情に悪影響を及ぼすものはない。しかも対日批判を続けるのは、揃いも揃って日本が極めて重要と考える国々である。問われているのは国益の軽重をどう考え、得失の均衡をどこに求めるかだ。勝ち目のない戦いに固執し必要以上の規模で友人を失うことに、筆者は国益はないと考える。経済合理性すでになし

結論を急ぐ前に、捕鯨が日本経済に占める位置から見ていこう。

鯨肉とは今や日本の食卓で、珍味としてのみ意味をもっている。鯨肉の市場規模は70億円内外で、多く見積もっても100億円を超えない。

1社で同規模の年商を上げる会社なら、日本にざっと1万社はある。農林水産省の調べによると海の漁業生産額は1兆円強で、捕鯨の規模はその1%に満たない。

領海の外、遠洋で鯨を捕る主体は実質上政府のみで、民間会社は1社も存在しない。その政府主体における常用雇用規模は、発注元と請負企業(日本鯨類研究所と共同船舶)の合計

で330人程度である。

他方、沿岸小型捕鯨は存亡の危機に瀕している。稼動する船の数は今や全国でたったの5隻。乗組員数は31人。1隻平均水揚げ約6460万円に対し、経費の平均は9500万円を上回り、操業するほど赤字が出る（2007年度）。

このように、捕鯨に託した日本の国益とは、経済面を見る限り既にあまりに小さい。これが、議論の出発点に来るべき認識である。我が国が守ろうとしているのは、何か経済とは別の価値だと考えるほかない。

日本側の姿勢は長年のうち固着を重ね、容易な転換を許さない。

捕鯨関係者を突き動かしてやまぬ思いとは、反捕鯨勢力との格闘を続けるうち身についた「大義は我にあり」とする信念であり、正論を護るまいとする正義の感情である。

「正しいものは正しい」ゆえに、妥協の余地はない。非妥協的姿勢を貫くことそれ自体が価値であり、その保全は国益だと、そう言わんとしているかに聞こえることすらある。

この状態で、関係者は自ら進んで旗を下ろせない。経済学で言うサンク・コスト（埋没費用）の投下残高がかさみ過ぎ、方針を変えるスイッチング・コストが禁止的に高止まりした状態だと見立てればよい。

下から内発的に膠着を破るのが困難な場合は、政治が外発的に、トップダウンで状況を動かすのを期待したい。が一般に利害当事者の票田が小さい場合、政治家の大勢はあまり関心を払わぬ中で、「声の大きい少数派」が影響力を奮いやすい。民主主義の逆説だが、この傾向は捕鯨をめぐる政治過程に当てはまる。

似た構図がマスコミにある。捕鯨への一般の無関心を映して普段は何も書かず、国際会議の対立や、日本に対する攻撃といった派手な話だけ記事にしがちだ。政治家も世論もいつしか「熱く」なり、国益をめぐる冷静な検討は省みられない。

日本の主張は確かに「正論」

しかも、次に見る通りなるほど日本の主張は正しいのだから、自ら折れて出るなど軟弱の極みということになる。しかし正論といえども通る見込みがないばかりか友を敵に回す正論なら、再考せねばならない。

日本が続けているのはIWC取り決め第8条に則る科学的調査捕鯨であって、商業捕鯨ではない。

同条によると、加盟国政府は科学調査に目的を限り、捕鯨許可証を特定主体に与えることができる。日本の場合、許可証を得た調査捕鯨の実施主体が農水省所管の財団法人・日本鯨類研究所（鯨研）である。

実際の操業は、共同船舶という会社が鯨研の委託によって手がける。本社は東京都中央区のビルにあり、同じビルに鯨研が同居している。

調査とは鯨を大量に捕って（殺して）なすべしとするのが日本政府の立場である。統計精度を高めるための母集団規模の確保、年齢判定のための耳垢採取が必要といった理由による。ただし捕るのは主に個体数が多いミンキー鯨で、目で見てできる調査は目視で済ませてみいる。

1000頭近い数を、こうして捕る。日本に持ち帰り、市場に売る。それでも商業捕鯨ではない。IWC取り決め第8条に従い、調査捕鯨で捕った鯨の有効・非営利利用をしているに過ぎないからである。

科学調査であるからには有効・非営利利用は当然で、この要請は同義反復だが、捨てずに食用に供す点で有効利用、売上金を次年度調査捕鯨費用に充当する点で非営利だとするのが日本政府の立場だ。反対派は日本の拡張解釈を言い、脱法的だと非難するけれど、日本の行為は少なくとも合法である。

税金頼みでは「商業」とは言えぬ

このように、調査捕鯨には違法性がない。不法をなじられるいわれはなく、正義は我にあって妥協の要なしとするのが日本政府従来の見解である。そして鯨の生態につき十分の知見を得たうえは、商業捕鯨を再開すべきだと一貫して主張してきた。

確かに正論だが、通らぬ正論だ。商業捕鯨再開などはIWCの内部力学と、我が国捕鯨実態の両面からして絶望的に不可能である。

IWCにおいて、一度決まった決定を覆すには4分の3の多数を要する点が、いかにも高い壁である。力関係の現状は、日本が率いる推進派と、英国などが引っ張る反対派とが拮抗する綱引き状態で、いずれも4分の3を取れない。日本の調査捕鯨をやめさせられない代わりに、日本が求める商業捕鯨の再開も無理だ。

そこで日本国内では、IWCからの脱退を勧める声が既にある。

しかし脱退すると、調査捕鯨という錦の御旗—遠洋捕鯨正当性の根拠を失うことになる。豪州やニュージーランドは、鯨禁猟区の尊重を始め、厳格な法執行を日本に対し実施してこよう。それゆえ遠征型の捕鯨は、脱退したとしても結局のところできない。強行した暁には、外交上の危機を招来することも考えられる。

他方、あり得ない想像だがIWCで悲願がかなったとする。その場合でも、実は日本に「商業」捕鯨者は現れない。捕鯨を取り巻く経済実態がそれほど厳しいからである。

鯨研は鯨肉供給における事実上の独占体なのに、経営がいつこうに安定しないという点、捕鯨における商業性の欠如を証明している。

鯨研の財務諸表によれば、長期借入金の突出が目立つ。固定負債として計上された21億円である。

資産勘定にはこれをカバーできる項目が乏しく、財務の健全性に懸念を抱かせる。実は鯨研に貸したのは海外漁業協力財団という農水省外郭団体（理事長は水産庁長官OB）で、利率はゼロか極めて低利。実質的意味合いは資本の増強であろう。

08年9月期の鯨研は、7億7800万円強の経常赤字を記録した。納税者のカネから補助金として前年比7割増に当たる9億800万円を得ているが、全く埋め合わせになっていない。

一方鯨研が捕鯨業務を委託する共同船舶の財務は不詳だが、信用調査会社の推定によれば年間の利益は1000万~2000万円程度という。赤字でないにせよ、設備更新需要に耐える収益性があるとは思えない。ちなみに、捕鯨母船は船齢の限界に近づきつつあるとされる。

以上を要約するに、日本の捕鯨は経済・産業的実質に乏しい。悲願とする商業捕鯨再開の可能性はIWCにおいてほぼゼロである。仮に認められたとしても商業性がなきに等しいため、実際の参入者は現れない。

問われる国益のバランス感覚

目下、IWCの共同議長職を日本は米国と分け合っている。IWCが対立一辺倒の場ではなく議論できる枠組となるよう、日本は米国とともに称賛に値する努力を続けている。

しかしこれで日本の調査捕鯨に対し豪州などが強い批判をやめるわけでも、IWCで商業捕鯨再開が認められやすくなるわけでもない。

とすると、経済的に多くを意味せず、実現可能性においてゼロの主張を無理にも続けるうち、英豪加米といった同盟ないし準同盟国の大衆を少なからず敵に回し、風前の灯とさえいえる国内零細捕鯨業者を苦境に置き続ける事実が変わらない。

それでも税金や公的資金を投じ、勝ち目のない戦いを挑んで日本の評判を下げることを、筆者は国益のバランス感覚を欠く状態と考える。

解決策は調査捕鯨をやめ、引き換えに、日本近海に出没するミンキー鯨を沿岸業者にも捕れるようはからうことだ。需給が締まるうえに利幅の見込める鯨種を手がけられ、初めて零細業者に存続の道が出る。結果として、「珍味」とともに風土的捕鯨文化の保全を図れる。

鯨研周辺科学者たちには調査継続に対する熱情があるだろうから、これは国費で存続の道を探る。ただし非致死的研究が主になるのはやむを得ない。それが世界の標準だから、特段日本を不利にする話でもない。

我が国が調査捕鯨をやめるなら、それは日本の広義国益にかなう。のみならず、捕鯨文化の保全にも資すと筆者は考えるが、以上は私見であって筆者が過去に属したか、現在属す組

識のいかなる見解を代弁するものでもない。また援用した数字や事実は、すべて公開情報に拠った。

※「WEDGE」のバックナンバー一覧（表紙検索）はこちら

連載企画／食再発見 変化のかたち／鯨肉／捕獲量激減高級品に／調査の「副産物」流通／全部位利用感謝を表現／今田純雄／広島修道大教授

Annex 80: M Komatsu, *International Whale Wars* (PHP Institute Co. Ltd, 2010) [excerpts]

International Whale Wars

By Dr Masayuki Komatsu
(PHP Institute Co. Ltd, 2010) [excerpts]

...

[62] For whaling to resume it would be necessary for our politicians to consistently take a more central role and to lift their engagement with whaling to a higher level. It is apparent that the current system of political support has not reached a level sufficient for this purpose. I would like to see the government and politicians invest proactively more of their time and energy into tackling the issue. Should they not do so, the so-called resumption of whaling will not just remain a distant dream, it will inevitably be forced effectively into reverse as it is today, and, in the near future, whaling might even be extinguished as a result of external pressures and the slump in sales of whale meat, the quality of which is deteriorating by the year. As a face-saving device, the option of abandoning scientific whaling might even be placed on the table – with obstruction by the Sea Shepherd organisation [63] presented as the excuse.

...

[112] Although we are conducting research, the regulations of the Convention stipulate that, in addition to their use for research, whales which have been caught may also be used as an important food resource. There is, of course, a difference between commercial whaling and scientific whaling. While the aim is not commercial sale, the fact is that Article 8 of the Convention states that whale meat, as a by-product of scientific whaling, 'must be sold'. Proceeds from the sale of whale meat, as a by-product of scientific whaling, are used to finance expenses for the expedition by research vessels during the following year.

The expansion of scientific whaling has now also boosted the hopes of those waiting for whale meat. They will be able to buy whale meat at cheaper prices with an increase in the amount coming onto the market as a result of the increased quota, which corresponds to the increase in the natural resource.

The distribution of whale product also benefits the government. Proceeds from the whale product substantially improved the hitherto insufficient fiscal administration of the Institute of Cetacean Research and Kyodo Senpaku. This was not so much the case following the whaling conducted in the north-west Pacific, but the effect was particularly marked following the Antarctic Ocean whaling where the minke whales are quite large in size.

....

[215] Their logic is that unsold whale meat product remains because [216] whale meat products are too plentiful owing to the excessive expansion of scientific whaling. Under normal circumstances, sales promotion ought to be attempted by reducing the prices and even by preparing to take a loss. But regardless of the fact

that it is considered necessary to provide whale meat to the Japanese people to gain their appreciation of it, they have chosen a method that will lessen the amount of whale meat produced. Presumably, they believed that by restricting supply, reducing operating costs and keeping the products at a high price they would meet the costs of maintaining the fleet.

The perspective of the people is missing from this logic. It completely fails to take into account the thinking that the average consumer wants 'good food at a cheap price'. They are attempting to send fleets to the Southern Ocean by setting a high price for unpalatable whale meat. But this runs the risk of going awry because expensive whale meat does not sell.

Here we see a difference in basic thinking with respect to the whaling issue, between the thinking of our era and theirs as it is at present. I have always worked for what I considered to be the national interest. Firstly, we should use the scientific information to research the cetacean resources that we can use sustainably, and negotiate for the resumption of whaling. Providing whale meat cheaply to the Japanese people as a by-product of scientific whaling obviously requires a reasonable effort. Substantial energy and effort would be required to do everything else, including product development, the financing for renewal of the fleet, and the devising of strategies to promote sales. But if that effort were to be rewarded in the form of support from the people, then we should definitely push ahead with it.

...

[Unnumbered back page] **About the Author**

Masayuki Komatsu

Dr Masayuki Komatsu was born in 1953 in Rikuzentakata, Iwate Prefecture. In 1977, Dr Komatsu entered the Ministry of Agriculture, Forestry and Fisheries (MAFF). At the Japan Fisheries Agency, MAFF, he supervised Japan-US fisheries negotiations, and was responsible for issues involving the FAO (United Nations Food and Agriculture Organisation), IWC (International Whaling Commission), CITES (Convention on International Trade in Endangered Species), and the Convention for the Conservation of Southern Bluefin Tuna. Between 2002 and 2003 he was Chief Commissioner, FAO Fisheries Commission. Later, as Division Head, Fisheries Resource and Environment Research Division, in 2005, Dr Komatsu was seconded as Director-General, Fisheries Research Agency. Dr Komatsu retired 2007, and is currently Professor, National Graduate Institute for Policy Studies (Leadership).

Dr Komatsu obtained an MBA at Yale, and was awarded a PhD from the University of Tokyo. In 1992 he was awarded a service medal by the Republic of Italy, and in 2003 he was selected among the 2003 Britannica International Yearbook "Top 50" list and, in 2005, by Newsweek (Japan) as one of the internationally most respected 100 Japanese. Dr Komatsu is author of many publications including *It's OK to eat Whale* (Takarajimasha); *The truth about the Whaling Dispute* (Chikyusha); *International Tuna Trials* (Iwanami Shinsho); *The Whale Debate Simplified* (Seizando); *Abundant Tokyo Bay - Revive the Sea, Seafood & Culinary Culture of*

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上ってきかねない。

同じ捕鯨国でも、アイスランドでは外務大臣アスグリムソン、さらには総理大臣までが加わり、政府が一丸となって取り組んでいた。ノルウェーが「異議申し立て」をして商業捕鯨を再開したのも、当時の首相ブルントラントの強力なリーダーシップによるものだった。また、反捕鯨国のオーストラリア、ニュージージーランドは、首相が直接、強力な陣頭指揮をとる。

日本はいまでも世界最大の捕鯨国ではないか。そうであれば、政治家がリスクを負い、リーダーシップを発揮することを、国民は期待する。自民党政権下では官僚主導に任せ、私を含めて職業官僚が陣頭指揮をとることになったが、それはやはり適切な制度ではない。

と、このように訴えたところで、思ったとおりに政治体制を整えるのは難しいというのは容易に想像がつく。同時に、政府は対米関係を第一に気にしすぎている。捕鯨の問題を強く打ち出すことで、反捕鯨国のアメリカとの関係がこじれると恐れているのだろう。

捕鯨の問題をもち出すときは、「これが日米関係に悪影響を与えないように」と、政府部内で事前に釘を刺されたと思える局面が少なくなかった。捕鯨のごときマイナーな案件が、日米関係全体に影響するわけではないのである。また、主義主張が正しいものを譲れば、逆に日米関係に悪影響が及ぶ。

このように、正当な権利と行動まで対米関係を気にして外交をするのは、どこかで戦争直後の占領体制をそのまま引きずっているからだろう。しかし捕鯨のように現在マイナーな分野

た反転攻勢に出られたことは意義深い。

ここにきて、日本はやつと不適切な「サンクチュアリ」の借りを返したのだと実感した。どうにかしてこの不正義に対して、修正のためのメッセージを向こうに伝えてやろう、伝えてやろうとしていたのが、少しでも達成した気分であった。

調査とはいえ、獲ったクジラは科学的分析の情報源としてだけではなく、条約上の規制に従って、大事な食糧資源としても扱われる。もちろん商業捕鯨と調査捕鯨は違う。しかし、商売が目的ではないとはいえ、調査捕鯨の副産物であるクジラ肉は「売らなければならぬ」と条約の第八条に定められているのだ。調査捕鯨の副産物であるクジラ肉の売上で、翌年の調査船の出航の費用がまかなわれる。となれば、クジラ肉を待ちわびていた人々にとっても、今回の調査捕鯨の拡充は大きな希望となった。増大した資源量に応じて、その範囲で設定された捕獲枠の増加によって市場に出回るクジラ肉の量が増えれば、安く手に入れることができる。

クジラ産品の流通は、政府にも恩恵を与える。それまで不足気味だった鯨類研究所と共同船舶の財政が、クジラ産品の売上で大いぶ改善された。北西太平洋はそれほどでもないが、南氷洋のミンククジラはかなり大型なので、とくにその効果は大きかった。

その後二〇〇〇年に北西太平洋調査計画を提出する際には、日本の近海でのマッコウクジラとニタリクジラを新たに追加した。ところが、以前は調査計画のIWC科学委員会への提出まではスムーズに運んでいたのが、このころからだんだん外務省のガードが固くなりはじめた。

を縮小、あるいは打ち切りたいと思っただけに見えるようにしか見えないのである。実際、二〇〇八年十一月十三日付「朝日新聞」に、「政府は調査捕鯨の頭数を七〇〇頭に減らす方針を固めた」という記事がスッパ抜かれたことがあった。その後「朝日新聞」は、「年間で採算を維持するための試算の一つでした」との訂正記事を掲載した。

調査捕鯨は、科学的、統計的に有意なサンプル数で設計がなされている。当然、サンプル数が大きいはと有意性は高まるが、どうして七〇〇頭で経済採算を計算する必要があるのか。在庫がたまり、販売がうまく行かないことを、サンプル数の削減に結び付けることは本末転倒であろう。そのような物の考え方では、すべてを失う結果になる。沿岸小型捕鯨も、南氷洋の調査捕鯨もだ。そうならないようにしてもらいたい。

国民に安くて美味しいクジラ肉を大量に

国民への捕鯨問題の周知と、サポートを得ることも、今後の日本の捕鯨業界における重要な課題だ。そのためには、より多くのクジラ肉を安い価格で国民に提供せねばならない。ところが現実には、クジラ肉は高価で一般市民には手が届かない。それゆえに売れない。

問題は価格にあるのだから、そこを見直せばいいものを、いまの水産庁、鯨類研究所、共同船舶の人間たちは、売れない理由を調査捕鯨の規模に求めたのである。つまり、調査捕鯨を拡

大しすぎたせいで製品が余ってしまったと、そういうロジックだ。本来であれば赤字を覚悟してでも値下げをし、販売促進をかけるべきだ。国民にクジラ肉を提供し、理解を得ることが必要とされているにもかかわらず、彼らは量を縮小することを選んだのである。量を縮小して維持費を削減し、製品を高価格に維持して船団の維持費を賄うことを考えたのだろうか。

そのロジックには、国民の目線というものが欠けている。一般の消費者が求める「いいものを安く食べたい」という考えにまったくもって立っていないのである。不味くなったクジラ肉を高く設定することで、南水洋に船団を出そうとしている。しかし、それは誤った方向に行きかねない。高いクジラ肉は売れない。

ここに私たちの時代と、現在の彼らとの、捕鯨問題に対する根本的な理念の違いが見える。私はあくまで「日本国全体のため」と思っていてやってきた。まず科学情報から持続的に利用できる鯨類資源を調査し、捕鯨再開に向けての交渉をする。調査捕鯨の副産物としてクジラ肉を国民に安い価格で提供するとすると、それ相応の努力が必要となるのは明らかだ。製品づくりや、船団を新しくするための資金繰り、販売促進の仕方などのすべてをやるとなると、そうとうなエネルギーと努力が必要となる。しかし、その努力が国民からのサポートというかたちで報われるのであれば、ぜひにでも進めるべきなのだ。

一般の消費者がクジラ問題を理解してくれて、日本国の方針のサポートに回る。そうしてまた、今度はこちらの経費も十分削減したうえで、クジラ肉を安く提供できるようになる。こん

〈著者略歴〉

小松正之 (こまつ まさゆき)

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Annex 81: J Sakuma, ‘Rapidly rising whale meat stockpiles and the emergence of hidden reserves: Freezers excluded from official statistics and Icelandic fin whale meat’, *IKA-NET News* 47 (January 2011)

‘Rapidly rising whale meat stockpiles and the emergence of hidden reserves: Freezers excluded from official statistics and Icelandic fin whale meat’

By Junko Sakuma

Source: *IKA-NET News* 47 (January 2011).

[2] Five years ago, in January 2006, IKA Net News published a report titled “Whale Meat Stocks Increasing”. In this edition, we analyse the current situation.

End of October retail stockpiles finally hit record levels.

The accompanying graph shows inventory levels for the end of October 2010. The level is 5,525 tonnes. This is the highest end-of-October value since 1990. Not only is that of interest, but a number of things have been happening which cannot be explained by the official inventory figures. It is increasingly likely that less whale meat has been sold than these figures show. This paper attempts to explain the background to this.

To begin with, it is instructive to cross-reference this with whale meat production levels. In 2006, meat production from scientific research reached an historic high at 5,333.8 tonnes (5486.5 tonnes including the coastal catch). This was a significant increase of 1,542 tonnes on the previous year. Since it was a year in which inventory levels would be expected to increase, it was also a year in which attention was focussed on how much the inventories would decrease, in other words, on the level of demand for whale meat in Japan.

What about 2010? At 3,620.4 tonnes (3,802.7 tonnes including the coastal catch), 2010 recorded the lowest level of production since 2004. This was 826 tonnes less than the previous year. Nevertheless, according to the statistics, inventories were at their highest level for the past 20 years.

The nature of these statistics is that if the “uncounted” whale meat stored in small freezer warehouses and excluded from official statistics were to be collected at the major freezer warehouses [which are counted in the official statistics], the appearance might be that inventories have increased, and one cannot simply jump to that conclusion.

Hidden Stockpiles? The Reasons

Reason No. 1: Statistics cover fewer freezer warehouses

This year, the situation cannot be easily understood simply by looking at the stockpile figures. This is because, starting from January 2010, the number of warehouses on which the statistics were based dramatically decreased. In other words, the number of warehouses obliged to report incoming and outgoing inventory volumes for the purpose of examining the “Seafood Products Distribution Statistics: Monthly Incoming and Outgoing Amounts for Major Items and End of Month Inventories”, on which the graph is based, decreased from 651 to 500. That is, this number fell to three-quarters of the former figure, so these figures cannot be used to monitor continuity in inventory fluctuations. I have therefore attempted to provide revised

figures by relying on data released in December 2009, the only occasion on which the two sets of figures were simultaneously released that recorded inventories both before and after the decrease in the number of reporting warehouses.

The revised figures are represented by the broken line. The number of warehouses included in the statistics fell by as much as 23%, but whale meat inventories dropped by 3.9%, compared to the average drop of about 20% in the total amount. This is a remarkably small difference. We can infer that there was little whale meat in the approximately 150 warehouses which were no longer counted. In the context of overall fluctuations it is obvious that there was virtually no effect. However, had the statistics been based on the 651 warehouses as they were last year, it is likely that the stockpile for August 2010 would have exceeded 6,000 tonnes. In other words, the whale meat unaccounted for in the approximately 150 warehouses no longer counted in the statistics may be referred to as a 'hidden stockpile'.

[3] Reason No. 2: Icelandic whalers have commenced exports

This year, there is another source for a 'hidden stockpile'. This is whale meat produced in Iceland, most likely meat from fin whales.

According to Iceland's trade statistics, as of October, Iceland exported approximately 760 tonnes of frozen whale meat to Japan. But according to Japanese trade statistics, the amount of whale meat imported from Iceland as of October, was no more than 160 tonnes. The 600 tonnes, which represent the difference, are absent from the distribution statistics, so one of the following situations must apply.

- 1) The meat appears as exported in the statistics but is still stored in bonded warehouses in Iceland.
- 2) The meat is on freight ships but has not reached Japan or has been temporarily unloaded in a third country.
- 3) The meat has been stored in a bonded warehouse in Japan awaiting customs clearance.

This then is the "Second Hidden Stockpile".

One would think that since charges would be accruing during bonded storage there would be a desire to complete customs and sell the meat. But, regardless of their intentions, importation is not proceeding.

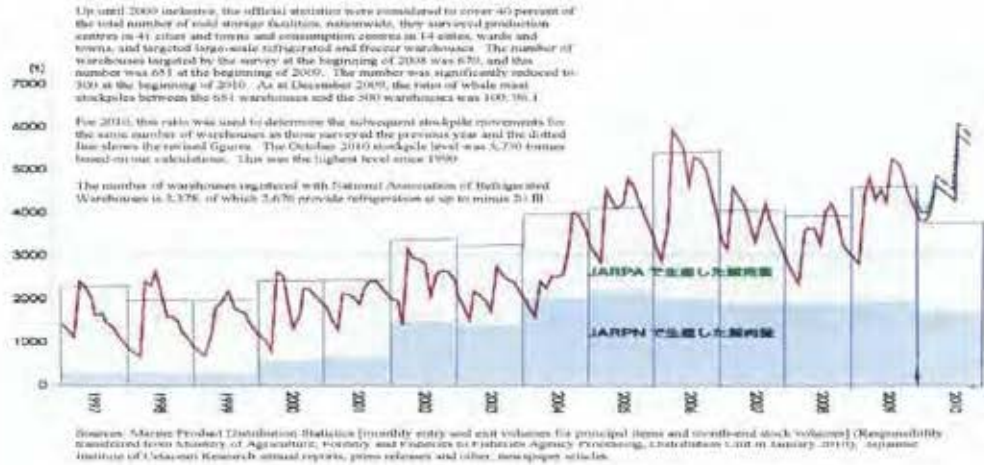
Kyodo News was the only agency to report that Icelandic whale meat had entered Japan, and that was when the meat was already in the market. A search of the Internet using search terms 'Icelandic product AND fin whale' will bring up a number of Internet shopping web pages.

Failure to Revive Potential Demand

A penetrating insight may reveal that furious efforts were being made, using whatever means, to create the appearance of reduced stockpiles, including reducing the number of warehouses subject to statistics and delaying customs clearance.

Even if that were not the case, there is mounting suspicion of an administration that created a situation in which it fails to provide guidance with regard to continuity in statistics. Making these cuts in the name of cost reductions appears more like obstructing the provision of information.

Movements in whale meat stocks



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CBD-COP10/MOP1 が開催された名古屋国際会議場

急増するクジラ肉の在庫と “遊水池”みたいな隠れ在庫の出現

～統計から外された冷凍庫 アイランド産ナガス肉～

佐久間淳子

2006年1月にIKA ネットニュースで「クジラ肉の在庫が増えている」とレポートを発表して5年。最新の状況を解説します。

○10月末の流通在庫量、とうとう記録達成

グラフを見てください。ここには2010年10月末の在庫量まで反映させてあります。5525トン。10月末在庫量としては、1990年以降でもっとも高い値です。それだけではありません。2010年は発表された在庫量の数値だけではわからない、いろいろなことが起きていて、この数字以上に売れていない状況が進んでいる可能性が高くなっています。その背景を説明しましょう。

まず、生産量との兼ね合いを見えます。

2006年の調査鯨肉生産量は史上最高の5333.8トン（沿岸捕獲分を含めれば5486.5）でした。前年よりも1542も増やしたのですから、増えて当然の年でもあり、それがどれほど減っていくのか、つまりどれほど日本の需要があるのかに注目した年でありました。2010年はどうでしょう。2004年以降最も生産量の少ない年で、3620.4トン（沿岸捕獲分を入れても3802.7トン）でした。前年より826トンも少ない。それにも関わらず在庫は統計の上では過去20年間で最も多いのです。

この統計の特性上、統計の対象となっていない小さな冷凍倉庫に眠っていたクジラ肉を大きな冷凍倉庫に集約するような動きがあった場合には、見かけ上在庫量が増えるということも起きるのでそこは単純に「増えた」とは言えません。

○隠し在庫？ その1 統計対象の冷凍倉庫が減った

ただ、今年は単純に在庫量の数字を見ているだけでは状況を把握しきれません。じつは、この統計数値の元になっている、対象倉庫の数が、2010年1月からガクッと減ってしまったのです。どういう事かという、このグラフの元になっている「水産物流通統計 - 主要品目別月間入・出庫量及び月末在庫量 -」を調べるために入庫出庫在庫の量を報告してくれるよう依頼してある倉庫の数が、651から500に減ったのです。3/4に減ったというわけです。これでは増減の連続性をウォッチすることができません。そこで、たった一回、倉庫数が減る前と減った後の両方の数値を発表した2009年12月のデータを頼りに、私なりに数値を補正してみました。

それが破線です。対象倉庫数は23%も減りましたが、鯨肉の在庫量は3.9%程度の減少でした。これは全体の平均が約20%減であるのに比べると、ずいぶん差が少ないですね。想像するに、削られた約150の倉庫にはあまり鯨肉が入っていなかったということになります。大づかみに増減を見る上ではあまり影響がないことはわかりました。ただ、昨年同様に651倉庫を対象に統計を取り続けていたならば、2010年8月の在庫量は6000トンを超える数字になっていたはずですが、言い方を変えれば、統計の対象から除外された約150倉庫に眠っているクジラ肉は「隠れ在庫」と呼んでもいいかもしれません。

INTERNATIONAL COURT OF JUSTICE

WHALING IN THE ANTARCTIC
(AUSTRALIA v. JAPAN)

MEMORIAL OF AUSTRALIA

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Special Permit

Permit No. 17-SUIKAN-2389

Dated November 1, 2005

Issued to: The Institute of Cetacean Research
Director: Dr. Hiroshi HATANAKA
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Syoichi NAKAGAWA, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales and Fin whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Nisshin-maru (8, 030. 00GT)
- 4 Vessels accompanied :
 - ① Sampling vessels accompanied
Kyo-maru No. 1 (812. 08GT)
Yushin-maru No. 2 (747. 00GT)
Yushin-maru (720. 00GT)
 - ② Sighting vessel
Kyoshin-maru No. 2 (372. 00GT)
Kaikou-maru (860. 25GT)
- 5 Owner of the Vessel :
Kyodo Senpaku LTD.
OFFSHORE OPERATION LTD.
- 6 Species and number of whales to be taken for Research
Nisshin-maru and sampling vessels accompanied : 850 Antarctic minke whales and 10 Fin whales
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. (Dwarf minke Whales are excluded.)

7 Research area :

Designated to the waters south of 60 S, east of 35 E, east of 175 E, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 8th, 2005 to April 18th, 2006

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person (s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 17-SUIKAN-2389

Dated November 1, 2005

Issued to: The Institute of Cetacean Research
Director: Dr. Hiroshi HATANAKA
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Syoichi NAKAGAWA, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales and Fin whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Yushin-maru (720.00GT)
- 4 Research base (the permitted vessel belongs to) ;
Nisshin-maru (8,030.00GT)
- 5 Owner of the Vessel :
Kyodo Senpaku LTD.
- 6 Species and number of whales to be taken for Research
Nisshin-maru and sampling vessels accompanied : 850 Antarctic minke whales and 10 Fin whales
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. (Dwarf minke whales are excluded.)

7 Research area :

Designated to the waters south of 60 S, east of 35 E, east of 175 E, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 8th, 2005 to April 18th, 2006

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 17-SUIKAN-2389

Dated November 1, 2005

Issued to: The Institute of Cetacean Research
Director: Dr. Hiroshi HATANAKA
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Syoichi NAKAGAWA, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales and Fin whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Kyo-maru No. 1 (812.08GT)
- 4 Research base the permitted vessel belongs to :
Nisshin-maru (8,030.00GT)
- 5 Owner of the Vessel :
Kyodo Senpaku LTD.
- 6 Species and number of whales to be taken for Research
Nisshin-maru and sampling vessels accompanied : 850 Antarctic minke whales and 10 Fin whales
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. (Dwarf minke whales are excluded.)

7 Research area :

Designated to the waters south of 60 S, east of 35 E, east of 175 E, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 8th, 2005 to April 18th, 2006

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person (s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 17-SUITKAN-2389

Dated November 1, 2005

Issued to: The Institute of Cetacean Research
Director: Dr. Hiroshi HATANAKA
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Syoichi NAKAGAWA, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales and Fin whales for scientific purposes in the Antarctic Ocean.

1 Purpose of research :

Research of whale stocks in the Southern Hemisphere

2 Method of research :

Research take using grenade harpoons

3 Vessel used and gross tonnage :

Yushin-maru No. 2 (747.00GT)

4 Research base the permitted vessel belongs to :

Nisshin-maru (8,030.00GT)

5 Owner of the Vessel :

Kyodo Senpaku LTD.

6 Species and number of whales to be taken for Research

Nisshin-maru and sampling vessels accompanied : 850 Antarctic minke whales and 10 Fin whales

However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. (Dwarf minke whales are excluded.)

7 Research area :

Designated to the waters south of 60 S, east of 35 E, east of 175 E, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 8th, 2005 to April 18th, 2006

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 17-SUIKAN-2389

Dated November 1, 2005

Issued to: The Institute of Cetacean Research
Director: Dr. Hiroshi HATANAKA
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Svoichi NAKAGAWA, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales and Fin whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Kyoshin-maru No. 2 (372. 00GT)
- 4 Research base the permitted vessel belongs to :
Nisshin-maru (8, 030. 00GT)
- 5 Owner of the Vessel :
Kyodo Senpaku LTD.
- 6 Species and number of whales to be taken for Research
Nisshin-maru and sampling vessels accompanied : 850 Antarctic minke whales and 10 Fin whales
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. (Dwarf Minke whales are excluded.)

7 Research area :

Designated to the waters south of 60 S, east of 35 E, east of 175 E, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 8th, 2005 to April 18th, 2006

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 17-SUIKAN-2389

Dated November 1, 2005

Issued to: The Institute of Cetacean Research
Director: Dr. Hiroshi HATANAKA
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Syoichi NAKAGAWA, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales and Fin whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Kaikou-maru (860.25GT)
- 4 Research base the permitted vessel belongs to :
Nisshin-maru (8,030.00GT)
- 5 Owner of the Vessel :
Kyodo Senpaku LTD.
- 6 Species and number of whales to be taken for Research
Nisshin-maru and sampling vessels accompanied : 850 Antarctic minke whales and 10 Fin whales
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. (Dwarf Minke whales are excluded.)

7 Research area :

Designated to the waters south of 60 S, east of 35 E, east of 175 E, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 8th, 2005 to April 18th, 2006

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 18-SUIKAN-2610

Dated November 13, 2006

Issued to: The Institute of Cetacean Research
Director: Dr. Hiroshi HATANAKA
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Hakuo YANAGISAWA, Minister of Agriculture, Forestry and Fisheries
ad interim

This permit authorizes the implementation of the research take of Antarctic minke whales and Fin whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Nisshin-maru (8,030.00GT)
- 4 Vessels accompanied :
 - ① Sampling vessels accompanied
Kyo-maru No. 1 (812.08GT)
Yushin-maru No. 2 (747.00GT)
Yushin-maru (720.00GT)
 - ② Sighting vessels
Kyoshin-maru No. 2 (372.00GT)
Kaikou-maru (860.25GT)
- 5 Owner of the Vessels :
Kyodo Senpaku LTD.
- 6 Species and number of whales to be taken for Research:
850 Antarctic minke whales and 10 Fin whales in total by the research fleet including this vessel
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

7 Research area :

Designated as the waters south of 60 S, east of 130 E, west of 145 W, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 15th, 2006 to April 11th, 2007

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person (s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 18-SUIKAN-2610

Dated November 13, 2006

Issued to: The Institute of Cetacean Research
Director: Dr. Hiroshi HATANAKA
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Hakuo YANAGISAWA, Minister of Agriculture, Forestry and Fisheries
ad interim

This permit authorizes the implementation of the research take of Antarctic minke whales and Fin whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Yushin-maru (720.00GT)
- 4 Research base (The permitted vessel belongs to):
Nisshin-maru (8,030.00GT)
- 5 Owner of the Vessel :
Kyodo Senpaku LTD.
- 6 Species and number of whales to be taken for Research:
850 Antarctic minke whales and 10 Fin whales in total by the research fleet including this vessel
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from
The research.

7 Research area :

Designated as the waters south of 60 S, east of 130 E, west of 145 W, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 15th, 2006 to April 11th, 2007

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 18-SUIKAN-2610

Dated November 13, 2006

Issued to: The Institute of Cetacean Research
Director: Dr. Hiroshi HATANAKA
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Hakuo YANAGISAWA, Minister of Agriculture, Forestry and Fisheries
ad interim

This permit authorizes the implementation of the research take of Antarctic minke whales and Fin whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Kyo-maru No. 1 (812.08GT)
- 4 Research base (The permitted vessel belongs to) :
Nisshin-maru (8,030.00GT)
- 5 Owner of the Vessel :
Kyodo Senpaku LTD.
- 6 Species and number of whales to be taken for Research:
850 Antarctic minke whales and 10 Fin whales in total by the research fleet including this vessel
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

7 Research area :

Designated as the waters south of 60 S, east of 130 E, west of 145 W, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 15th, 2006 to April 11th, 2007

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person (s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 18-SUIKAN-2610

Dated November 13, 2006

Issued to: The Institute of Cetacean Research
Director: Dr. Hiroshi HATANAKA
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Hakuo YANAGISAWA, Minister of Agriculture, Forestry and Fisheries
ad interim

This permit authorizes the implementation of the research take of Antarctic minke whales and Fin whales for scientific purposes in the Antarctic Ocean.

1 Purpose of research :

Research of whale stocks in the Southern Hemisphere

2 Method of research :

Research take using grenade harpoons

3 Vessel used and gross tonnage :

Yushin-maru No. 2 (747.00GT)

4 Research base (The permitted vessel belongs to) :

Nisshin-maru (8,030.00GT)

5 Owner of the Vessel :

Kyodo Senpaku LTD.

6 Species and number of whales to be taken for Research:

850 Antarctic minke whales and 10 Fin whales in total by the research fleet including this vessel

However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

7 Research area :

Designated as the waters south of 60 S, east of 130 E, west of 145 W, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 15th, 2006 to April 11th, 2007

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 18-SUIKAN-2610

Dated November 13, 2006

Issued to: The Institute of Cetacean Research
Director: Dr. Hiroshi HATANAKA
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Hakuo YANAGISAWA, Minister of Agriculture, Forestry and Fisheries
ad interim

This permit authorizes the implementation of the research take of Antarctic minke whales and Fin whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Kyoshin-maru No. 2 (372.00GT)
- 4 Research base (The permitted vessel belongs to) :
Nisshin-maru (8,030.00GT)
- 5 Owner of the Vessel :
Kyodo Senpaku LTD.
- 6 Species and number of whales to be taken for Research:
850 Antarctic minke whales and 10 Fin whales in total by the research fleet including this vessel
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf Minke whales are excluded from the research.

7 Research area :

Designated as the waters south of 60 S, east of 130 E, west of 145 W, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 15th, 2006 to April 11th, 2007

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 5 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 18-SUIKAN-2610

Dated November 13, 2006

Issued to: The Institute of Cetacean Research
Director: Dr. Hiroshi HATANAKA
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan.

Issued by: Mr. Hakuo YANAGISAWA, Minister of Agriculture, Forestry and Fisheries
ad interim

This permit authorizes the implementation of the research take of Antarctic minke whales and Fin whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Kaikou-maru (860.25GT)
- 4 Research base (The permitted vessel belongs to) :
Nisshin-maru (8,030.00GT)
- 5 Owner of the Vessel :
OFFSHORE OPERATION LTD.
- 6 Species and number of whales to be taken for Research:
850 Antarctic minke whales and 10 Fin whales in total by the research fleet including this vessel
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf Minke whales are excluded from the research.

7 Research area :

Designated as the waters south of 60 S, east of 130 E, west of 145 W, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 15th, 2006 to April 11th, 2007

9-Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person (s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Annex 84: Special Permit No. 19-SUIKAN-1911 of 7 November 2007
[incomplete record held by the International Whaling Commission]

Special Permit

Permit No. 19-SUIKAN-1911

Dated November 7, 2007

Issued to: The Institute of Cetacean Research
Director: Mr. Minoru MORIMOTO
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Masatoshi WAKABAYASHI, Minister of Agriculture, Forestry and
Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Nisshin-maru (8,044.00GT)
- 4 Vessels accompanied :
 - ① Sampling vessels accompanied
Yushin-maru No. 3 (742.00GT)
Yushin-maru No. 2 (747.00GT)
Yushin-maru (720.00GT)
 - ② Sighting vessels
Kyoshin-maru No. 2 (372.00GT)
Kaikou-maru (860.25GT)
- 5 Owner of the Vessel :
Kyodo Senpaku LTD.
- 6 Species and number of whales to be taken for Research:
850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

7 Research area :

Designated as the waters south of 60 S, east of 35 E, west of 175 E, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 12th, 2007 to April 16th, 2008

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 19-SUIKAN-1911

Dated November 7, 2007

Issued to: The Institute of Cetacean Research
Director: Mr. Minoru MORIMOTO
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Masatoshi WAKABAYASHI, Minister of Agriculture, Forestry and
Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Yushin-maru No. 3 (742.00GT)
- 4 Research base (The permitted vessel belongs to):
Nisshin-maru (8,044.00GT)
- 5 Owner of the Vessel :
Kyodo Senpaku LTD.
- 6 Species and number of whales to be taken for Research:
850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

Special Permit

Permit No. 19-SUIKAN-1911

Dated November 7, 2007

Issued to: The Institute of Cetacean Research

Director: Mr. Minoru MORIMOTO

Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Masatoshi WAKABAYASHI, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

1 Purpose of research :

Research of whale stocks in the Southern Hemisphere

2 Method of research :

Research take using grenade harpoons

3 Vessel used and gross tonnage :

Yushin-maru No. 2 (747.00GT)

4 Research base (The permitted vessel belongs to) :

Nisshin-maru (8,044.00GT)

5 Owner of the Vessel :

Kyodo Senpaku LTD.

6 Species and number of whales to be taken for Research:

850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.

However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

Special Permit

Permit No. 19-SUIKAN-1911

Dated November 7, 2007

Issued to: The Institute of Cetacean Research

Director: Mr. Minoru MORIMOTO

Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Masatoshi WAKABAYASHI, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

1 Purpose of research :

Research of whale stocks in the Southern Hemisphere

2 Method of research :

Research take using grenade harpoons

3 Vessel used and gross tonnage :

Yushin-maru (720.00GT)

4 Research base(The permitted vessel belongs to) :

Nisshin-maru (8,044.00GT)

5 Owner of the Vessel :

Kyodo Senpaku LTD.

6 Species and number of whales to be taken for Research:

850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.

However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

Special Permit

Permit No.19-SUIKAN-1911

Dated November 7, 2007

Issued to: The Institute of Cetacean Research
Director: Mr.Minoru MORIMOTO
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Masatoshi WAKABAYASHI, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Kyoshin-maru No.2 (372.00GT)
- 4 Research base(The permitted vessel belongs to):
Nisshin-maru (8,044.00GT)
- 5 Owner of the Vessel :
Kyodo Senpaku LTD.
- 6 Species and number of whales to be taken for Research:
850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf Minke whales are excluded from the research.

Special Permit

Permit No. 19-SUIKAN-1911

Dated November 7, 2007

Issued to: The Institute of Cetacean Research

Director: Mr. Minoru MORIMOTO

Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Masatoshi WAKABAYASHI, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

1 Purpose of research :

Research of whale stocks in the Southern Hemisphere

2 Method of research :

Research take using grenade harpoons

3 Vessel used and gross tonnage :

Kaikou-maru (860.25GT)

4 Research base(The permitted vessel belongs to):

Nisshin-maru (8,044.00GT)

5 Owner of the Vessel :

OFFSHORE OPERATION LTD.

6 Species and number of whales to be taken for Research:

850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.

However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf Minke whales are excluded from the research.

Special Permit

Permit No. 20-SUIKAN-1727

Dated November 5, 2008

Issued to: The Institute of Cetacean Research
Director: Mr. Minoru MORIMOTO
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Shigeru ISHIBA, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Nisshin-maru (8,044.00GT)
- 4 Vessels accompanied :
 - ① Sampling vessels accompanied
Yushin-maru No. 3 (742.00GT)
Yushin-maru No. 2 (747.00GT)
Yushin-maru (720.00GT)
 - ② Sighting vessels
Kyoshin-maru No. 2 (372.00GT)
Kaikou-maru (860.25GT)
- 5 Owner of the Vessel :
Kyodo Senpaku LTD.
- 6 Species and number of whales to be taken for Research.
850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.
- 7 Research area :

Designated as the waters south of 60 S, east of 130 E, west of 145 W
excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 12th, 2008 to April 30th, 2009

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Sole: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 20-SUIKAN-1727

Dated November 5, 2008

Issued to: The Institute of Cetacean Research
Director: Mr. Minoru NORIMOTO
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Shigeru ISHIBA, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

1 Purpose of research :

Research of whale stocks in the Southern Hemisphere

2 Method of research :

Research take using grenade harpoons.

3 Vessel used and gross tonnage :

Yushin-maru No. 3 (742.00GT)

4 Research base (The permitted vessel belongs to):

Nisshin-maru (8,044.00GT)

5 Owner of the Vessel :

Kyodo Senpaku LTD.

6 Species and number of whales to be taken for Research:

850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.

However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

Designated as the waters south of 60 S, east of 130 E, west of 145 W, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 12th, 2008 to April 30th, 2009

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 20-SUTKAN-1727

Dated November 5, 2008

Issued to: The Institute of Cetacean Research
Director: Mr. Minoru MORIMOTO
Address : 4-5, Toyoni-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Shigeru ISHIBA, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Yushin-maru No. 2 (747.00GT)
- 4 Research base (The permitted vessel belongs to) :
Nisshin-maru (8,044.00GT)
- 5 Owner of the Vessel :
Kyodo Senpaku LTD.
- 6 Species and number of whales to be taken for Research:
850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

Designated as the waters south of 60 S. east of 130 E. west of 145 W.
excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 12th. 2008 to April 30th. 2009

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th. 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 20-SU'IKAN-1727

Dated November 5, 2008

Issued to: The Institute of Cetacean Research
Director: Mr. Minoru MORIMOTO
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Shigeru ISHIBA, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Yushin-maru (720, 00GT)
- 4 Research base (The permitted vessel belongs to) :
Nisshin-maru (8, 044 00GT)
- 5 Owner of the Vessel :
Kyodo Seapaku LTD.
- 6 Species and number of whales to be taken for Research:
850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

Designated as the waters south of 60 S, east of 130 E, west of 145 W, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 12th, 2008 to April 30th, 2009

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 20-SUIKAN-1727

Dated November 5, 2008

Issued to: The Institute of Cetacean Research
Director: Mr. Minoru MORINOTO
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Shigeru ISHIBA, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Kyoshin-maru No. 2 (372, 00GT)
- 4 Research base (The permitted vessel belongs to) :
Nisshin-maru (8, 044, 00GT)
- 5 Owner of the Vessel :
Kyodo Senpaku LTD.
- 6 Species and number of whales to be taken for Research:
850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf Minke whales are excluded from the research.

Designated as the waters south of 60 S, east of 130 E, west of 145 W, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 12th, 2008 to April 30th, 2009

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 20-SUIKAN-1727

Dated November 5, 2008

Issued to: The Institute of Cetacean Research
Director: Mr. Minoru NORIMOTO
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Shigeru ISHIBA, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

1 Purpose of research :

Research of whale stocks in the Southern Hemisphere

2 Method of research :

Research take using grenade harpoons

3 Vessel used and gross tonnage :

Kaikou-maru (880, 25GT)

4 Research base (The permitted vessel belongs to) :

Nisshin-maru (8, 044, 00GT)

5 Owner of the Vessel :

OFFSHORE OPERATION LTD.

6 Species and number of whales to be taken for Research:

850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.

However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf Minke whales are excluded from the research.

Designated as the waters south of 40 S, east of 130 E, west of 145 W,
excluding the 200 mile zones of foreign countries

8 Duration of validity of this permit :

From November 12th, 2008 to April 30th, 2009

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUICYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 21-SUIKAN-1605

Dated November 12, 2009

Issued to: The Institute of Cetacean Research

Director: Mr. Minoru MORIMOTO

Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Hirotaka AKAMATSU, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

1 Purpose of research :

Research of whale stocks in the Southern Hemisphere

2 Method of research :

Research take using grenade harpoons

3 Vessel used and gross tonnage :

Yushin-maru No. 2 (747.00GT)

4 Research base (The permitted vessel belongs to):

Nisshin-maru (8,044.00GT)

5 Owner of the Vessel :

Kyodo Senpaku LTD.

6 Species and number of whales to be taken for Research:

850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.

However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

7 Research area :

Designated as the waters south of 60 S, east of 35 E, west of 175 E, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 19th, 2009 to April 30th, 2010

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 21-SUIKAN-1605

Dated November 12, 2005

Issued to: The Institute of Cetacean Research

Director: Mr. Minoru MORIMOTO

Address : 4-5, Toyonai-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Hirotaka AKAMATSU, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

1 Purpose of research :

Research of whale stocks in the Southern Hemisphere

2 Method of research :

Research take using grenade harpoons

3 Vessel used and gross tonnage :

Nisshin-maru (8,044.00GT)

4 Vessels accompanied :

Yushin-maru No. 2 (747.00GT)

Yushin-maru (720.00GT)

Yushin-maru No. 3 (742.00GT)

Shonan-maru No. 2 (712.00GT)

5 Owner of the Vessel :

Kyodo Senpaku LTD.

6 Species and number of whales to be taken for Research:

850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.

However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

7 Research area :

Designated as the waters south of 60 S, east of 35 E, west of 175 E, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 19th, 2009 to April 30th, 2010

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUICYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 21-SUIKAN-1605

Dated November 12, 2009

Issued to: The Institute of Cetacean Research

Director: Mr. Minoru MORIMOTO

Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Hirotaka AKAMATSU, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

1 Purpose of research :

Research of whale stocks in the Southern Hemisphere

2 Method of research :

Research take using grenade harpoons

3 Vessel used and gross tonnage :

Yushin-maru (720.00GT)

4 Research base (The permitted vessel belongs to) :

Nisshin-maru (8,044.00GT)

5 Owner of the Vessel :

Kyodo Senpaku LTD.

6 Species and number of whales to be taken for Research:

850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.

However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

7 Research area :

Designated as the waters south of 60 S, east of 35 E, west of 175 E, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 19th, 2009 to April 30th, 2010

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 21-SUIKAN-1805

Dated November 12, 2009

Issued to: The Institute of Cetacean Research

Director: Mr. Minoru MORIMOTO

Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Hirotaka AKAMATSU, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

1 Purpose of research :

Research of whale stocks in the Southern Hemisphere

2 Method of research :

Research take using grenade harpoons

3 Vessel used and gross tonnage :

Yushin-maru No. 3 (742.00GT)

4 Research base (The permitted vessel belongs to) :

Nisshin-maru (8,044.00GT)

5 Owner of the Vessel :

Kyodo Senpaku LTD.

6 Species and number of whales to be taken for Research:

850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.

However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

7 Research area :

Designated as the waters south of 60 S, east of 35 E, west of 175 E, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 19th, 2009 to April 30th, 2010

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No.4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No. 21-SUIKAN-1605
Dated November 12, 2009

Issued to: The Institute of Cetacean Research
Director: Mr. Minoru MORIMOTO
Address : 4-5, Toyomi-cho, Chuo-ku, Tokyo, Japan

Issued by: Mr. Hirotaka AKAMATSU, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, Fin whales and Humpback whales for scientific purposes in the Antarctic Ocean.

1 Purpose of research :

Research of whale stocks in the Southern Hemisphere

2 Method of research :

Research take using grenade harpoons

3 Vessel used and gross tonnage :

Shonan-maru No. 2 (712.00GT)

4 Research base (The permitted vessel belongs to):

Nisshin-maru (8,044.00GT)

5 Owner of the Vessel :

Kyodo Senpaku LTD.

6 Species and number of whales to be taken for Research:

850 Antarctic minke whales, 50 Fin whales and 50 Humpback whales in total by the research fleet including this vessel.

However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf Minke whales are excluded from the research.

7 Research area :

Designated as the waters south of 60 S, east of 35 E, west of 175 E, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From November 19th, 2009 to April 30th, 2010

9 Terms and conditions:

- (1) It shall be prohibited to take species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit should so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting Report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No. 4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented under the guidance and supervision by the Director-General of the Fisheries Agency where and if appropriate.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No.22-SUIKAN-1577

Dated November 29,2010

Issued to: The Institute of Cetacean Research
Director: Mr.Minoru MORIMOTO
Address : 4-5,Toyomi-cho,Chuo-ku,Tokyo,Japan

• Issued by: Mr. Michihiko KANO, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, fin whales and humpback whales for scientific purposes in the Antarctic Ocean.

1 Purpose of research :

Research of whale stocks in the Southern Hemisphere

2 Method of research :

Research take using grenade harpoons

3 Vessel used and gross tonnage :

Nisshin-maru (8,044.00GT)

4 Vessels accompanied :

Yushin-maru (720.00GT)

Yushin-maru No.2 (747.00GT)

Yushin-maru No.3 (742.00GT)

5 Owner of the Vessel :

Kyodo Senpaku LTD.

6 Species and number of whales to be taken for research:

850 Antarctic minke whales, 50 fin whales and 50 humpback whales in total by the research fleet including this vessel.

However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

7 Research area :

Designated as the waters south of 60 S, east of 35 E, west of 145 W, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From December 2, 2010 to March 31, 2011

9 Terms and conditions:

- (1) It shall be prohibited to take cetacean species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit shall so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No.4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented following the guidance and supervision by the Director-General of the Fisheries Agency.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.
- (15) The Minister of Agriculture, Forestry and Fisheries may, at any time, change the terms and conditions of this permit. Such changes must be followed by the bearer of this permit.
- (16) DNA analysis that is necessary for DNA registration shall be conducted for each whale taken.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No.22-SUIKAN- 1577

Dated November 29,2010

Issued to: The Institute of Cetacean Research
Director: Mr.Minoru MORIMOTO
Address : 4-5,Toyomi-cho,Chuo-ku,Tokyo,Japan

Issued by: Mr. Michihiko KANO, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, fin whales and humpback whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Yushin-maru (720.00GT)
- 4 Research base(The permitted vessel belongs to) :
Nisshin-maru (8,044.00GT)
- 5 Owner of the Vessel :
Kyodo Senpaku LTD.
- 6 Species and number of whales to be taken for research:
850 Antarctic minke whales, 50 fin whales and 50 humpback whales in total by the research fleet including this vessel.
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.
- 7 Research area :
Designated as the waters south of 60 S, east of 35 E, west of 145 W, excluding the 200 mile zones of foreign countries.
- 8 Duration of validity of this permit :
From December 2, 2010 to Marchi 31, 2011

9 Terms and conditions:

- (1) It shall be prohibited to take cetacean species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit shall so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No.4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented followig the guidance and supervision by the Director-General of the Fisheries Agency.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.
- (15) The Minister of Agriculture, Forestry and Fisheries may, at any time, change the terms and conditions of this permit. Such changes must be followed by the bearer of this permit.
- (16) DNA analysis that is necessary for DNA registration shall be conducted for each whale taken.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No.22-SUIKAN- 1577

Dated November 29,2010

Issued to: The Institute of Cetacean Research

Director: Mr.Minoru MORIMOTO

Address : 4-5,Toyomi-cho,Chuo-ku,Tokyo,Japan

Issued by: Mr. Michihiko KANO, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, fin whales and humpback whales for scientific purposes in the Antarctic Ocean.

1 Purpose of research :

Research of whale stocks in the Southern Hemisphere

2 Method of research :

Research take using grenade harpoons

3 Vessel used and gross tonnage :

Yushin-maru (720.00GT)

4 Research base(The permitted vessel belongs to) :

Nisshin-maru (8,044.00GT)

5 Owner of the Vessel :

Kyodo Senpaku LTD.

6 Species and number of whales to be taken for research:

850 Antarctic minke whales, 50 fin whales and 50 humpback whales in total by the research fleet including this vessel.

However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

7 Research area :

Designated as the waters south of 60 S, east of 35 E, west of 145 W, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From December 2, 2010 to Marchi 31, 2011

9 Terms and conditions:

- (1) It shall be prohibited to take cetacean species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit shall so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No.4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented following the guidance and supervision by the Director-General of the Fisheries Agency.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.
- (15) The Minister of Agriculture, Forestry and Fisheries may, at any time, change the terms and conditions of this permit. Such changes must be followed by the bearer of this permit.
- (16) DNA analysis that is necessary for DNA registration shall be conducted for each whale taken.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No.22-SUIKAN- 1577

Dated November 29,2010

Issued to: The Institute of Cetacean Research
Director: Mr.Minoru MORIMOTO
Address : 4-5,Toyomi-cho,Chuo-ku,Tokyo,Japan

Issued by: Mr. Michihiko KANO, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, fin whales and humpback whales for scientific purposes in the Antarctic Ocean.

1 Purpose of research :

Research of whale stocks in the Southern Hemisphere

2 Method of research :

Research take using grenade harpoons

3 Vessel used and gross tonnage :

Yushin-maru No.2 (747.00GT)

4 Research base (The permitted vessel belongs to):

Nisshin-maru (8,044.00GT)

5 Owner of the Vessel :

Kyodo Senpaku LTD.

6 Species and number of whales to be taken for research:

850 Antarctic minke whales, 50 fin whales and 50 humpback whales in total by the research fleet including this vessel.

However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.

7 Research area :

Designated as the waters south of 60 S, east of 35 E, west of 145 W, excluding the 200 mile zones of foreign countries.

8 Duration of validity of this permit :

From December 2, 2010 to March 31, 2011

9 Terms and conditions:

- (1) It shall be prohibited to take cetacean species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit shall so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No.4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented following the guidance and supervision by the Director-General of the Fisheries Agency.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.
- (15) The Minister of Agriculture, Forestry and Fisheries may, at any time, change the terms and conditions of this permit. Such changes must be followed by the bearer of this permit.
- (16) DNA analysis that is necessary for DNA registration shall be conducted for each whale taken.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Special Permit

Permit No.22-SUIKAN- 1577

Dated November 29,2010

Issued to: The Institute of Cetacean Research
Director: Mr.Minoru MORIMOTO
Address : 4-5,Toyomi-cho,Chuo-ku,Tokyo,Japan

Issued by: Mr. Michihiko KANO, Minister of Agriculture, Forestry and Fisheries

This permit authorizes the implementation of the research take of Antarctic minke whales, fin whales and humpback whales for scientific purposes in the Antarctic Ocean.

- 1 Purpose of research :
Research of whale stocks in the Southern Hemisphere
- 2 Method of research :
Research take using grenade harpoons
- 3 Vessel used and gross tonnage :
Yushin-maru No.3 (742.00GT)
- 4 Research base(The permitted vessel belongs to) :
Nisshin-maru (8,044.00GT)
- 5 Owner of the Vessel :
Kyodo Senpaku LTD.
- 6 Species and number of whales to be taken for research:
850 Antarctic minke whales, 50 fin whales and 50 humpback whales in total by the research fleet including this vessel.
However, it is authorized to take up to 935 Antarctic minke whales, if it is so required for the purpose to implement the research. Dwarf minke whales are excluded from the research.
- 7 Research area :
Designated as the waters south of 60 S, east of 35 E, west of 145 W, excluding the 200 mile zones of foreign countries.
- 8 Duration of validity of this permit :
From December 2, 2010 to March 31, 2011

9 Terms and conditions:

- (1) It shall be prohibited to take cetacean species other than those prescribed in paragraph 6 or to exceed the number of take prescribed in paragraph 6.
- (2) Any whales taken under this permit shall so far as practicable be processed after the observation and collection of samples.
- (3) Results of the research shall be reported to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (4) Accounting report regarding the research shall be submitted to the Minister of Agriculture, Forestry and Fisheries immediately upon the completion of operation of the research.
- (5) The cold grenade harpoon shall not be used unless it is permitted by the Director-General of the Fisheries Agency as necessary for the implementation of research and unless it is used as the second harpoon in order to shorten the time to death of the whale which was struck by the explosive grenade harpoon.
- (6) Rifles on board shall be used only for the purpose of shortening the time to death of whales.
Rifles shall be used as the main secondary killing technique unless difficulties arise with rifles or hunters.
- (7) This permit shall be placed on board the vessel during the operation of the research.
- (8) The flag specified in form No.4 of the notification dated August 15th, 1950 (ref. No. 25-SUIGYO-3645) shall be displayed on the vessel.
- (9) Enforcement officials, or person(s) who have responsibility for the research shall be on board the vessel.
- (10) It shall be prohibited to refuse fisheries inspector to be on board the vessel.
- (11) Damage to other fisheries caused by the operation shall be compensated in consultation with the parties concerned.
- (12) The bearer of the permit shall not refuse the presentation of report which is required for the purpose of coordinating this operation with other fishing operations.
- (13) The research shall be implemented following the guidance and supervision by the Director-General of the Fisheries Agency.
- (14) This permit could be withdrawn if violation to these terms and conditions be observed.
- (15) The Minister of Agriculture, Forestry and Fisheries may, at any time, change the terms and conditions of this permit. Such changes must be followed by the bearer of this permit.
- (16) DNA analysis that is necessary for DNA registration shall be conducted for each whale taken.

Note: This document is an unofficial translation for the purposes of the International Whaling Commission. The original permit in the Japanese language is the only official version of this permit.

Annex 88: Government of Japan, *National Diet Debates*, House of Councillors - Budget Committee - No. 10, 17 March 1982 [excerpt]

| 96 – House of Councillors Budget Committee – No. 10 | | | |
|---|--|---------------------------|------|
| 17 March 1982 | | | |
| Speaker: 22/360 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Ikuro Itō | Democratic Socialist Party / Kokumin Rengō | | |
| <p>Mr Ikuro Itō, Committee Member:</p> <p>So, these are the numbers, and we're hearing reports that wealthy persons are going as far as vote-buying, the anti-whaling nations are buying votes and getting other countries to become members of the IWC. The upshot of this is that at the Special Meeting scheduled to be held in Brighton on 24th and 25th this month and at the Annual Meeting in July, as you have just pointed out, we're now in the situation where the anti-whaling nations account for more than two-thirds of the IWC. Pretty much, I'd say that the way ahead looks rather grim. Japan's whaling industry, which once possessed seven whaling factory ships, now has but one. The industry has been shrinking and shrinking. I'd like to learn from the Prime Minister as to what the Government's basic position on the whaling industry is – that is, whether the Government intends to develop the industry or whether it sees it as being out of its hands?</p> | | | |

| 96 – House of Councillors Budget Committee – No. 10 | | | |
|---|--------------------------|---------------------------|------|
| 17 March 1982 | | | |
| Speaker: 23/360 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Zenkō Suzuki | Liberal Democratic Party | Prime Minister | |
| <p>Mr Zenkō Suzuki, State Minister:</p> <p>Japan's whaling industry has an extremely long history and it also occupies an important place in the Japanese diet. As Mr Itō has just mentioned, and as the Minister for Agriculture, Forestry and Fisheries also stated in his reply, lately we have seen, targeting whaling, the anti-whaling movement driven by environmental protection organisations and other groups grow larger and larger worldwide. As part of this trend, and as we have just heard, many countries, including land-locked countries that have nothing to do with whaling, have become members of the International Whaling Commission. Whether or not you'd describe it as environmental protection, they're taking an anti-whaling stance built on emotion-based arguments, and trying to force through these unscientific policies. Most recently, the IWC's Scientific Committee has clearly proven scientifically that, to the contrary, with the current level of restrictions in place, after several years or a decade, the stocks will actually increase beyond their current levels and stabilise there. Despite this, they are paying no attention [to the science] and are trying to use their numbers to lead the</p> | | | |

IWC in the direction of a ban on whaling. The situation is truly regrettable.

At the heart of it, I see the problem as lying in the actual set-up of the International Whaling Commission, with its very make-up. But even were we to quickly take this up this issue it wouldn't go anywhere towards resolving it. That's why, as much as we can, we're also reaching out to the other whaling countries and communicating laterally with each other to make sure that a rational result is reached firmly from the position of natural resources theory, and we're pushing to have the correct views accepted by the International Whaling Commission. We're also pushing ahead with proactive diplomacy aimed at the non-whaling member nations, including through a range of public relations efforts.

The Government intends to place even greater efforts than it has to date into the protection and growth of the whaling industry into the future.

| 96 - 参 - 予算委員会 - 10 号 | | | |
|---|----------|---------|----|
| 昭和 57 年 03 月 17 日 | | | |
| 発言者：22/360 | | 検索語：前・次 | |
| 発言者の情報 | | | |
| 発言者名 | 所属会派 | 肩書き | 役割 |
| 伊藤郁男 いたういくお | 民社党・国民連合 | | |
| <p>伊藤郁男君</p> <p>そこで、そういう数で、しかも資産家が票を買ってでも、反捕鯨国が票を買って IWC に加盟をさせるといふ、そういうことも指摘をされているわけでありまして、したがって、今月の二十四、五とブライトンにおきまして特別会議が開かれるわけですね。そして七月の年次総会が開かれると、こういうことになりまして、いま御指摘のようにもう三分の二以上を反捕鯨国が占めるといふ状況になりますと、まさにきわめて前途は暗い状況ではないかと思うんですが、かつて捕鯨母船七隻を有したわが国の捕鯨産業でありますけれども、いまはもう母船一隻しかない。縮小に縮小を重ねてきておるわけでありまして、この捕鯨産業についての政府の基本的な考え方ですね、これを育成をしていくのか、あるいはやむを得ないと考えるのか、その辺の基本的な姿勢を総理大臣にお伺いします。</p> | | | |

| 96 - 参 - 予算委員会 - 10 号 | | | |
|--|-------|---------|----|
| 昭和 57 年 03 月 17 日 | | | |
| 発言者：23/360 | | 検索語：前・次 | |
| 発言者の情報 | | | |
| 発言者名 | 所属会派 | 肩書き | 役割 |
| 鈴木善幸 すずきぜんこう | 自由民主党 | 内閣総理大臣 | |
| <p>国務大臣（鈴木善幸君）</p> <p>日本の捕鯨業は非常に歴史も古く、また、日本の食生活に占めておるウエートも大きい産業でございます。私は、いま伊藤さんからも御指摘があり、農水大臣からも御答弁を申し上げましたように、最近、捕鯨に対しまして、自然保護団体その他を中心として反捕鯨の連動が非常に世界的に広がりを見せておるわけでありまして。こういう中で国際捕鯨委員会が、いまもお話しがありましたように、全然捕鯨に関係のない内陸国家のような国がたくさんこの国際捕鯨委員会に加盟をしておる。そして、自然保護といいますが、むしろ感情論の上に立って反捕鯨の態度をとり、そういう非科学的な政策を押しつけようとしておる。現在科学小委員会等もありまして、学問的にこの程度の規制をすれば数年後には、あるいは十年後にはこういう資源はむしろ現状よりもふえていくと、安定していくということがはっきり立証されておるにかかわらず、それを無視して、数でもってこれを禁止の方向に持っていこうとしておる、こういうことはまことに遺憾なことであります。</p> | | | |

基本的には私は国際捕鯨委員会のあり方そのもの、構成そのものにも問題があると思います。しかし、いま直ちにそのことを問題にいたしましても問題の解決にはならない。そこで、できるだけ捕鯨国に対しましても、十分資源論の面から合理的な結論が出るようにお互いに横の連絡をとりながら、捕鯨委員会での正しい意見が通るように働きかけておる。また、非捕鯨国のメンバーに対しましても、いろいろPR等積極的な外交も進めてやっておるところでございます。

今後とも政府といたしましては、この捕鯨業の保護育成につきましては従来にも増して努力をしてまいりたいと、こう考えております。

Annex 89: Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 24, 4 August 1982 [excerpts]

| 96 – House of Representatives Agriculture, Forestry & Fisheries Committee – No. 24 | | | |
|---|-------------|--|------|
| 4 August 1982 | | | |
| Speaker: 92/277 | | Search Term: Previous/Next | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Akira Matsuura | | Director-General, Japan Fisheries Agency | |
| <p>Mr Matsuura, Government Delegate:</p> <p>In terms of our dealings with the United States, the fact is that when we saw the outcome of last year's Annual Meeting we certainly felt a sense of crisis, and with that in mind, we reached out several times to the Americans and held a range of conversations with them at the officials' level. However, the background to this seemed to be that for the Americans the moratorium is a key national policy, and based on that they took the position of supporting the moratorium on this occasion too.</p> <p>As an issue ahead of us, however, there's clearly a need to do more in reaching out and seeking understanding for our position and that's also with regard to the countries that have shifted their support towards the moratorium. As part of this, and, in particular, with regard to the United States, we also have our fisheries relationships which we have cultivated over a long period to date, and, in recent times, through joint ventures and the like, these fisheries relationships have become even closer. It will be extremely important to seek the understanding of the United States with regard to issues like continuing with our whaling and normalising the IWC while also maintaining these excellent fisheries relationships. I think it will also be important to seek the same kind of understanding from other countries as well. Particularly concerning the US, there is the huge problem of the Packwood-Magnuson Amendment. In fact, Mr Inoue, the Head of the Far Seas Fisheries Division, is currently visiting the US to negotiate revisions to the Japan-United States Fishery Agreement, and I have a short while ago given him instructions to engage in various discussions with his counterparts about the whaling issue as well.</p> | | | |

[...]

| 96 – House of Representatives Agriculture, Forestry & Fisheries Committee – No. 24 | | | |
|--|-----------------------|----------------------------|------|
| 4 August 1982 | | | |
| Speaker: 109/277 | | Search Term: Previous/Next | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Ichirō Hino | Japan Socialist Party | | |
| <p>Mr Hino, Committee Member:</p> <p>After the international meeting concluded, I took a sounding of the views of the people in the industry as well as the workers in the relevant sectors. Even though there would be a three-year grace period, all of them were very concerned. And they all said exactly the same thing, which was that they were no longer able to do any other kind of work. In other</p> | | | |

words, the equipment and technologies used for whaling cannot be readily applied to other uses. To a man, they all said that continuing with whaling was all they had left. They even went as far as to tell me that were they to lose their means of earning a living through whaling, then they would have no means of survival. I certainly hope that you are prepared to give adequate answers to these people. How about it? If it would be possible, I would be grateful if the Minister himself would respond.

**96 – House of Representatives
Agriculture, Forestry & Fisheries Committee – No. 24**

4 August 1982

Speaker: 110/277

Search Term: Previous/Next

Speaker Information

| Speaker | Affiliation | Title | Role |
|----------------|--------------------------|--|------|
| Kichirō Tazawa | Liberal Democratic Party | Minister for Agriculture, Forestry and Fisheries | |

Minister Tazawa

In fact, very much along the lines of the explanation given by the Director-General of the Fisheries Agency, following the Annual Meeting I met with Prime Minister Suzuki and I have been informed of a range of views about strategies for dealing with the issue from here on. It is the Prime Minister's view that precisely since the problems facing whaling in Japan are so extremely significant, and as there are so many people who are reliant primarily on this industry for their livelihood, we must actively continue to build an environment where whaling can be practiced. The Prime Minister told me that the problem, of course, is that unless we pursue relations with the United States harmoniously, we will be instead laying down the basis for future problems, and so we had to be careful of that; but, that said, he was of the view that we ought to push harder ahead with a response on whaling that was even more forward-leaning than to date. And so, for my part too, since there are people who are unable to get jobs elsewhere in the fishing industry other than in whaling, as you have pointed out, I intend to redouble efforts in actively dealing with the whaling problem and to live up to the expectations which have been placed upon me.

| | | | |
|---|------|-------------|----|
| 96-衆-農林水産委員会-24号 | | | |
| 昭和57年08月04日 | | | |
| 昭和57年08月04日 | | 発言者: 92/277 | |
| | | 検索語: 前・次 | |
| 発言者の情報 | | | |
| 発言者名 | 所属会派 | 肩書き | 役割 |
| 松浦昭 | | 水産庁長官 | |
| <p>松浦政府委員</p> <p>アメリカとの関係につきましても、実は私ども昨年の総会の結果を見まして非常に危機感を持っておったわけでございまして、さような意味から何回かアメリカとの接触も行い、また、行政のベースではいろいろな話し合いも行ってきたところでございます。しかしながら、アメリカそのものとしてはやはりモラトリアムというものが一つの国是であるという点から、今回もこのモラトリアムに賛成の立場をとったという経緯であろうと思います。</p> <p>しかし、今後の問題といたしましては、当然これらのモラトリアムに賛成に回りました国々につきましても、わが国の立場をさらに一層強力に理解を求めて働きかけるということが必要でございます。その中でも、特に米国につきましては、従来まで長い間培われてきました漁業の関係もございまして、さらにまた、最近におきましては、ジョイントベンチャーその他を通じました漁業関係をさらに緊密にしている関係にございまして、かような良好な漁業関係の維持というものもあわせて、わが国の捕鯨の継続あるいはIWCの正常化といったような問題につきまして米国の理解を求めるといことが非常に重要でありますし、また、その他の国々についても同様な理解を求めていくということが重要であろうと思います。特に、米国につきましてはバックウッド・マグナソン修正法という非常に大きな問題がございますので、実は現在井上海洋漁業部長が日米漁業協定の改定交渉のために訪米いたしておりますが、その際に、捕鯨問題につきましても先方と種々話し合いを行うように指示をして出したところでございます。</p> | | | |

[略]

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|------------------|-------|--------------|----|
| 96-衆-農林水産委員会-24号 | | | |
| 昭和57年08月04日 | | | |
| 昭和57年08月04日 | | 発言者: 109/277 | |
| | | 検索語: 前・次 | |
| 発言者の情報 | | | |
| 発言者名 | 所属会派 | 肩書き | 役割 |
| 日野市朗ひのいちろう | 日本社会党 | | |
| <p>日野委員</p> | | | |

この国際会議が終わってから、私、業界の方やそれからその関連の労働者の方々の意見をも聞いてみたわけでありまして。三年間の余裕があるとはいうものの、みんなかなり不安感を感じているわけでございます。そして、この人たちが一様に言うことは、もう自分たちはほかには何にもやれないのだということでございます。つまり、捕鯨の設備、それから捕鯨の技術というようなものは、これは他になかなか転用ができるものではないということございまして、こういった人たちはみんないずれももうこれからは捕鯨を続けるしかないのだということでありまして、捕鯨という生活手段を奪われるということになりますと、これは自分たちの生存の道はないというようなことまで言われるわけでありまして。こういう人たちに対して十分にこたえるというだけの覚悟はぜひともしていただきたいと思っております。いかがでございましょう。できれば大臣からひとつお願いをしたいのですが。

96-衆-農林水産委員会-24号

昭和57年08月04日

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発言者の情報

| 発言者名 | 所属会派 | 肩書き | 役割 |
|-------------|-------|--------|----|
| 田澤吉郎たざわきちろう | 自由民主党 | 農林水産大臣 | |

田澤国務大臣

実はいま水産庁長官の答弁にもありましたように、この総会の後、鈴木総理ともお会いしまして、今後の対策等についていろいろ意見を承ったのでございますが、それに対しては、総理としては、やはり日本の捕鯨に対する問題というのは非常に大きい、これを中心にして生計を立てている人がたくさんおるのであるから、これに対しては今後とも積極的に捕鯨ができる状況をつくっていかねばならない。ただ、問題は、やはりアメリカとの関係を円満な形で進めていかねば将来にかえって禍根を残すことになるから、そういう点は注意しなさいということはおっしゃいましたものの、これまで以上に積極的に捕鯨についてはより一層の対策を進めていくべきであるという考えでございますので、私といたしましても、ただいま御指摘のように捕鯨以外に漁労の道のない方々でございますので、旧来にも増して捕鯨問題について積極的に取り組んで、期待にこたえるように努力をいたしたいと考えております。

Annex 90: Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 2, 11 October 1983 [excerpt]

| 100 – House of Representatives Agriculture, Forestry & Fisheries Committee – No. 2 | | | |
|--|-------------|---------------------------------------|------|
| 11 October 1983 | | | |
| Speaker: 41/163 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Fumio Watanabe | | Director-General, Fisheries Agency | |
| <p>Mr Watanabe, Government Delegate: I will respond.</p> <p>As has just been mentioned, at last year's IWC, a decision was taken to invoke a total ban on commercial whaling with a grace period of three years. Japan has filed an objection to this decision. At the time, then Minister for Agriculture, Forestry and Fisheries, Mr Tazawa, issued a statement, as has just been indicated. In summary, this statement said that we have another three years, with this year being the second, and, with one more time next year, so that, if we accept this decision, next year would be the final year that we can do commercial whaling. Our basic position is that this moratorium has no basis in science. That's our basic view. What's more, should it come to pass that Japan's whaling industry would be finished by this, being mindful of the people who work directly in whaling and the large number of people who work in related industries, we'll continue to point out the lack of rationality behind the moratorium decision and, our basic position at present is that during the roughly two years until the decision comes into effect the Government will make the utmost efforts to obtain the understanding of the countries concerned to ensure that our whaling can continue in some form or another.</p> | | | |

| 100 – House of Representatives Agriculture, Forestry & Fisheries Committee – No. 2 | | | |
|---|-----------------------|---------------------------|------|
| 11 October 1983 | | | |
| Speaker: 42/163 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Tatsuo Shinmori | Japan Socialist Party | | |
| <p>Mr Shinmori, Committee Member:</p> <p>Minister, following this, I would be very grateful for your views. Given the result – this moratorium – which is a resolution to ban commercial whaling, if I'm correct, then Japan's position is that we won't be able to ignore international opinion, will we? We're being targeted by a range of messages such as "you must ban whaling" and "Japan is a barbaric country" and so on. That said, the fact is there are people who are making a living from it, and whose lives and livelihoods depend on it. What exactly will these people do should it come to pass that whaling is banned? Our research shows that there are seven whaling enterprises, including both large-scale and small-scale whalers and coastal whalers, which employ some 1,500 people. There are also around 3,600 people working in as many as ten enterprises. Obviously, we must provide relief for these people.</p> | | | |

Recently, as a retaliatory measure aimed at our far seas trawlers in the northern Pacific, which do on-sea purchasing of Alaskan Pollack and other fish, the United States has put forward the Packwood-Magnuson Amendment which would enforce a cut of 100,000 tonnes to Japan's fishing allocation. They will take stringent retaliatory actions, and should Japan continue commercial whaling, the United States is threatening to take away Japan's allocation altogether.

So how should we deal with this is extremely worrying situation? Which ought we to choose? Should we choose the whaling? Should we choose to have our fishing allocation in American waters cut or terminated? This is the situation and we are being required to make a choice between these two options. Minister, what are your views on this? This is a case where we really must ask the Minister to make a political decision. What do you say to this, Minister?

**100 – House of Representatives
Agriculture, Forestry & Fisheries Committee – No. 2**

11 October 1983

Speaker: 43/163

Search Term: Forward/Back

Speaker Information

| Speaker | Affiliation | Title | Role |
|--------------|--------------------------|--|------|
| Iwazo Kaneko | Liberal Democratic Party | Minister for Agriculture, Forestry and Fisheries | |

Mr Kaneko, State Minister:

Japan catches around 1.2 to 1.3 million tonnes of fish within America's coastal waters, and most of this is Alaskan Pollack. And, if I'm right, your question was, ought we to take those fish or ought we to let go of the whales? I say that we take both of them. We will certainly not write off whaling; we're now at the point where this is practically turning into an international relations issue over some agricultural products. Taking the fisheries issues in particular, Japan's fishing vessels operate in the coastal waters of seven or eight different countries that we have to deal with. It's my well-informed view, therefore, that we should engage more confidently in our fisheries diplomacy, and it's with that in mind that we are continuing with persistence with our talks on whaling, and it's my belief that we will be able to get the Americans to see our point of view. So my view is that we will continue to persist in our negotiations, and that we don't have any intention to abandon either one or the other.

| 100-衆-農林水産委員会-2号 | | | |
|---|------|---------|----|
| 昭和58年10月11日 | | | |
| 発言者：41/163 | | 検索語：前・次 | |
| 発言者の情報 | | | |
| 発言者名 | 所属会派 | 肩書き | 役割 |
| 渡邊文雄 | | 水産庁長官 | |
| <p>渡邊（文）政府委員</p> <p>お答え申し上げます。</p> <p>ただいま御指摘のように、昨年のIWCにおきまして、三年間の猶予期間を置きまして商業捕鯨の全面禁止の決定があったわけでございます。それにつきまして、わが国といたしましては異議の申し立てをいたしましたわけでございます。その際、当時の田澤農林水産大臣からの談話をただいま御指摘があったわけでございますが、結論から申しますと、あと三年間ということでございますから、ことしが二回目、それから来年もう一回ということで、一応決定の線からいきますともう一回だけが商業捕鯨が行えるということに、裏返して言うともうそういうことになるわけでございますが、私どもの基本的な考え方は、そういったモラトリアムというものは科学的な根拠を持っていないというのを基本に据えまして、さらにそういったことでわが国の捕鯨業がもしだめだということになりますと、それに伴います、捕鯨に直接参加している人も、あるいはこれに関連いたします産業に従事している人も数多いわけでございますので、そういったことでぜひともモラトリアム決定の不当性というものを指摘しながら、今後とも、その決定が発効するまでまだ約二年間あるわけでありまして、その間に関係国の理解を得まして、何らかの形で私どもの捕鯨の姿が存続できますように最大限の努力を払いたいというのが現在の私どものポジションでございます。</p> | | | |

| 100-衆-農林水産委員会-2号 | | | |
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| 昭和58年10月11日 | | | |
| 発言者：42/163 | | 検索語：前・次 | |
| 発言者の情報 | | | |
| 発言者名 | 所属会派 | 肩書き | 役割 |
| 新盛辰雄しんもりたつお | 日本社会党 | | |
| <p>新盛委員</p> <p>大臣、後でお答えいただくとして、このモラトリアムの結果によって、いわゆる商業捕鯨禁止決議であります。日本とすれば国際世論ということも無視するわけにはいかないわけですね。捕鯨反対、野蛮な国日本、こういうようなことでいろいろと指摘を受けておりますが、これによって生活をしている、命と暮らしを守っている方々がいらっしゃるわけでありまして。この方々をこれからもし禁止だとなれば一体どうするのか、私ど</p> | | | |

もの調べでも大型捕鯨あるいは小型捕鯨、沿岸捕鯨、こうしたものが経営団体でも七経営団体ですし、従業員が約千五百人、鯨製品の加工工場などに働いている人たちが三千六百人、経営団体は戸もあるわけであります。こういう方々の救済はもちろんですが、最近アメリカ側は報復措置として、遠洋トロールの北転船に見られましたように、スケトウなどの洋上買い付けその他ありますが、漁獲割り当てを十万吨減らしてしまえといったバックウッド・マグナソン修正案が現在出されておまして、厳しい制裁措置をとる、日本が商業捕鯨を継続をするならもう割り当てもやめる、こういうことを言っておりますので、これに対応する問題等、きわめて憂慮すべき事態であり、どちらをとるか、鯨をとるのか、アメリカ沿岸における漁獲を少なくするのがあるいは全くなくするのか、これはこういう事態ですから二者択一でどちらか決めなければいけない。このところを大臣どうお考えか。ここはやはり大臣の政治的判断を求めなければどうしようもないです。いかがですか。

100-衆-農林水産委員会-2号

昭和58年10月11日

発言者：43/163

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発言者の情報

| 発言者名 | 所属党派 | 肩書き | 役割 |
|--------------|-------|--------|----|
| 金子岩三 かねこいわぞう | 自由民主党 | 農林水産大臣 | |

金子国務大臣

スケソウを中心としてアメリカ沿岸で百二、三十万トンの漁獲をやっておるわけですが、それをとるか、鯨を捨てるかというような御質問のようでございますが、私は、両方ともとります。鯨も決して捨てなくて、これはもういまでは農産物を中心にしてほとんど国際関係の問題になってしまっておるわけでございます。特に漁業問題は、相手国七、八カ国の沿岸に日本の漁船が進出しておる。したがって、漁業外交をもっと強く展開すべきだということは私の持論でありまして、そういう意味からいって、鯨も粘り強く話を続けていっておりますと、アメリカも理解をしてもらえる、私はこのように考えております。今後ともひとつ粘り強く交渉を続けて、両方とも捨てるつもりはない、こういう考え方であります。

Annex 91: Government of Japan, *National Diet Debates*, House of Representatives - Foreign Affairs Committee - No. 18, 1 August 1984 [excerpt]

| 101 – House of Representatives Foreign Affairs Committee – No. 18 | | | |
|---|---|---------------------------|------|
| 1 August 1984 | | | |
| Speaker: 143/196 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Katsu Kawamura | Democratic Socialist Party / Kokumin Rengo | | |
| <p>Mr Kawamura, Committee Member:</p> <p>I believe that today we've had some people from the Fisheries Agency attend, and I just saw in this morning's newspaper that a private advisory body of the Fisheries Agency Director-General called the Whaling Issues Study Group has submitted a report, the intent of which is somewhat unclear, saying that Japan should make the switch from commercial whaling to scientific whaling, that is, it would catch only the number of whales needed for the research, and, at the very same time, the whales that were caught would be also be sold, purchased and eaten. Right now, at a time when we won't be able to achieve any kind of breakthrough unless we go and file an objection and keep our hands free, it seems to me, just going from the newspaper article on it, that what's emerged is something that looks pretty much like a surrender. Just what are they thinking?</p> | | | |

| 101 – House of Representatives Foreign Affairs Committee – No. 18 | | | |
|--|-------------|---|------|
| 1 August 1984 | | | |
| Speaker: 144/196 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Keiichi Nakajima | | Head, Ocean Fisheries Department, Fisheries Agency | |
| <p>Mr Nakajima, Briefing Officer:</p> <p>I will respond.</p> <p>The Whaling Issues Study Group was actually commissioned by the Director-General of the Fisheries Agency in October last year to deliberate on the preferred directions for the future of Japan's whaling. The whaling issue encompasses a very broad range of issues, so the study group was set up by bringing together experienced and knowledgeable people from various sectors to consider it from a broad range of perspectives. The study group subsequently met on seven occasions and compiled a report titled, "Preferred Future Directions for Japan's Whaling," which was delivered to the Director-General yesterday.</p> <p>The report calls on the Government to step up its efforts to ensure the continuation of whaling, stating that there is no reason for Japan to give up whaling. It bases its conclusion on the fact that, under the Convention, the IWC decision to invoke the moratorium on commercial whaling is invalid, for reasons such as: the lack of any scientific basis to the decision; whaling's long history in Japanese culinary practices; the importance of whaling</p> | | | |

to specific regional communities and the people involved in the industry; and, the need for stock surveys.

However, given the severity of the current international environment, in which countries seeking the prohibition of commercial whaling hold the majority and the United States is taking a hard-line approach towards Japan by linking the whaling issue to the issue of Japan's fishing allocations in the United States' 200-nautical mile zone in the northern sea areas, the report recommends that the Government consider, as policies to continue whaling after the moratorium comes into effect, firstly, for Antarctic whaling, conducting scientific survey whaling with the objective being to do stock surveys, and seeking understanding for this from the countries concerned, and for coastal whaling, seeking the understanding of the countries concerned of the fact that whaling is essential to the livelihoods of people in regional communities from social, economic and cultural perspectives.

The Fisheries Agency's view is that this report has given us valuable recommendations for future solutions in this extremely challenging international environment. Our intention is to use the report as a reference and, through discussions with the United States, with which links are particularly close, and the other major concerned countries, to make our utmost efforts to ensure that our whaling will be able to continue both in the Antarctic and coastal whaling, in some form or another.

| 101 – House of Representatives Foreign Affairs Committee – No. 18 | | | |
|---|---|---------------------------|------|
| 1 August 1984 | | | |
| Speaker: 145/196 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Katsu Kawamura | Democratic Socialist Party / Kokumin Rengo | | |
| Mr Kawamura, Committee Member: | | | |
| In that case, the contours of it would be that we had terminated commercial whaling, and, with that kind of shape to it, were we to then negotiate with the United States – because it appears that the US itself seems to think that the IWC is heading to extremes – the negotiations may get to a conclusion, and if that were to happen, we'd catch the usual number for research and then channel them toward the usual usage purposes as always. Is that how you're thinking? | | | |

**101 – House of Representatives
Foreign Affairs Committee – No. 18**

1 August 1984

Speaker: 146/196

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Speaker Information

| Speaker | Affiliation | Title | Role |
|------------------|-------------|--|------|
| Keiichi Nakajima | | Head, Marine Fisheries Department, Fisheries Agency | |

Mr Nakajima, Briefing Officer:

The Japanese Government filed an objection to the commercial whaling moratorium two years ago with the objective of reserving Japan's position, and that position remains unchanged today. However, as is noted in the report, it is all tied up with northern Pacific fishing, and the whaling issue is a very emotional one, and from those perspectives, it is an exceedingly difficult problem. In this extremely severe international environment, we intend to make our utmost efforts to ensure the continuation of whaling in some form or another, so we will, in the first instance, discuss the issue carefully with the United States and negotiate strongly to seek their understanding of Japan's position.

101 - 衆 - 外務委員会 - 18号

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| 昭和 59 年 08 月 01 日 | | | |
| 発言者： 143/196 | | 検索語: 前・次 | |
| 発言者の情報 | | | |
| 発言者名 | 所属会派 | 肩書き | 役割 |
| 河村勝 かわむらかつ | 民社党・国民連合 | | |
| <p>河村委員</p> <p>きょう、水産庁から来ていただいていると思いますが、ちょうどけさの新聞を見たら、捕鯨問題検討会という水産庁長官の私的諮問機関で、もう商業捕鯨はあきらめて調査捕鯨に転換をする、調査に必要な鯨だけとって、それはまた同時に、とった鯨は売ったり買ったりするし食べもするというような、ちょっと意図不明のような答申が出ております。今、異議申し立てぐらいやって、少しフリーハンドを持って頑張らなければ打開できないような時期に、何か文面だけを見ると、もうあきらめましたという感じのものができて出てきておりますが、これは一体どうするつもりでございますか。</p> | | | |

101 - 衆 - 外務委員会 - 18号

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| 昭和 59 年 08 月 01 日 | | | |
| 発言者： 144/196 | | 検索語: 前・次 | |
| 発言者の情報 | | | |
| 発言者名 | 所属会派 | 肩書き | 役割 |
| 中島圭一 | | 水産庁海洋漁業部長 | |
| <p>中島説明員</p> <p>お答え申し上げます。</p> <p>捕鯨問題検討会につきましては、これは実は昨年十月に水産庁長官の委嘱を受けまして、今後の我が国捕鯨のあり方につきまして、捕鯨問題は非常に広範な問題を含んでおりますので、幅広い観点から検討を行うということで、各界の有識者にお集まりいただきまして設置されたものでございます。その後七回にわたる会合を経まして、「我が国捕鯨の今後のあり方について」という報告書が取りまとめられまして、昨日長官に対して報告が行われたわけでありまして。</p> <p>この報告書におきましては、IWCによります商業捕鯨モラトリアムの決定が科学的根拠を欠く等条約上の正当性がないこと、あるいは我が国におきます捕鯨、特に我が国国民にとりまして非常に長い歴史を有しております食習慣とか、特定地域社会及び関係者に対する捕鯨の重要性とか資源調査の必要性というようなことから、捕鯨をやめる理由はないとしまして、政府に対して捕鯨存続のための一層の努力を求めているわけでありまして。</p> | | | |

ただし、商業捕鯨禁止を求めている国が非常に多数を占めているという現状、それから米国が我が国に対しまして、北洋におきます米国の二百海里水域内の漁獲割り当ての問題と捕鯨問題をリンクさせまして、強硬な態度で迫っているというような厳しい国際環境にかんがみまして、モラトリアム発効後の捕鯨の存続のための方策としまして、一つは、南氷洋捕鯨につきましても資源調査を目的とする科学的な調査捕鯨活動を実施する、そういうことで関係国の理解を求めるということ、それから沿岸捕鯨につきましても、社会的、経済的、文化的にも地域住民の生活に必要なものであるという点につきまして関係国の理解を求めていくということ、こういう捕鯨存続のための方策を検討するように提言しているわけでございます。

私どもとしましては、この報告は、現在の非常に厳しい国際環境のもとにおきまして、今後の方策についての一つの貴重な示唆をいただいたものというふうに考えられるわけでございます。今後十分これを参考とさせていただきます。特に関係の深い米国あるいはその他主要関係国との協議を通じまして、我が国の南氷洋また沿岸捕鯨のいずれにつきましても何らかの形で捕鯨が存続し得るように、最善の努力を払いたいというふうに考えているところでございます。

101 - 衆 - 外務委員会 - 18号

昭和 59 年 08 月 01 日

発言者： 145/196

検索語： 前・次

発言者の情報

| 発言者名 | 所属会派 | 肩書き | 役割 |
|------------|----------|-----|----|
| 河村勝 かわむらかつ | 民社党・国民連合 | | |

河村委員

そうすると、形は商業捕鯨はやめたということにはなっているけれども、こういうような形でアメリカとの折衝をやって、アメリカ自身もこの IWC の行き方については少しひど過ぎるじゃないかというような感じを持っているようでありますから、あるいは交渉は成り立つのかもしれないが、そうなれば、従来の実績ぐらいのものは調査のために捕獲をして、それを従来どおりの使用目的に向けることができる、そう考えているわけですか。

101 - 衆 - 外務委員会 - 18号

昭和 59 年 08 月 01 日

発言者： 146/196

検索語： 前・次

発言者の情報

| 発言者名 | 所属会派 | 肩書き | 役割 |
|------|------|-----------|----|
| 中島圭一 | | 水産庁海洋漁業部長 | |

中島説明員

私ども日本政府としましては、商業捕鯨モラトリアムにつきまして一昨年あったわけでございますが、これには我が国の立場を留保するという観点で異議申し立てを行っているわけでありまして、この立場自体は現在も変更してないわけでございます。ただ、この報告にもございますように、北洋水域の問題とも絡みまして、また捕鯨問題が非常に感情的な問題にもなっているという点で、非常に困難な問題になっているわけでございますが、そういう中で、厳しい国際環境の中でもかく何らかの形で捕鯨の存続を図るということで最善の努力をしたいと思ひまして、まず米国と十分協議をして、我が国の立場について理解を求めるように強力な折衝をいたしたいというふうに思います。

Annex 92: Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 27, 2 August 1984 [excerpts]

| 101 – House of Representatives Agriculture, Forestry & Fisheries Committee – No. 27 | | | |
|--|-------------------------|---------------------------|------|
| 2 August 1984 | | | |
| Speaker: 210/342 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Kazuo Takeda | Komeito / Kokumin Rengo | | |
| <p>Mr Takeda, Committee Member:</p> <p>I'd like you to give us a clear response on this one.</p> <p>With regard to the whaling problem, I'd like to hear the thoughts of the Fisheries Agency about what to do about the future of Japan's whaling industry. A recent newspaper article reported that a Whaling Issues Study Group, apparently a private advisory group of the Fisheries Agency Director-General, has given advice along the lines that it also believes that Japan should cease commercial whaling in the Antarctic Ocean and maintain whaling activities for the purposes of researching whale stocks. The article then states that it appears that there is an inclination towards a reversal of the long-declared position of continuing with commercial whaling without being bound by the decisions of the IWC – the International Whaling Commission. An article of this kind is of some concern, and so I'd like to hear your opinion on these points as well.</p> | | | |

| 101 – House of Representatives Agriculture, Forestry & Fisheries Committee – No. 27 | | | |
|--|-------------|---------------------------------------|------|
| 2 August 1984 | | | |
| Speaker: 211/342 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Hiroya Sano | | Director-General, Fisheries Agency | |
| <p>Mr Sano, Government Delegate:</p> <p>I will respond.</p> <p>The fact is that the international situation surrounding Japan's whaling has seen some extremely harsh decisions taken, including the decision made at the IWC Annual Meeting two years ago to invoke the moratorium on commercial whaling, and, further, at this year's IWC meeting, major cuts were made to catch quotas.</p> <p>So the view of the Fisheries Agency is that, given these circumstances, and having taken them into account, we will use as a reference the valuable opinions expressed in the Whaling Issues Study Group report which we received recently, and, through holding consultations with the United States and the other major concerned nations, we will make our utmost efforts to ensure that Japan's whaling is able to continue in some form or another.</p> | | | |

In response to your question, I'd like to explain briefly the nature of the report of the Whaling Issues Study Group. Put simply, the essence of the Group's report may, I believe, be summarised into four key points.

The first is that it provides the assessment that the IWC's decision to invoke the moratorium on commercial whaling has no scientific basis since it ignores the relevant stock situation of each different whale species and different whale populations, and that it is irrational in view of the basic spirit of the International Whaling Convention, which is for the effective utilisation of whale resources.

The second is that, regardless of the above, the situation surrounding whaling is that the anti-whaling nations, which support a total ban on commercial whaling, already account for a more than three-quarters majority of the International Whaling Commission. Moreover, the United States Government has created a link between the whaling issue and the fishing quotas it allocates to Japan within the United States' 200 nautical mile zone in the northern Pacific Ocean and it is pressuring Japan strongly to withdraw our objection. The report shows that the Study Group recognises that the issue is under these extremely difficult objective circumstances. This is the second point.

Having given consideration to the two issues just covered, when consideration was given to the preferred direction in the current environment for Japanese whaling after the moratorium commences, the path to ensure the continuation of whaling would be, for Southern Ocean whaling, to position it as a research whaling activity which has a scientific nature, and, for coastal whaling, to position it as whaling which is absolutely essential to the livelihood of regional communities from the perspectives of their societies, economies and cultures, and that the continuation of whaling ought to be planned for while we seek the understanding of the relevant countries based on these points; and that is the third point.

The fourth point is that, for the continuation of Japanese whaling, further diplomatic efforts should be concentrated on obtaining the understanding of the United States and other nations and to ensuring the proper functioning of the IWC. Roughly summarised, this is the essence of the report that we received.

We would like to use these opinions as a reference as we consider how to ensure the continuation of Japanese whaling.

[...]

| 101 – House of Representatives | | | |
|---|-------------------------|---------------------------|------|
| Agriculture, Forestry & Fisheries Committee – No. 27 | | | |
| 2 August 1984 | | | |
| Speaker: 216/342 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Kazuo Takeda | Komeito / Kokumin Rengo | | |
| Mr Takeda, Committee Member: | | | |
| Minister, this issue is extremely serious. The people in the seamen's unions are engaged in | | | |

what is really a very traditional Japanese industry located in every region and they have given great support to their local communities. Given the circumstances, however, despite their working tremendously hard, they are in decline. When we think about the great effort made by those desperate to uphold the industry and make a living from it, while it may only be a small thing, I would like a renewed emphasis placed on the position held by this very important, major traditional maritime industry. We must not hang out to dry the people who have supported that industry until now amidst great hardship.

I know numerous people who have worked very hard for the major companies, and they have no other way of making a living. More than fifty percent of the workforce are in their mid- to late forties, or almost fifty years of age. The core of that workforce would be completely unable to manage other work even if they were to go out and seek it. In that respect, I would ask that you use your power as the Minister to steadfastly defend the light of the tradition. I would like to hear your resolve in this regard.

| 101 – House of Representatives | | | |
|---|--|--|------|
| Agriculture, Forestry & Fisheries Committee – No. 27 | | | |
| 2 August 1984 | | | |
| Speaker: 217/342 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Shinjirō Yamamura | Liberal Democratic Party / New Liberal National Federation | Minister for Agriculture, Forestry and Fisheries | |
| Mr Yamamura, State Minister: | | | |
| The circumstances surrounding Japanese whaling have become extremely harsh, what with the 1982 decision to invoke the moratorium on commercial whaling and this year's drastic reduction in catch limits. I actually met with people from the whaling industry and the seamen's unions yesterday when they came to petition me. As the Minister for Foreign Affairs has said, and as the Director-General of the Fisheries Agency just now also said, I intend to do my utmost to ensure that Japanese whaling continues in some form or another. | | | |

| 101-衆-農林水産委員会-27号 | | | |
|---|----------|---------|----|
| 昭和59年08月02日 | | | |
| 発言者：210/342 | | 検索語：前・次 | |
| 発言者の情報 | | | |
| 発言者名 | 所属会派 | 肩書き | 役割 |
| 武田一夫 たけだかずお | 公明党・国民会議 | | |
| <p>武田委員</p> <p>ひとつきちっとお願いしたいと思います。</p> <p>次に、捕鯨問題について、水産庁としましては我が国捕鯨産業を今後どういうふうにしていこうと考えているのかお聞きしたいと思おのです。</p> <p>最近の新聞記事であります、これは水産庁長官の私的諮問機関だそうありますが、捕鯨問題検討会が、日本としても南極海での商業捕鯨をやめ、資源調査のための捕鯨活動を存続すべきだ、こういう報告をされた。これを受けて、従来IWC決定、いわゆる国際捕鯨委員会の決定に拘束されずに商業捕鯨を続けると表明してきたその姿勢を転換する方針に傾いているようだという内容の記事が載っていたわけですが、この点の記事も気にかかりますので、その点も含めて御見解を伺いたいと思います。</p> | | | |

| 101-衆-農林水産委員会-27号 | | | |
|--|------|---------|----|
| 昭和59年08月02日 | | | |
| 発言者：211/342 | | 検索語：前・次 | |
| 発言者の情報 | | | |
| 発言者名 | 所属会派 | 肩書き | 役割 |
| 佐野宏哉 | | 水産庁長官 | |
| <p>佐野政府委員 お答えいたします。</p> <p>我が国の捕鯨を取り巻く国際情勢は、一昨年のIWCの年次会議におきまして商業捕鯨モラトリアムが決定をされまして、本年の一WC会議でさらに捕鯨枠の大幅削減等極めて厳しい決定が行われている実情でございます。私どもといたしましてはこのような情勢の中で、このような情勢を十分踏まえて先般御報告をいただきました捕鯨問題検討会の貴重な御意見も参考にさせていただき、米国を初めとする主要関係国との協議を通じて我が国の捕鯨が何らかの形で存続し得るよう、今後とも最善の努力を尽くしていきたいというふうに思っておるわけでございます。</p> <p>それで、お尋ねでございますので、この捕鯨問題検討会の報告がいかなるものであるかということについて一言御説明させていただきます。簡潔に申しますと、捕鯨問題検討会の報告の骨子というのは四つに集約できると思います。</p> | | | |

一つは、IWCが行った商業捕鯨モラトリアムの決定というのは、鯨種別、系群別の資源状態を無視して行われた科学的根拠を有しないものである、鯨資源の有効利用という国際捕鯨取締条約の基本精神から見ても不合理なものであるという御判断をお示しになっていることでございます。

第二は、しかしながら捕鯨を取り巻く情勢というのは、商業捕鯨の全面禁止に賛成する反捕鯨国というのが国際捕鯨委員会の中でも既に四分之三を上回る多数を占めているという状況にあり、かつ米国政府は、我が国に対する北洋における米国二百海里内の漁獲割り当てと捕鯨問題をリンクさせて、我が国の異議申し立ての取り下げを強硬に迫っている、こういう非常に厳しい客観情勢下にあるという御認識、それが第二のポイントであります。

そういう二つの要素を考えまして、その中でモラトリアム発効後の我が国の捕鯨のあり方ということを見ると、その捕鯨を存続させていく行き方というのは、南米洋捕鯨については科学的な調査捕鯨活動という位置づけ、それから沿岸捕鯨につきましても社会的、経済的、文化的な意味で地域住民の生活のための必要不可欠な捕鯨であるという位置づけ、そういう点に立脚をして、関係国の理解を求めながら捕鯨の存続を図っていくべきであるというのが第三点。

第四番目といたしまして、我が国の捕鯨の今後の存続のためには、米国を初めとする諸外国の理解を得ること、さらにIWCの持つ機能が正常な形で発揮されるようにすること、こういう面についての外交的な努力を一層傾注すべきであるということでございます。大ざっぱに取りまとめますと以上のような骨子になります。報告をちょうだいしたわけであります。

私どもとしては、こういう考え方を参考にさせていただきながら、今後の我が国の捕鯨の存続のさせ方について検討をしてみたいと思っておるわけでございます。

101-衆-農林水産委員会-27号

昭和59年08月02日

発言者：216/342

検索語：前・次

発言者の情報

| 発言者名 | 所属会派 | 肩書き | 役割 |
|-------------|----------|-----|----|
| 武田一夫 たけだかずお | 公明党・国民会議 | | |

武田委員

大臣、この問題は非常に深刻ですよ。ですから、海員組合の皆さん方が各地において、もう本当に伝統的な日本の産業として、しかもそれはその地域を非常によく支えてきた。ところが、こういうふうな状況なものですから、一生懸命努力しながら寂れていっている。しかしながら、何としてもそれを残しながらそこで生きていこうという方々の大変な努力というものを考えたときに、小さなものであるかも知れぬけれども、大変大事な日本の伝統的な海の中の一つの大きな産業の占める位置を私はもう一度重要視をしてほしいと思います。そして、これまで大

変な御苦勞の中で今日を支えてきた方々を干ばしにしてはいかぬ。

私は大手の会社のもとに一生懸命その下で働いてきた方々をたくさん知っていますが、もうそれ以外に生きる道がないのです。年も大体四十五、六、五十近い方々が五〇%以上ですね。これから後ほかに仕事を求めるといっても、とてもできないという方々が今中核ですよ。そういう意味で、伝統の灯は大臣の力でひとつしかと守ってほしい、このことも重ねてお願いしておきます。大臣の決意を聞かせていただきたい。

101-衆-農林水産委員会-27号

昭和59年08月02日

発言者：217/342

検索語：前・次

発言者の情報

| 発言者名 | 所属会派 | 肩書き | 役割 |
|--------------------|-------------------|--------|----|
| 山村新治郎 やまむらしんじろう | 自由民主党・新自由 国民連合 | 農林水産大臣 | |

山村国務大臣

我が国の捕鯨を取り巻く国際情勢は、一昨年の商業捕鯨モラトリアムの決定、本年の捕獲枠の大幅削減等、極めて厳しいものとなっております。実はきのうもこの捕鯨関係の皆さん、海員組合の皆さんも一緒でしたが、陳情にもおいでになりました。私といたしましては、外務大臣、そしてまた今水産庁長官から述べましたとおり、今後とも何らかの形で存続するというようなことで最善の努力を尽くしてまいりたいというぐあいに考えます。

Annex 93: Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 28, 7 August 1984 [excerpts]

| 101 – House of Representatives Agriculture, Forestry & Fisheries Committee – No. 28 | | | |
|---|-------------|------------------------------------|------|
| 7 August 1984 | | | |
| Speaker: 121/377 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Hiroya Sano | | Director-General, Fisheries Agency | |
| <p>Mr Sano, Government Delegate:</p> <p>I will respond.</p> <p>[...]</p> <p>Be that as it may, although the IWC has already made its decision to go ahead with the moratorium on commercial whaling, here we have recently received a valuable report from the Study Group on Whaling Issues, whose members have expert knowledge and professional experience, and we'll refer to the ideas contained in that report as we want to continue to make persistent efforts to seek the understanding of the countries concerned to ensure the continuation of Japanese whaling.</p> | | | |

[...]

| 101 – House of Representatives Agriculture, Forestry & Fisheries Committee – No. 28 | | | |
|--|-------------|------------------------------------|------|
| 7 August 1984 | | | |
| Speaker: 130/377 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Hiroya Sano | | Director-General, Fisheries Agency | |
| <p>Mr Sano, Government Delegate:</p> <p>Having received the report, we are currently in the process of considering our policies for dealing with whaling in the future, and we haven't yet reached the stage of taking any position about what we will or won't give up. However, we do believe that the proposals in the study group's report to which I have referred will be valuable recommendations for ensuring the continuation of whaling after the moratorium has come into effect.</p> | | | |

[...]

| 101 – House of Representatives Agriculture, Forestry & Fisheries Committee – No. 28 | | | |
|---|-------------|------------------------------------|------|
| 7 August 1984 | | | |
| Speaker: 134/377 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Hiroya Sano | | Director-General, Fisheries Agency | |
| <p>Mr Sano, Government Delegate:</p> <p>It's our view that the most fundamental point is how Japan's whaling activities will be interpreted by the Americans in connection with American domestic laws, as I mentioned earlier, and the problems that could arise following the application of those laws. In regard to these points, I believe that the ideas incorporated in the Study Group's report contain some very important recommendations for exploring solutions to these problems that would be acceptable to both sides.</p> | | | |

[...]

| 101 – House of Representatives Agriculture, Forestry & Fisheries Committee – No. 28 | | | |
|--|--|--|------|
| 7 August 1984 | | | |
| Speaker: 138/377 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Shinjirō Yamamura | Liberal Democratic Party / New Liberal National Federation | Minister for Agriculture, Forestry and Fisheries | |
| <p>Mr Yamamura, State Minister:</p> <p>I believe that to date the Ministry of Agriculture, Forestry and Fisheries has done everything possible, and we will continue to make our utmost efforts, to ensure that Japanese whaling can continue in some form or another into the future.</p> | | | |

| 101-衆-農林水産委員会-28号 | | | |
|--|------|---------|----|
| 昭和59年08月07日 | | | |
| 発言者：121/377 | | 検索語：前・次 | |
| 発言者の情報 | | | |
| 発言者名 | 所属会派 | 肩書き | 役割 |
| 佐野宏哉 | | 水産庁長官 | |
| <p>佐野政府委員</p> <p>お答えいたします。</p> <p>[略]</p> <p>それはそれといたしまして、既にIWCは商業捕鯨モラトリアムを決定いたしておるわけですが、私どもといたしましては、先般学識経験者を網羅した捕鯨問題につきましての検討会からも貴重な報告をちょうだいいたしたところでございますので、そういう考え方を参考にさせていただいて、関係国の理解を求めよう粘り強い努力を継続しながら、我が国の捕鯨の存続に努めていきたいと考えておる次第でございます。</p> | | | |

[略]

| 101-衆-農林水産委員会-28号 | | | |
|--|------|---------|----|
| 昭和59年08月07日 | | | |
| 発言者：130/377 | | 検索語：前・次 | |
| 発言者の情報 | | | |
| 発言者名 | 所属会派 | 肩書き | 役割 |
| 佐野宏哉 | | 水産庁長官 | |
| <p>佐野政府委員</p> <p>佐野政府委員 私どもはこの報告をちょうだいして今後の捕鯨についての対処方針を現在検討させていただいておる段階でございますから、何を断念するとかしないとかという立場にまで熟しておるわけではございませんが、私どもとしてはモラトリアム発効後捕鯨を継続するために、この検討会の報告で言及されております御提案が貴重な御示唆であるというふうに思っております。</p> | | | |

[略]

| 101-衆-農林水産委員会-28号 | | | |
|---|------|---------|----|
| 昭和59年08月07日 | | | |
| 発言者：134/377 | | 検索語：前・次 | |
| 発言者の情報 | | | |
| 発言者名 | 所属会派 | 肩書き | 役割 |
| 佐野宏哉 | | 水産庁長官 | |
| <p>佐野政府委員</p> <p>私どもにとりまして一番基本的なポイントは、先ほど申しましたアメリカの国内法との関係で我が国の捕鯨活動が一体アメリカ側によっていかなるものとして解釈され、アメリカの国内法の適用上どういう問題を生ずるかということであります。私は、その点につきましては、今回の検討会の報告に盛り込まれておりますアイデアは、その問題について双方に受諾可能な解決を模索していく上で重要な御示唆を含んでおるものであるというふうに思っております。</p> | | | |

[略]

| 101-衆-農林水産委員会-28号 | | | |
|--|-------------------|---------|----|
| 昭和59年08月07日 | | | |
| 発言者：138/377 | | 検索語：前・次 | |
| 発言者の情報 | | | |
| 発言者名 | 所属会派 | 肩書き | 役割 |
| 山村新治郎 やまむらしんじろう | 自由民主党・ 新自由国民連合 | 農林水産大臣 | |
| <p>山村国務大臣</p> <p>少なくとも今まで農林水産省としてできるだけことはしてきたと思っておりますが、今後とも我が国の捕鯨が何らかの形で存続し得るよう、最善の努力を尽くしてまいりたいと思っております。</p> | | | |

Annex 94: Government of Japan, *National Diet Debates*, House of Councillors - Agriculture, Forestry and Fisheries Committee / Closed - No. 1, 4 September 1984 [excerpt]

| 101 – House of Councillors | | | |
|--|------------------------------|---------------------------|------|
| Agriculture, Forestry & Fisheries Committee / Closed – No. 1 | | | |
| 4 September 1984 | | | |
| Speaker: 105/194 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Teiko Karita | Komeito / Citizens' Congress | | |
| <p>Ms Teiko Karita, Committee Member:</p> <p>You mentioned that, in the course of the talks, you failed to reach agreement about the preferred directions for whaling after the moratorium. From a variety of information sources, it seems that, after the total ban on commercial whaling was put forward, the Fisheries Agency came to hold the view that Japan should also shift from commercial whaling to scientific whaling. Did you explain to the Americans the proposed form that the scientific whaling would take?</p> | | | |

| 101 – House of Councillors | | | |
|---|-------------|------------------------------------|------|
| Agriculture, Forestry & Fisheries Committee / Closed – No. 1 | | | |
| 4 September 1984 | | | |
| Speaker: 106/194 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Hiroya Sano | | Director-General, Fisheries Agency | |
| <p>Mr Hiroya Sano, Briefing Officer:</p> <p>With regard to the first part, we have not made any decision to abandon commercial whaling and switch to scientific whaling. As you are aware, Japan has lodged an objection to the moratorium on commercial whaling and that objection is still current.</p> <p>At the time when we held the talks with the Americans the other day, we had the report submitted by the Whaling Issues Study Group which recommends the idea of undertaking the continuation of whaling activities in the form of research, given the difficulties of challenging the commercial whaling moratorium head-on, as you have indicated. We explained this thinking of the Whaling Issues Study Group to the Americans to gauge their reaction, but to date, there has been no particular reaction forthcoming from them.</p> | | | |

101 - 参 - 農林水産委員会 - 閉 1 号

59年09月04日

発言者：105/194

検索語：前・次

発言者の情報

| 発言者名 | 所属会派 | 肩書き | 役割 |
|-------------|------|----------|----|
| 刈田貞子 かりたていこ | | 公明党・国民会議 | |

刈田貞子君

それから、先ほど話し合いの中身の中に、モラトリアム後のあり方についてということで、この中身も物別れになっているというお話でございます。種々の情報で商業捕鯨の全面禁止が打ち出されて、後にはとにかく日本も商業捕鯨というものを転換して、調査捕鯨というふうな考え方を水産庁もお持ちになったようにございますけれども、この調査捕鯨というふうな形のあり方についてはアメリカの方に御説明なされたのですか。

101 - 参 - 農林水産委員会 - 閉 1 号

59年09月04日

発言者：106/194

検索語：前・次

発言者の情報

| 発言者名 | 所属会派 | 肩書き | 役割 |
|------|------|-------|----|
| 佐野宏哉 | | 水産庁長官 | |

説明員（佐野宏哉君）

まず前段でございますが、私どももいたしましては商業捕鯨を断念して調査捕鯨に切りかえるという決断をしたわけではございません。御承知のように、日本は商業捕鯨モラトリアムの決定には異議申し立てをいたしておりまして、現在もその異議申し立てば維持されておるわけでありまして。

それから、先般アメリカ側と協議をいたしました際には、捕鯨問題検討会が出しました報告、その中では先生御指摘のように商業捕鯨モラトリアムに対して真っ向から挑戦することが難しいという状況の中で、調査という形で捕鯨活動の継続を図るという考え方が示唆されておるわけでございます。捕鯨問題検討会のこういう考え方をアメリカ側に説明をして反応を探ってみたわけでございますけれども、現在のところアメリカは特定の反応をするに至っておらないというのが実情でございます。

Annex 95: Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 2, 18 December 1984 [excerpt]

| 102 – House of Representatives | | | |
|--|-------------|---------------------------------------|------|
| Agriculture, Forestry & Fisheries Committee – No. 2 | | | |
| 18 December 1984 | | | |
| Speaker: 206/324 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Hiroya Sano | | Director-General, Fisheries Agency | |
| <p>Mr Sano, Government Delegate:</p> <p>I will respond.</p> <p>Firstly, to respond to your first point regarding the talks with the United States on the hunting of sperm whales, in the spirit of the International Convention for the Regulation of Whaling, as a signatory to that Convention, Japan naturally has a right to file an objection, and it is Japan's view that there are no scientific grounds for the decision to adopt a catch limit of zero for sperm whales. Therefore, there is absolutely no argument for withdrawing that objection. However, in the cold reality of the existence of American domestic legislation, namely the Packwood-Magnuson Amendment, as you have just pointed out, we made the decision to do so from the view that it was unavoidable as the only way to avoid a clash between the United States and Japan.</p> <p>Moving on to your second point about relations with the other member countries of the International Whaling Commission, in withdrawing our objection to the catch limit on sperm whales, although we have notified of the withdrawal, it will not take effect for another four seasons. Therefore, the objection will remain in effect for this year's catch of 400 whales, next year's 400 whales, and also for the next two seasons after that. In that respect, therefore, it will be possible to operate legally under the International Convention for the Regulation of Whaling, so, in that respect, we are doing things in such a way as to not invite censure from other IWC member countries.</p> <p>On your third point, about the revocation of the moratorium on commercial whaling, during the recent talks, it is true that, tied up with this issue, the Americans proposed that a certain level of whaling be permitted for the next two seasons after the commercial whaling moratorium comes into effect. In the November talks, however, we took the position that the Japanese delegation to those talks did not have the authority to negotiate on any whale species other than the sperm whale, so this matter was not discussed at all with the Americans. Therefore, the issue of the revocation of the commercial whaling moratorium is one that the Japanese Government should consider the various circumstances independently and make any necessary decisions.</p> <p>In doing so, as the Minister responded earlier, we are of exactly same opinion as you that the United States' domestic legislation, which, by linking the whaling issue with the issue of fishing allocations in the 200-nautical mile exclusive economic zone, seeks to restrict the exercise of the rights of a Government that is a signatory to the Convention, is an outrageous law.</p> <p>Therefore, as you mentioned earlier, we will take the position of ensuring the future of whaling as an intrinsic Japanese industry through the continuation of whaling in some form</p> | | | |

or another and give serious consideration to the issues, also keeping in mind the operations of the Japanese fishing fleets in the northern Pacific waters.

| 102 – House of Representatives Agriculture, Forestry & Fisheries Committee – No. 2 | | | |
|---|------------------------------|---------------------------|------|
| 18 December 1984 | | | |
| Speaker: 207/324 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Chūji Yoshiura | Komeito / Citizen's Congress | | |
| Mr Yoshiura, Committee Member: | | | |
| <p>At the 34th annual meeting of the IWC in 1982, the decision was made with regard to the prohibition of commercial whaling, but it was also decided that a comprehensive review of this moratorium would be made in 1990. I think we need to lobby other countries vigorously for the early review of this moratorium, but it has been pointed out to date that, once whaling goes into hiatus, it will be impossible to start it up again, both from an equipment perspective and a personnel perspective. I think, therefore, that efforts need to be placed into the continuation of whaling, even in the forms proposed in the report of the Whaling Issues Study Group. I'd like to ask your views on these points.</p> | | | |

| 102 – House of Representatives Agriculture, Forestry & Fisheries Committee – No. 2 | | | |
|---|-------------|---------------------------------------|------|
| 18 December 1984 | | | |
| Speaker: 208/324 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Hiroya Sano | | Director-General, Fisheries Agency | |
| Mr Sano, Government Delegate: | | | |
| <p>Firstly, I am in complete agreement with you about the need to lobby the other countries concerned to bring about, at the earliest possible time, the comprehensive review that you mentioned. We have just made a strong appeal for that towards the United States in our recent bilateral talks. The Americans did not give us a definitive response, but I believe we were able to get them to listen favourably to Japan's arguments. We intend to take a similar approach towards other member countries as well.</p> <p>Also, I believe that the concepts of scientific whaling and subsistence whaling as described in the Whaling Issues Study Group report that you mentioned are ideas that we should make maximum use of, appropriately and effectively, to keep Japanese whaling alive under these very challenging circumstances.</p> | | | |

102-衆-農林水産委員会-2号

昭和59年12月18日

発言者：206/324

検索語：前・次

発言者の情報

| 発言者名 | 所属会派 | 肩書き | 役割 |
|------|------|-------|----|
| 佐野宏哉 | | 水産庁長官 | |

佐野政府委員

お答えいたします。

まず第一点。今回のマッコウ捕鯨をめぐる日米協議でございますが、これは私どもは国際捕鯨取締条約の精神から申しますれば、日本は当然締約国として異議申し立ての権利を有しておるわけでございまして、日本側としては、マッコウの捕獲枠をゼロとする決定は何ら科学的根拠を有しないと考えておりますから、これを撤回する理屈は全くないわけでございますが、先生先ほど御指摘のようなバックウッド・マグナソン修正法というアメリカの国内法が存在しておるといふ冷厳な現実の中で、日米間の激突を回避するためのやむを得ざる措置としてそのような決定を行ったわけでございます。

それから第二点。国際捕鯨委員会の他の加盟国との関係でございますが、今般行われましたマッコウ捕鯨に関する異議申し立ての撤回は、撤回通告はいたしました、撤回の効力が発生するのは四期後にしてございますので、本年の四百頭、来年の四百頭、さらにその次二シーズンの分は、これは依然として異議申し立ての効力が存続しておりますから、そういう意味で、国際捕鯨取締条約上、合法的に操業可能でございますので、そういう意味では他の国際捕鯨委員会加盟国から非難を受けるということがないように考えてやっておりますつもりでございます。

第三点の商業捕鯨モラトリアム撤回の問題でございますが、これは先般の協議の際、先ほど先生御指摘のような商業捕鯨モラトリアムの撤回と絡めて、商業捕鯨モラトリアム発効後二シーズンの期間についてある水準の捕鯨を認めるというアメリカ提案があったことは事実でございますが、私どもは十一月の協議の際は、マッコウクジラ以外の鯨種については日本代表団は何ら交渉権限を有しないという態度で臨んでおりまして、この問題については米側と全く討議をいたしておりません。したがって、商業捕鯨モラトリアムの撤回問題については、今後、日本政府として独自に諸般の事情を考えながら意思決定を行うべき性質のものでございます。

そうするに当たりましては、先ほど大臣からもお答え申し上げましたように、捕鯨問題と二百海里内の漁獲割り当ての問題を絡めて締約国政府の当然の権利行使に対して制裁を科するというようなアメリカの国内法が全くとんでもない法律であるということは、私どもも全く先生と同じ意見であります。したがって、先生先ほど御指摘のような我が国の固有の産業としての捕鯨業の前途、何らかの形で捕鯨の存続を図るという考え方に立って、かつ北洋水域における我が国漁船団の操業ということも念頭に置いて、慎重に検討してまいりたいと思っております。

| 102-衆-農林水産委員会-2号 | | | |
|---|----------|---------|----|
| 昭和59年12月18日 | | | |
| 発言者：207/324 | | 検索語：前・次 | |
| 発言者の情報 | | | |
| 発言者名 | 所属会派 | 肩書き | 役割 |
| 吉浦忠治 よしうちゅうじ | 公明党・国民会議 | | |
| <p>吉浦委員</p> <p>五十七年の第三十四回のIWC会議では、商業捕鯨の禁止を決定するとともに、その決定について一九九〇年、いわゆる六十五年までに包括的見直しをすることが決定されたのでありますが、このモラトリアムの早期見直しのために諸外国に対して強力に働きかける必要があるというふうに考えるわけでありませけれども、捕鯨を一たん休むというと、いわゆる機材の面なり人の関係の面なりで再開は不可能というふうに今日まで言われているわけでありませから、いわゆる捕鯨問題検討会答申のような形ででも捕鯨を継続する努力が必要であるというふうに考えませけれども、この点どんなふうにお考えか、お尋ねをいたしたい。</p> | | | |

| 102-衆-農林水産委員会-2号 | | | |
|--|------|---------|----|
| 昭和59年12月18日 | | | |
| 発言者：208/324 | | 検索語：前・次 | |
| 発言者の情報 | | | |
| 発言者名 | 所属会派 | 肩書き | 役割 |
| 佐野宏哉 | | 水産庁長官 | |
| <p>佐野政府委員</p> <p>お答えいたします。</p> <p>まず、先生御指摘の包括的見直し、これをできるだけ早い時期にやるように関係国に働きかけるべしという先生の御指摘につきましては、私も全く同感でございます。先般、日米協議に当たりませてもアメリカ代表団に対してその旨は強く要請をしたところでございます。アメリカ代表団は確定的には反応いたませませんが、日本側の主張に対しては好意的に耳を傾けてもらっただと思っております。それ以外の加盟国に対しても同様のアプローチをいたしたいというふうに考えております。</p> <p>それと、先生御指摘の捕鯨問題検討会の報告の中にございます調査捕鯨、生存捕鯨、これらの概念は我が国の捕鯨をこういう厳しい状況のもとで生き残らせるために適宜、有効に活用していくべきアイデアであるというふうに思っております。</p> | | | |

Annex 96: Government of Japan, *National Diet Debates*, House of Councillors - Foreign Affairs Committee - No. 11, 16 May 1985 [excerpt]

| 96 – House of Councillors Foreign Affairs Committee – No. 11 | | | |
|--|---|---------------------------|------|
| 16 May 1985 | | | |
| Speaker: 230/329 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Eiko Nukiyama | Democratic Socialist Party / Kokumin Rengo | | |
| <p>Ms Eiko Nukiyama, Committee Member:</p> <p>With this Packwood-Magnuson Amendment, if it were to be invoked, as I said earlier, the fishing quota will be cut by half. If we still don't comply, it will be cut by the other half again, in other words, the allocation will be completely wiped out. If that were to happen, it would have terrible consequences for Japan's fisheries operators. How does the value of the Japan's fish catch in the United States' 200-nautical mile zone compare to the value of the catch of Japan's whaling operators?</p> | | | |

| 96 – House of Councillors Foreign Affairs Committee – No. 11 | | | |
|--|---|---------------------------|------|
| 16 May 1985 | | | |
| Speaker: 231/329 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Tadashi Imai | Director, Far Seas Division, Marine Fisheries Department, Fisheries Agency | | |
| <p>Mr Tadashi Imai, Briefing Officer:</p> <p>I will respond.</p> <p>There are various ways of calculating this, for example, whether we calculate just the catch in the American 200-nautical mile zone, or whether we include the salmon and ocean trout catch decided between Japan, the United States and Canada, but overall, the situation of Japanese fishing in the United States' 200-nautical mile zone is that there is more than 250 vessels with a total catch exceeding one million tonnes. In monetary terms, it would be worth considerably more than 100 billion yen. These operations directly employ somewhere well in excess of 10,000 people. Whaling, on the other hand, in terms of not the number of whales caught but in monetary value, would be worth about 13 billion yen, of which around 8 billion yen would be from Antarctic whaling and 5 billion yen from Japanese coastal waters. The number of people employed by these operations, including employees of the head offices of the companies would be around 1,300. Overall, therefore, the ratio of the scale of our fishing in American waters to our whaling is about 10 to one.</p> | | | |

102 - 参 - 外務委員会 - 11 号

昭和 60 年 05 月 16 日

発言者: 230/329

検索語: 前・次

発言者の情報

| 発言者名 | 所属会派 | 肩書き | 役割 |
|--------------|----------|-----|----|
| 抜山映子 ぬきやまえいこ | 民社党・国民連合 | | |

○抜山映子君 そのいわゆる P・N 法ですが、これによりますと、もしこれが発動されますと、先ほど言ったように、二分の一漁獲を減らされる。これに従わないとさらにまた二分の一、すなわち全部減らされてしまう。そういうことになりますと、日本の漁業者としても大変に困るわけです。大体米国の二百海里内で操業を行っている日本の漁獲高と、それから我が国の捕鯨漁業者の漁獲高ですね、それぞれ比較するとどれぐらいになりますか。

102 - 参 - 外務委員会 - 11 号

昭和 60 年 05 月 16 日

発言者: 231/329

検索語: 前・次

発言者の情報

| 発言者名 | 所属会派 | 肩書き | 役割 |
|------|------|--------------|----|
| 今井忠 | | 水産庁海洋漁業部遠洋課長 | |

○説明員（今井忠君） お答えいたします。

計算のしようがいろいろございまして、アメリカの二百海里水域の中だけとか、または日米加三カ国で決めましたサケ・マスを含めるかどうかとか微妙な計算の方法がございしますが、総じて出しますと、アメリカの二百海里水域の内で行っております日本の漁業の状況は、漁船の数が二日五十隻以上になりまして、漁獲量が百万トンを超えます。金額といたしまして一千億をかなり上回った状況ということになります。それに従事している直接従事者の数が一万数千人になろうというふうに推測されます。一方捕鯨業でございしますが、捕鯨業につきましては捕獲の頭数ではなくて金額なんでもございしますが、金額は大体百三十億くらい、うち八十億見当が南氷洋捕鯨、五十億見当が日本近海ということになります。これに直接従事しておる漁業者、それからその会社の本社の従業員も含めまして千三百人くらい、ですから、総じていいますと、捕鯨の関係は一〇対一という感じになろうというところでございます。

Annex 97: Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee - No. 6, 7 April 2010 [excerpt]

| 174 – House of Representatives | | | |
|--|---|--|------|
| Agriculture, Forestry and Fisheries Committee – No. 6 | | | |
| 7 April 2010 | | | |
| Speaker: 13/76 | | Search Term: Forward/Back | |
| Speaker Information | | | |
| Speaker | Affiliation | Title | Role |
| Hirohata Akamatsu | The Democratic Party of Japan (Mushozoku (Independents') Club | Minister for Agriculture, Forestry and Fisheries | |
| <p>Mr Akamatsu, Minister:</p> <p>As you point out, the previous government was criticised for its response to the Sea Shepherd's criminal acts, because the culprits were sent to Australia and then somehow allowed to go free. So, for our part, we planned from the start that we would adopt a firm stance against the obstructive activities of the Sea Shepherd this time. Their obstructive behaviour was even more serious than anticipated, and in response we did such things as use water hoses, and from this year we also sent a ship to shadow and protect the research vessel for the first time.</p> <p>As you just expressed, in terms of the various impressions, there might have been the impression that the Japanese vessels were spending the time trying to get away from and avoid the Sea Shepherd, but as for the result, the research whaling catch we were able to obtain was pretty much as planned – please understand that it is our practice not to state the number of whales – but I can say it was approximately the number we had planned.</p> <p>[...]</p> | | | |

174-衆-農林水産委員会-6号

昭和 22 年 04 月 07 日

発言者： 13/76

検索語: 前・次

発言者の情報

| 発言者名 | 所属会派 | 肩書き | 役割 |
|---------------|----------------|--------|----|
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赤松国務大臣

御指摘のとおり、前政権のときに、シーシェパードの犯罪行為に対して、オーストラリアに移送して、それでまた何となく自由になってしまったみたいな御批判もあったものですから、私どもとしては、今回のシーシェパードの妨害行動については毅然とした態度で臨もうということは、もう当初から予定をいたしておりました。予想以上の激しい妨害行動でございましたけれども、それに対して、放水等による対応だとか、あるいは、ことしから初めて調査船を守る船を後ろに配置するとかいうような形でやってまいりました。

今、委員御指摘がありましたけれども、いろいろイメージとしては、逃げたり避けたりしたイメージもあるかもしれませんが、結果的には、ほぼ私どもが予定をしておりました、頭数は言わないことになっているものですからお許しいただきたいと思いますが、ほぼ予定した調査捕鯨頭数を確保できたということでございます。

[略]

Annex 98: Whaling Issues Study Group, *Report on Preferred Future Directions for Japan's Whaling* (July 1984) in *New Policy Monthly* (August 1984) 108

Source: *New Policy Monthly* (*Gekkan Nyuu Porishū*) (August 1984) 108

Ministry of Agriculture, Forestry and Fisheries

Report on Preferred Future Directions for Japan's Whaling

July 1984
Whaling Issues Study Group

[108] Introduction

Japan's whaling industry, with its long history and tradition, continues to have an important meaning for many Japanese and play an important role in our culinary practices, regional economies, local cultures and regional societies. However, following the International Whaling Commission's decision in 1982 to introduce a total prohibition on commercial whaling, which is set to commence from the 1985-86 whaling season, the international situation confronting Japan's whaling has become increasingly severe.

In view of these circumstances, the Whaling Issues Study Group (WISG) was established by the commission of the Director-General, Japan Fisheries Agency, in October 1983, to examine the preferred future direction for Japan's whaling from a broad range of perspectives. The SG members, who are listed in the attachment to this document, are experts in a range of sectors, and I believe that the WISG has been able to consider the relevant issues not only from an economic viewpoint, but also from the viewpoints of culture, history, environmental protection and international cooperation.

The WISG met seven times between October 1983, when it held its first meeting, and July 1984, and conducted a vigorous examination of the history and current circumstances of Japan's whaling industry, the international situation surrounding whaling, the impact of the total prohibition of commercial whaling and other related issues. This report is a summary of the preferred future directions for Japan's whaling industry as conceived as a result of this examination process.

Kenjiro Nishimura
Chairman
Whaling Issues Study Group

1. From ancient times to the present, the Japanese people have had, and continue to have, the traditional culinary practice of consuming whales. This is of a similar character, albeit to varying degrees, to the practices of indigenous peoples in regional areas of Alaska, Siberia and Greenland, who are reliant on whale meat as an indispensable part of their daily diet. In contrast to the whaling that was previously carried out by Western nations for the purpose of extracting whale oil, which today has been superseded by petroleum, Japan's whaling is distinguished by the characteristic that since ancient times it has been carried out with the purpose of securing whale meat, as well as using the entire whale carcass for a wide variety of different uses. The reason why Japan ventured into the Southern Ocean whaling grounds before World War II and continues to conduct whaling there today is that for Japan whaling is a tradition and has a background in which whales are of considerably greater importance than they are in other countries.

In many regions throughout Japan, local cultures and communities have also been formed based on the culinary practice of consuming whale and on whaling as an industry. This means that there is today a deep-rooted sense of regional solidarity that has been fostered over the course of history that centres on rituals, ceremonies and legends woven around whales, and a collective consciousness based on regional ties and blood relationships that has been cultivated through whaling.

Further, particular districts, including towns well known for their whaling, such as Ayukawa in Miyagi Prefecture, and Taiji in Wakayama Prefecture, produce a large number of Southern Ocean and Japanese coastal whalers, and the whaling industry plays a role as a core industry in these regions due to the development of whale product processing and other related industries. Given that these regions are typically located in remote areas with inferior transport services and they have no significant industries other than whaling, it is fair to say that these regions and the whaling industry share a common destiny.

For these reasons, whales continue to have an important meaning and play an important role for the people of Japan, as a valuable biological resource which should be utilised for people in the same way as other seafood resources, as a significant source of social and cultural value, and as a core industry in certain regions. Consequently, it is not acceptable that peoples of other ethnicities and countries – who assert that there should be absolutely no use of whales allowed regardless of the situation of whale stocks – should force their values on us and seek to deny our particular ethnic culinary practices and cultures which are entwined with whales.

2. Japan's whaling industry began to be organised in the 17th Century, when it increased in scale, its character as an industry became more defined, and it became firmly established in a number of locations around the country. Against the background of the strong attachment for whaling felt by the Japanese people that had grown as a tradition throughout this long period, the industry continued to develop steadily, including making advances into the Southern Ocean in 1934. From the 1970s, however, it has been contracting as international regulations on whaling have strengthened.

To explain this briefly, from the 1950s intensely competitive whaling by all countries in the Southern Ocean continued so that during the 1960s there was a remarkable decline in whale stocks, in particular, those of the great whales. This led the International Whaling Commission (IWC) to admit that its whaling regulations to that time had been inadequate for the conservation of whale resources, and, starting in the 1970s, it began tightening whaling regulations by, among other actions, setting catch quotas for different whale species. With a view to maintaining and developing the whaling industry over the long term, Japan accepted the whaling regulations introduced by the IWC, and, at present, Japan's whaling industry has been obliged to downsize to, or close to, the lowest level at which it can maintain itself as an industry. That is, the scale of the Southern Ocean factory-ship whaling, in terms of fleet size, is now only one-seventh of its peak, and the species of whale captured is now limited to the minke whale, which the IWC Scientific Committee has determined is a resource which is in excellent condition. Japan's coastal whaling is also submitting to similarly stringent regulations.

At the same time, from the standpoint that whaling regulations should be implemented rationally and on scientific grounds, Japan is contributing to raising the standard of scientific management of whale resources by leading in the implementation of collaborative international resource surveys of minke whales in the Southern Ocean, and it has been properly discharging its duties in a way befitting one of the world's leading whaling nations.

3. Subsequent to the United Nations Conference on the Human Environment which was held in 1972, the anti-whaling nations were joined by environmental protection groups in advocating the protection of whales, and their assertions strengthened by the year. The high point reached by this movement is considered to have been the decision made by the IWC in 1982 to introduce the moratorium on commercial whaling. The effect of this decision is to have placed a total ban on whaling for commercial purposes following a three-year grace period, and can be fairly described as having finally brought Japan's whaling industry to a crisis point of complete termination. We consider, however, that the decision to implement the moratorium on commercial whaling is inconsistent with the fundamental spirit of the [109] International Convention for the Regulation of Whaling.

The International Convention for the Regulation of Whaling, which was concluded in 1946, has as its major preface the effective use of whale resources for humankind, and its purpose is the orderly development of the whaling industry through the conservation and use of whale resources. This means that regulations on whaling should be permitted only in cases where a need is shown based on the results of scientific research. However, the decision behind this moratorium is neither based on the advice of the IWC Scientific Committee nor does it have a scientific basis as it completely ignores the diverse conditions of the different whale stocks which differ according to species and populations.

For these reasons, it is our view that there is absolutely no reason for Japan to abandon its whaling industry, and that, under the terms of the Convention, it was reasonable for Japan to file an objection with the IWC in November 1982 that has made the continuation of commercial whaling possible.

In addition, were whaling to be prohibited there would be serious ramifications in Japan for the employment of Southern Ocean and Japanese coastal whalers and those in related industries who are based primarily in regions that do not have any significant industries apart from whaling. Moreover, it would cause a very serious situation involving the decline of regional economies and the loss of specific regional homeland identities and cultures, as well as denying a culinary practice of Japanese people.

4. As outlined above, when we take into account the fundamental spirit of the International Convention for the Regulation of Whaling as well as the very serious impact that the whaling prohibition would cause in Japan, we consider the continuation of Japan's whaling to be entirely reasonable. At the same time, as we note below, it is also a fact that the international situation surrounding Japan's whaling industry is extremely difficult.

The key point is that in the IWC the anti-whaling countries which approve of the total prohibition of commercial whaling have secured in excess of the three-quarters majority that is required to make decisions on whaling regulations such as the aforementioned moratorium on commercial whaling. For this reason, even were Japan to put forward its case for the continuation of commercial whaling based on rational scientific grounds, it would be virtually impossible to secure the necessary support at the forum of the IWC Annual Meeting.

In addition, the United States Government is strongly pressing Japan to withdraw its objection by linking the whaling issue to its allocation to Japan of fishing quotas within the United States' 200 nautical mile zone in the northern Pacific. Of particular concern was the fact that last year the United States reduced its fishing quota allocation to Japan, citing as its reason that Japan did not withdraw its objection. In addition to the above, the United States has already enacted a law that makes it possible reduce to zero the fishing quota allocated to Japan within a two year period in the event that Japan were to continue its commercial whaling after the prohibition of commercial whaling comes into effect from the 1985-86 whaling season.

By rights, whaling and northern Pacific fishing are completely separate matters and it is highly inappropriate that the United States should use fishing allocation quotas as a bargaining instrument in its negotiations with Japan. Nevertheless, in view of the United State's holding firmly to this position regardless of repeated representations by Japan, it is necessary for us to have a full appreciation of the impact on Japan's northern Pacific fishing (which occupies a key position in this country's fishing industry) were Japan to press ahead with commercial whaling.

5. Following a comprehensive evaluation of the domestic and international situation outlined above, the Study Group makes the following recommendations for the preferred future directions for Japan's whaling industry after the moratorium has taken effect.

The continuation of whaling ought rightly to be accepted because the decision to prohibit all commercial whaling is illegitimate in terms of the Convention, since it lacks a scientific basis, and because of the employment situation of those persons employed in the whaling industry, the role played by whaling in certain regional communities, the preference of Japanese people for whale meat, and the need to transmit whaling skills to future generations.

However, it is also a fact that it would be extremely difficult to maintain the whaling industry as presently operated given that the countries seeking the prohibition of commercial whaling constitute a majority, and given the international situation where there are grave fears of a negative impact on our northern Pacific fishing industry through its links with the United States. For these reasons consideration should be given to the following policy response in order to continue whaling in the Southern Ocean and in Japanese coastal waters.

(i) Southern Ocean Whaling

In the field of whale resources in the Southern Ocean, while there has been considerable research conducted to date primarily on minke whale stock levels and reproductive issues and their surrounding ecological systems, there are still many questions left to be answered. For this reason, we should seek the understanding of relevant countries for Japan to undertake scientific whaling activities that aim to shed further light on these questions. Further, it will be necessary to assert that these research activities will contribute to the aim of understanding marine ecosystems in the Southern Ocean, which will be of major benefit for all humankind.

(ii) Coastal Whaling

Given that in specific regions whaling has a long history and tradition and is a core industry, and that whales have been central to the formation of cultural practices and local societies, we should seek the understanding of relevant countries with regard to coastal whaling being essential to the livelihood of regional peoples in terms of its social, economic and cultural significance.

It would also be appropriate to seek the understanding of relevant countries with regard to the fact that the area of operations of the coastal whaling will be within the 200 nautical mile fisheries zone, within which Japan has jurisdictional rights over the reasonable management and conservation of marine resources, including whales.

In conclusion, Japan's whaling industry, which has a long history and tradition, has been exposed to the severe criticism and attacks of the anti-whaling nations, and its very survival is now at risk. Were Japan's whaling industry to be extinguished for irrational reasons, however, the impact on our culinary practices, regional economies, culture and societies would be immense. The Government should appreciate the full extent of this situation. To ensure the continuation of whaling, the Government should use the support of those involved in whaling, and the broader citizenry, to seek the understanding of the United States and the other relevant foreign nations through a range of measures including diplomatic efforts. The Government should also make further efforts to ensure that the IWC is able to function normally and in accordance

with the fundamental spirit of the International Convention for the Regulation of Whaling.

Attachment

Whaling Issues Study Group Members

Reizo Ishiyama, Professor Emeritus, Tokyo Maritime University, and former Director, Japan Nature Protection Federation.

Yoshizane Iwasa, Advisor, Fuji Bank.

Yoshihide Uchimura, Director, Japan Racing Association.

Teruo Sasaki, Deputy-Chairman, Japan Fisheries Association.

Saburotsuke Suzuki, Chairman, Ajinomoto Co, Inc.

Yoshio Seko, Mayor, Taiji, Wakayama Prefecture.

Kazukiyo Doi, Head, All Japan Seamen's Union.

Masamichi Narita, News Analyst, Nippon Hoso Kyokai (NHK).

Kenjiro Nishimura, Chairman, Central Fishing Industry Coordination Committee.

Takao Hoshiai, Professor, National Institute of Polar Research.

Susumu Yamaji, Professor, Tokai University.

Shichihei Yamamoto, Writer.

Shigeya Yoshise, Governor, Japan Development Bank.

Bunroku Yoshino, Head, International Economic Research Institute.

我が国捕鯨の今後のあり方について(報告)

昭和59年7月
捕鯨問題検討会

はじめに

長い歴史と伝統を有する我が国捕鯨業は我が日本人の食習慣、地域経済・文化、社会にとって、今なお重要な基幹と役割を持っているものである。しかしながら、我が国の捕鯨を取り巻く国際情勢は、1982年の国際捕鯨委員会(1WC)において、1985-86漁期からの商業捕鯨全面禁止の決定が行われる等、一層厳しいものとなっている。捕鯨問題検討会(以下「検討会」という。)は、このような情勢を踏まえ、今後の我が国捕鯨のあり方について広い観点から検討を行うため、水産庁長官の委嘱の下に、1983年10月設置されたものである。検討会のメンバー(別添)は、各界有識者から構成されており、最終的観点のみならず、文化、歴史、環境保護、国際協調等の様々な観点からの検討が行われたものと考えている。

検討会は、1983年10月に第1回会合を開催して以来、1984年7月までに計7回にわたって我が国捕鯨業の歴史と現状、捕鯨をめぐる国際情勢、商業捕鯨全面禁止がもたらす影響等について、精力的に検討を行ってきた。本報告は、このような検討経過を踏まえ、我が国捕鯨の今後のあり方について取りまとめたものである。

捕鯨問題検討会
議長 西村 徳次郎

1. 日本人は、古来より現代に至るまで、鯨を食するという伝統的な食習慣を有している。これは歴史的背景はあれ、アラスカ、シベリア、グリーンランド地方等の居住民が、鯨肉を不可欠な食物としていることと鯨鯨の性格を有するものである。また、かつての政治情勢が現在では石油に代替されている鯨油の採取を目的として捕鯨を行ってきたのに対し、我が国の捕鯨は、昔から主として鯨肉の確保を目的とするとともに鯨鯨をあらゆる用途に完全利用しているという特徴を有している。我が国が第二次大戦終結から東洋洋捕鯨に参入し、現在なお捕鯨を継続しているのも、このように我が国にとって捕鯨は伝統的なものであり、鯨の重要性が鯨外品と比べはるかに高かったことを背景としていたためといえるのである。

また、我が国では、このような鯨を食するという食習慣及び鯨鯨としての捕鯨を基盤とした地域文化、地域社会が全国各州で形成されている。すなわち、鯨にまつわる儀式、祭礼、芸術等を中心に歴史的に醸成された地域感や、捕鯨を通じて培われた地域、金銭與信感等といったものが、現在まで根強く残っているのである。

更に、漁業の町として知られる釧路(宮城系)、太地(和歌山系)等特定の地域においては、南太平洋あるいは我が国沿岸の捕鯨従事者が数多く輩出し、鯨鯨品加工業者の集積地帯も発達する等、捕鯨業は地域の基幹産業としての役割を有している。また、これら地域は、交通の不便な辺陲の地

にあり、捕鯨業以外に生きるべき産業もないことから、いわば捕鯨業と運命を共にしている地域とさえいえよう。

このように、鯨は我が日本人にとって、魚介類と並んで人間のために利用すべき貴重な生物資源であるとともに、社会的・文化的な価値の源泉の一つとなり、特定地域における基幹産業となっている等、現在なお重要な基幹と役割を持っているのである。したがって、他の民衆、国民が資源状態の如何にかかわらず、鯨の利用は全く認められるべきでないとし、鯨の資源状態を我が手に押しつけ、鯨にまつわる伝統的な食習慣や文化等を否定しようとすることは、許されるべきものではない。

2. 我が国捕鯨業は17世紀には追鯨化が行われ、規模も拡大し、商業としての性格を認め、捕鯨を行う地域も、全国各地に定着していた。更に、この伝統的に培われた漁民の捕鯨に対する強い愛着を背景として、1934年には南太平洋に遠出する等規模に拡大を続けたが、1970年代以降は、国際的な捕鯨規制が強化される中で、縮小を続けている。

すなわち、1950年代以降、南太平洋において世界各國が捕鯨競争を競ったこと等から、1980年代、大規模を中心として世界的に鯨資源の減少が顕著となった。このため、国際捕鯨委員会(1WC)は、それまでの捕鯨規制が鯨資源の保存にとって不十分なものであった点を反省し、1970年代以降、鯨捕鯨に捕鯨頭数を設定する等により捕鯨規制の強化を奨励したのである。我が国は北極的な捕鯨業の維持発展の観点から1WCによる捕鯨規制を受け入れており、現在では我が国捕鯨業は鯨鯨として維持しうる最低限ないし、それに近い規模にまで縮小を余儀なくされている状況にある。すなわち南太平洋の傳統式捕鯨の規模は、追鯨化で最盛期の7割の1に過ぎず、捕鯨対象鯨も、1WC科学委員会において資源状態が増減良好とみられているミンク鯨のみに限定されている。我が国沿岸の捕鯨についても同様の厳しい規制に置かれているのである。

一方我が国は、鯨の捕鯨規制は科学的根拠に基づき合理的に行われるべきであるとの立場から、南太平洋の鯨の国際共同資源調査の実施を主導するなど、鯨資源の科学的管理の水準を高めることに貢献しており、いわば世界有数の捕鯨国としての責務を完全に果たしているのである。

3. 1973年の国連人間開発会議以降、鯨の資源を主張する反捕鯨派、更には環境保護団体の主張は年々勢力を増していったが、このような運動が頂点に達したといえるのが、1982年の1WCにおける「商業捕鯨モラトリアム」の決定である。この決定は、「商業目的のための捕鯨は、3年間の暫予期間を置いて全面禁止すること」を内容としており、我が国捕鯨業は遂に消滅の危機に立たされたといえる。しかしながら、商業捕鯨モラトリアムの決定は、国際捕鯨取締条約の基本精神からみて、不合理的なものである。

と考える。

すなわち、1946年に締結された国際捕鯨取締条約は、鯨資源が人類にとって有効に利用されることを大前提とし、そのための鯨資源の保存や鯨資源の利用による捕鯨量の秩序ある発展を図ることを目的としているのである。したがって捕鯨の制限は、科学的調査の結果必要がある場合に限り認められるべきである。しかしながら、モントリオール条約は、IWCの科学委員会の勧告に基づくものでなかったのみならず、鯨個体、系群別に異なる資源状態の及し悪しをも一切無視して行われた科学的根拠を有しないものである。

このような意味で、我が国としては捕鯨業を放棄する理由はなく、我が国政府が1982年11月、IWCに対し異議申立てを行い、条約上は商業捕鯨の継続を可能としたことは正当なものと考えられる。

また、仮に捕鯨が禁止されれば、我が国では、捕鯨以外にみるべき高度のない地域を中心とした南太平洋及び我が国沿岸の捕鯨従事者、関連産業従事者等の深刻な雇用問題や、地域経済の衰退、地域固有の郷土意識及び郷土文化の喪失といった問題を引き起こし、更には日本人の食習慣を否定することにもなりかねないと考えられる。

4. 以上のように、国際捕鯨取締条約の基本理念及び捕鯨禁止が我が国内に及ぼす深刻な影響等に鑑みれば、我が国の捕鯨継続は正当なものと考えられるが、他方、次のように、我が国捕鯨業を取り巻く国際情勢が極めて厳しいことも事実である。

すなわち、IWCにおいては、商業捕鯨の全面禁止に賛成する反捕鯨派が、先に述べた商業捕鯨モントリオール条約のような捕鯨規制の決定を行うために必要な4分の3を上回る多数を占めている状況にあることである。このため我が国がいくらか科学的、合理的な論議を基にして商業捕鯨の存続を訴えても、IWC総会の場で支持を得ることは事実上不可能に近い。

更に、米連邦政府が我が国に対する北洋における米連200海里内漁獲制限と捕鯨問題とをリンクさせて我が国に異議申立ての威嚇を強行していることである。すなわち、米連は、昨年我が国が異議申立てを撤回しないことを理由として対日漁獲制限を削減した。また、既に米連には、商業捕鯨禁止決定が実施する1985-86年漁期以降、我が国が商業捕鯨を継続した場合、対日漁獲制限を2年間のうちにゼロとしうる法律が制定されている。本来、捕鯨と北洋漁業とは全く関係のない別個の事柄であり、このように米連が漁獲削減を我が国との交渉材料としていることは著しく不当なものである。しかしながら、米連が、我が国の態度を重なる抗議にもかかわらず、従来の態度を堅持している以上、商業捕鯨を強行した場合、我が国漁業において非常に重要な地位を占めている北洋漁業が受ける影響について十分配慮する必要がある。

5. このような国内及び国際情勢を総合的に勘照し、検討会としては我が国捕鯨のモントリオール条約後継のあり方について次のように提言する。

商業捕鯨全面禁止の決定は、科学的根拠を欠く等条約上の正当性がなく、また、捕鯨業に従事する人々の雇用事情、捕鯨が特定の地域社会に果たしている役割、日本人の食習慣等、更には捕鯨技術の伝承の必要性等に鑑みれば、捕鯨の存続は当然認められるべきである。

しかしながら、商業捕鯨の禁止を求める国が多数を占め、また、米連との間で北洋漁業に悪影響が生じる恐れが強いという国際情勢の中で、従来どおりの捕鯨業を維持していくことは極めて困難であることも事実である。したがって、南太平洋捕鯨及び我が国沿岸の捕鯨について次のような方針のための方策を検討する必要がある。

① 南太平洋捕鯨

南太平洋における鯨資源については、これまで、ミンク鯨を中心に資源量、再生産関係、更には資源を取り巻く生態系に關し相次ぐ調査研究が進められてきているが、なお依然として多くの解明すべき点が残されている。したがって、これらの重点の解明を目的とする科学的な調査捕鯨活動を実施することについて、関係国の理解を求めていくべきである。また、このような調査活動は、南太平洋における海洋生態系の解明という人類全伴にとって極めて有益な目的に資するという点についても併せて主張していく必要がある。

② 沿岸捕鯨

沿岸捕鯨については、特定地域において捕鯨業が長い歴史と伝統を持ち、基幹産業としての地位を占めていること、数々を中心として文化、社会が形成されていることに鑑み、社会的、経済的、文化的な意味で地域住民の生活のために必要不可欠な活動である点について、関係国の理解を求めていくべきである。

また、沿岸捕鯨が保護区域としているのは、我が国が鯨をはじめ水産資源の合理的な管理・保存を図るための管轄権を有している200海里漁業水域内であるという点についても、関係国の理解を求めていく必要がある。

最後に、長い歴史と伝統を有する我が国捕鯨業は、反捕鯨国の厳しい批判と攻撃にさらされ、今や存亡の危機にある。しかしながら、不当な理由により我が国捕鯨が消滅することになれば、我が国の食習慣、地域経済、文化、社会が受ける影響は極めて大きい。政府としては、このような情勢を十分認識し、捕鯨存続を図っていくため、捕鯨関係者、更には広く国民の支持を背景として、外交努力の傾注をはじめとするあらゆる措置を講じ、捕鯨存続をこれまで以上に粘り強く訴えることにより、米連をはじめとする海外国の理解が得られるよう努力すべきである。また、IWCが国際捕鯨取締条約の基本精神に基づく正常な機能を発揮しようとするよう、政府として、さらに努力を傾注すべきである。

別 添

捕鯨漁業関係者連絡委員会委員名簿

| 氏 名 | 職 業 |
|-----------|----------------------------|
| 石 山 礼 嘉 | 東京水産大学名誉教授 全国自然保護連合会理事長 |
| 藤 俊 昭 英 | 富士銀行総務課長 |
| 内 村 貞 英 | 日本中央鯨豚会理事兼 大日本水産会副会長 |
| 佐々木 隆 典 | 味の素(株)会長 |
| 鈴木 三雄助 | NHK解説委員 |
| 菅 吉 芳 男 | 和歌山県北地町町長 |
| 土 井 一 博 | 全日本水産組合連合会 NHK解説委員 |
| 成 田 正 路 | 中央漁業調整委員会 会長 |
| 西 村 隆 次 郎 | 国立極地研究所教授 |
| 黒 倉 孝 男 | 東海大学教授 |
| 山 地 達 | 作家 |
| 山 本 七 平 | 日本開発銀行総裁 |
| 青 柳 龍 儀 | 国際捕鯨研究所所長 |
| 吉 野 文 六 | |

Annex 99: *Institute of Cetacean Research (Juridical Foundation) - Deed of Endowment*, (30 October 1987 as amended on 20 October 1999), Institute of Cetacean Research website, <<http://www.icrwhale.org/kifu.pdf>> on 16 April 2011 [excerpts]

[1] **The Institute of Cetacean Research
(Juridical Foundation)
Deed of Endowment**

Chapter I: General Rules

Article 1: Names

The name of this institute shall be 財団法人 日本鯨類研究所 [TN: romanised as Zaidan Hōjin Nippon Geirui Kenkyūjo], and the English name shall be “Institute of Cetacean Research” (Juridical Foundation), hereafter, “the Institute”, in this Deed of Endowment.

Article 2: Offices

The offices of the Institute shall be located in Chuo Ward, Tokyo City.

Article 3: Objectives

The objectives of the Institute shall be to contribute to the appropriate management and usage of marine resources through conducting experiments, research and surveys on cetaceans and other marine mammals, as well as surveys on the international conditions affecting cetaceans and other marine mammals.

Article 4: Operations

The Institute shall carry out the following operations to achieve the objectives outlined in Article 3: Objectives:

- (a) Experiments, research and surveys with regard to cetaceans and other marine mammals,
- (b) Collection and presentation of data with regard to cetaceans and other marine mammals,
- (c) Surveys, information collection and presentation of same about the international conditions affecting cetaceans and other marine mammals,
- (d) Other operations necessary to achieve the Institute’s purposes.

Chapter II: Assets and Accounting

Article 5: Composition of Assets

The Institute’s assets shall be composed of, as listed in the provisions below:

- (a) Assets listed in the Asset Register at the time of establishment,
- (b) Income generated from assets,
- (c) Donations,
- (d) Income from operations,
- (e) Membership fees,

- (f) Other income.

Article 6: Asset Types

The assets of the Institute shall be Basic Assets, Normal Assets and Special Foundation assets.

Article 7: Basic Assets

The Basic Assets shall be composed as listed in the provisions below:

- (a) Assets listed as Basic Assets in the Assets Register at the time of establishment,
- (b) Assets which have been specified as Basic Assets when donated,
- (c) Assets which the Board of Directors has resolved shall be transferred to Basic Assets.

Article 8: Normal Assets

The Normal Assets shall be composed as listed in the provisions below:

- (a) Income generated from the Basic Assets and income generated from the Special Foundation Assets as specified in Article 9: Business and Operations Statement,
- (b) Donations, except for those listed in Article 7 Provision 2 Item 2, and Article 9, Provision 1, Item 1,
- [2] (c) Assets belonging to the Institute other than Basic Assets and Special Foundation Assets.

2. The Director-General shall administer the Normal Assets as determined by the Board of Directors.

Article 9: Special Foundation Assets

The Special Foundation Assets shall be those assets composed as listed in the provisions below and they shall be used by the Director-General, with the approval of the Board of Directors, as asset particularly necessary for those surveys listed in Article 4, Provision 1, which are carried out with regard to international conventions, hereafter called "Special Surveys":

- (a) Assets which have been donated and specified as Special Foundation assets,
- (b) Assets which the Board of Directors has resolved to transfer to Special Foundation Assets,
- (c) Income generated from Provision (b) above.

2. The implementation of special surveys and the use and disposition of Special Foundation Assets shall be determined separately in the Business and Operations Statement [TN: not translated here].

3. The drafting of the Business and Operations Statement, and changes to the same, shall require the approval of the Minister for Agriculture, Forestry and Fisheries.

Article 10: Disposition of Basic Assets

Basic Assets may not be disposed of or provided as collateral. However, a portion of the Basic Assets may be disposed of or provided as collateral for loans should this be necessary for the implementation of the Institute's operations and following a resolution to that effect passed by a majority of two-thirds or more of directors attending a board meeting and with the approval of the Minister for Agriculture, Forestry and Fisheries.

Article 11: Disbursement of Expenses

The expenses of the Institute shall be disbursed using Normal Assets and/or Special Foundation Assets.

2. The accounting for Special Surveys shall be performed separately from accounting for other operations and shall use a separate account.

Article 12: Loans

The Institute shall be able to borrow temporary loans for disbursements for expenses required for the Institute's operations that shall be paid back using normal assets during the same accounting year as the operation, to a maximum level as determined in advance by the Board of Directors.

2. The Institute may borrow long-term loans for disbursements of expenses required for the Institute's operations pursuant to a resolution to that effect passed by a majority of two-thirds of directors attending a board meeting and with the approval of the Minister for Agriculture, Forestry and Fisheries.

Article 13: Operation's Year

The operation's year for the Institute shall, each year, commence on 1 October and finish on 30 September of the following year.

Article 14: Operations Plan and Income and Expenditure Budget

The Director-General must, prior to the commencement of each financial year of operations, prepare a business plan and income and expenditure budget and, after receiving approval from the Board of Directors, submit it the same to the Minister for Agriculture, Forestry and Fisheries.

Article 15: Temporary Budget

Regardless of the provision of Article 14: Operations Plan and Income and Expenditure Budget, in the event that the Income and Expenditures Budget is unable to be passed due to reasons beyond the Institute's control, the Director-General can, until the day that the Income and Expenditure Budget is passed, receive income and pay expenditures, pursuant to a resolution by the Board of Directors and by drafting a temporary budget in accordance with the budget of the preceding year.

2. Income received and expenditures paid under the temporary budget referred in the preceding provision shall be treated as income and expenditures of the newly drafted budget.

Article 16: Operations Reports and Income and Expenditures Account Statement

The Director-General shall, after the end of each financial year, promptly draft the documents listed in the following provisions and submit these to the Auditor and have them audited.

- (a) Operations Report,
- [3] (b) Income Account Report,
- (c) Net Asset Change Account Report,
- (d) Asset Register,
- (e) Balance Sheet

2. The Auditor shall, immediately after receiving the above documents, audit them, draft an Audit Report, and submit it to the Board of Directors.

3. The Director-General, shall submit the documents listed in Article 16, Item 1, and the Audit Report referred in the preceding provision to the Minister for Agriculture, Forestry and Fisheries, pursuant to a resolution by the Board of Directors.

4. The Director-General shall keep at the Institute's offices the documents listed in Article 16, Item 1, and the Audit Report referred in Article 16, Item 2.

Chapter III

Article 17: Board Director Numbers and Selection

The Institute shall appoint the following Executives:

- (a) Between eight and twelve Board Directors,
- (b) Between one and two Auditors

2. The Directors and Auditor/s shall be selected by the Board of Trustees.

3. There may be no overlap of members between the Board Directors, Auditors and the Board of Trustees.

4. Of the Board Directors, one may also serve concurrently as Director-General, and one also serve concurrently as Executive Director.

5. Of the Board Directors, the proportion of the number of those from the same family (being family members within the third degree of kinship inclusive, and persons in a specified relationship with a Director) and/or persons employed by specified companies shall not exceed one third or more of the present number of Board Directors.

6. Of the Board Directors, the proportion of directors who were formerly employed by the Government Agency which has jurisdiction over the Institute shall be one third or less than the present number of Board Directors.

7. Of the Board Directors, the proportion of directors who are from the same industry shall be half or less than the present number of Board Directors.

Article 18: Board Director Work

The Director-General shall represent the Institute and oversee its operations.

2. The Executive Director shall assist the Director-General, coordinate the executive office, enforce the rule of law with regard to the Institute's operations, represent the Institute should the Director-General be unable to do so due to an unforeseen incident, and undertake the duties of Director-General in his/her absence.

3. The Board Directors shall form the Board of Directors and carry out the Institute's operations.

3. The Auditor shall carry out the duties according to the provisions of Civil Code No. 59.

Article 19: Directors' Term

The term of the Directors shall be two years. However, this shall not prevent Directors from being re-elected.

2. The term of Directors who have acceded office to take over from a current Director or following an increase in the number of Directors, shall be, in the case of the former, the remaining term of that current Director.

[...]

[5] Chapter V: Trustees and Board of Trustees

Article 32: Trustees

This Institute shall appoint between 8 and 12 Trustees.

2. The Trustees shall be selected from among persons with appropriate academic and professional qualifications by the Board of Directors, and appointed by the Director-General.

3. The provisions listed from Article 19 to Article 21 shall apply to the Trustees.

Article 33: Board of Trustees

The Board of Trustees shall be comprised of the Trustees.

2. The Board of Trustees shall, as determined elsewhere in this Deed of Endowment, deliberate on items referred by the Director-General with regard to the management of the Institute, and shall be able to give its opinion to the Director-General.
3. The Director-General shall convene meetings of the Board of Trustees.
4. The Chair of the Board of Trustees shall be chosen by the Board of Trustees at that time.
5. Board Directors and Auditor/s shall be able to attend Board of Trustee meetings and submit their opinion on matters.

Article 34: Application of Provisions

The provisions from Article 25, Item 5, to Article 31, shall apply to the Board of Trustees. When applied to the Board of Trustees, references to Director-General shall be read as Chair of the Board of Trustees.

Article 35: Experts Committee

The Director-General shall, when he/she deems necessary and pursuant to a resolution by the Board of Directors, be able to establish an Experts Committee to facilitate the smooth management of the Institute's operations.

2. Experts Committee members shall be appointed by the Director-General from among persons who have specialist knowledge and who have been approved by the Board of Directors.
3. The Board of Directors shall determine the items necessary for the management of the Experts Committee.

[...]

[6] Chapter VII: Support Association Members

Article 38: Support Association Members

Persons who support the objectives of this Institute may become Support Association Members of the Institute.

2. Support Association Members shall pay Support Association membership fees in accordance with that determined elsewhere by the Board of Directors [TN: not translated].
3. The rules regarding the Support Association shall be determined elsewhere by the Director-General pursuant to a resolution by the Board of Directors [TN: not translated].

[...]

Supplementary Notes

1. This Deed of Endowment shall take effect from the day of establishment of the Institute, namely, 30 October 1987.
2. The Institute's inaugural Business and Operations Plan and Income and Expenditure Budget since establishment shall, regardless of the provisions of Article 15, be determined by the Establishment Committee.
3. The Institute's inaugural operations year following establishment, regardless of the provisions of Article 13, shall commence on the day of establishment and end on 30 September 1988.
4. The Institute's inaugural Board Directors following establishment, regardless of the provisions of Article 17, Item 2 and Item 4, shall be as listed in the Attachment [TN: not translated], and their term, regardless of the provisions in Article 19, Item 1, shall be until the accession of Board Directors as selected at the inaugural meeting of the Board of Trustees.
5. Following establishment, the first Trustees, regardless of the provisions of Article 32, Item 2, shall be as listed in the Attachment [TN: not translated], and, regardless of Article 19, Item 1 in accordance with Article 32, Item 3, their term shall be until the accession to office of the Trustees selected at the inaugural meeting of the Board of Directors following establishment.

[7] Supplementary Note

The amendment to this Deed of Endowment was effective from the day of approval by the Minister for Agriculture, Forestry and Fisheries, namely, 24 November 1988.

Supplementary Note

The amendment to this Deed of Endowment was effective from the day of approval by the Minister for Agriculture, Forestry and Fisheries, namely, 31 March 1988.

Supplementary Note

The amendment to this Deed of Endowment was effective from the day of approval by the Minister for Agriculture, Forestry and Fisheries, namely, 29 November 1996.

Supplementary Note

The amendment to this Deed of Endowment was effective from the day of approval by the Minister for Agriculture, Forestry and Fisheries, namely, 20 October 1999.

財団法人 日本鯨類研究所 寄附行為

第1章 総則 (名称)

第1条 本研究所は、財団法人 日本鯨類研究所（英文名は、「Institute of Cetacean Research」とする。以下「本研究所」という。）という。

（事務所）

第2条 本研究所は、事務所を東京都中央区に置く。

（目的）

第3条 本研究所は、鯨類その他の海産哺乳類に関する試験研究及び調査並びに鯨類その他の海産哺乳類に係る国際情勢に関する調査等を行うことによりもって水産資源の適切な管理と利用に寄与することを目的とする。

（事業）

第4条 本研究所は、前条の目的を達成するため、次の事業を行う。

- (1) 鯨類その他の海産哺乳類に関する試験研究及び調査
- (2) 鯨類その他の海産哺乳類に関する資料の収集及び提供
- (3) 鯨類その他の海産哺乳類に係る国際情勢に関する調査及び情報収集並びに提供
- (4) その他、本研究所の目的を達成するために必要な事業

第2章 資産及び会計

（資産の構成）

第5条 本研究所の資産は、次の各号に掲げるものをもって構成する。

- (1) 設立時における財産目録に記載された財産
- (2) 資産から生じる収入
- (3) 寄附金品
- (4) 事業に伴う収入
- (5) 賛助会費
- (6) その他の収入

（資産の種別）

第6条 本研究所の資産は、基本財産、普通財産、特別基金財産とする。

（基本財産）

第7条 基本財産は、次の各号に掲げるものをもって構成する。

- (1) 設立時の財産目録に基本財産として記載された財産
 - (2) 設立後に基本財産とすることを指定して寄附された財産
 - (3) 理事会で基本財産に繰り入れることを議決した財産
- 2 基本財産は、理事会の定めるところにより、理事長がこれを管理する。

（普通財産）

第8条 普通財産は、次の各号に掲げるものをもって構成する。

- (1) 基本財産から生ずる収入及び特別基金財産から生ずる収入のうち第9条の業務方法書において定めたもの
 - (2) 寄附金（第7条第1項第2号及び第9条第1項第1号に掲げるものを除く。）
 - (3) 本研究所の資産であって、基本財産及び特別基金財産以外のもの
- 2 普通財産は、理事会の定めるところにより、理事長がこれを管理する。

(特別基金財産)

第9条 特別基金財産は、第4条第1号の調査のうち、国際条約に関連して理事長が理事会の承認を得て、特に必要があると認めて実施する調査（以下「特別調査」という。）に充当するための財産で、次の各号に掲げるものをもって構成する。

- (1) 特別基金財産とすることを指定して寄附された財産
- (2) 理事会で特別基金財産に繰り入れることを議決した財産
- (3) 前2号の財産から生ずる収入

2 特別調査の実施並びに特別基金財産の運用及び処分については、業務方法書において別に定める。

3 業務方法書の制定及び変更に当たっては、農林水産大臣の承認を受けなければならない。

(基本財産の処分)

第10条 基本財産は、これを処分し、又は担保に供することができない。ただし、本研究所の事業遂行上やむを得ない理由があるときは、理事会において出席理事の3分の2以上の多数による議決を経、かつ、農林水産大臣の承認を受けてその一部を処分し、又は担保に供することができる。

(経費の支弁)

第11条 本研究所の経費は、普通財産及び特別基金財産をもって支弁する。

2 特別調査に係る経理については、特別の勘定を設けて、他の事業に係る経理と区分して経理しなければならない。

(借入金)

第12条 本研究所は、その事業に要する経費の支弁に充てるため、あらかじめ理事会において定めた額を限度として、その事業年度内において普通財産をもって償還する一時借入金の借入れをすることができる。

2 本研究所は、その事業に要する経費の支弁に充てるため、理事会において出席理事の3分の2以上の多数による議決を経、かつ、農林水産大臣の承認を受けて、長期借入金の借入れをすることができる。

(事業年度)

第13条 本研究所の事業年度は、毎年10月1日に始まり、翌年の9月30日に終わる。

(事業計画及び収支予算)

第14条 理事長は、毎事業年度開始前に事業計画及び収支予算の案を作成し、理事会の議決を経て、農林水産大臣に提出しなければならない。

(暫定予算)

第15条 前条の規定にかかわらず、やむを得ない理由により予算が成立しないときは、理事長は、理事会の議決を経て、予算成立の日まで前年度の予算に準じて暫定予算を編成し、収入支出をすることができる。

2 前項の収入支出は、新たに成立した予算の収入支出とみなす。

(事業報告書及び収支計算書等)

第16条 理事長は、毎事業年度終了後、遅滞なく、次の各号に掲げる書類を作成し、監事に提出して、その監査を受けなければならない。

- (1) 事業報告書
- (2) 収支計算書
- (3) 正味財産増減計算書

- (4) 財産目録
- (5) 貸借対照表

2 監事は、前項の書類を受理したときは、これを監査し、監査報告書を作成して理事会に提出しなければならない。

3 理事長は、第1項の書類及び前項の監査報告書について、理事会の議決を経て、これを農林水産大臣に提出しなければならない。

4 理事長は、第1項の書類及び第2項の監査報告書を事務所に備え付けておかなければならない。

第3章 役員等

(役員の数及び選任)

第17条 本研究所に、次の役員を置く。

- (1) 理事8人以上12人以内
 - (2) 監事1人又は2人
- 2 理事及び監事は、評議員会において選任する。
- 3 理事、監事及び評議員は、相互にこれを兼ねることができない。
- 4 理事のうちから理事長1人及び専務理事1人を互選する。
- 5 理事のうち、同一の親族（3親等以内の親族及びこの者と特別の関係にある者をいう。）又は特定企業の関係者の占める割合は、それぞれ理事現在数の3分の1を超えてはならない。
- 6 理事のうち、本研究所を所管する官庁の出身者が占める割合は、理事現在数の3分の1以下とする。
- 7 理事のうち、同一の業界の関係者が占める割合は、理事現在数の2分の1以下とする。

(役員職務)

第18条 理事長は、本研究所を代表し、その業務を総理する。

2 専務理事は、理事長を補佐し、事務局を統括して本研究所の業務を掌理し理事長に事故あるときはその職務を代理し、理事長が欠けたときは、その職務を行う。

3 理事は、理事会を組織し、業務を執行する。

4 監事は、民法第59条に規定する職務を行う。

(役員任期)

第19条 役員任期は、2年とする。ただし再任を妨げない。

2 補欠又は増員により就任した役員任期は、前任者又は現任者の残任期間とする。

(任期満了又は辞任の場合)

第20条 役員は、辞任又は任期満了後においても、後任者が就任するまでは、その職務を行わなければならない。

(解任)

第21条 役員は、本研究所の役員としてふさわしくない行為をしたとき、その他特別の事由があるときは、理事会及び評議員会の現在数の3分の2以上の多数による議決を経て、解任することができる。

2 前項の規定により役員を解任する場合は、その理事会及び評議員会の開催の10日前までに当該役員に対してその旨書面をもって通知し、かつ、理事会及び評議員会において弁明の機会を与えなければならない。

(役員報酬)

第22条 役員は無報酬とする。

2 前項の規定にかかわらず、常勤の役員には、理事会の議決を経て、報酬を支払うことができる。

(顧問及び参与)

第23条 本研究所に、顧問及び参与を置くことができる。

2 顧問及び参与は、理事会の承認を得て、学識経験者のうちから理事長が委嘱する。

3 顧問及び参与は、本研究所の業務並びに運営に関する重要事項について、理事長の諮問に応ずる。

第4章 理事会

(構成)

第24条 理事会は、理事をもって構成する。

2 監事は、必要に応じ理事会に出席し、意見を述べることができる。

(招集)

第25条 理事会は、理事長が招集する。

2 理事会は、定例理事会及び臨時理事会とする。

3 定例理事会は、毎年2回これを開催する。

4 臨時理事会は、次の場合に開催する。

(1) 理事長が必要と認めたとき。

(2) 理事2名以上、又は監事から会議の目的たる事項を示した書面により請求があったとき。

5 理事会の招集は、少なくともその開催の日の7日前までに、その会議の目的たる事項、日時及び場所を記載した書面をもって通知しなければならない。

(権能)

第26条 理事会は、この寄附行為に別に定めるもののほか、次の各号に掲げる事項を議決する。

(1) 事業計画及び事業報告並びに収支予算及び収支計算に関する事項

(2) 基本財産に関する事項

(3) 寄附行為の変更に関する事項

(4) 解散及び解散に伴う残余財産の処分に関する事項

(5) その他本研究所の業務及び運営に関する重要事項

2 前項第1号から第4号までの事項は、評議員会に付議した後これをするものとする。

(議長)

第27条 理事会の議長は、理事長がこれに当たる。

(定足数)

第28条 理事会は、理事現在数の過半数の出席がなければ、議事を開き議決することができない。

(議決)

第29条 理事会の議事は、この寄附行為に別に定めるもののほか、出席理事の過半数をもって決し、可否同数のときは、議長の決するところによる。この場合において、議長は、理事として議決に加わる権利を有しない。

(書面表決等)

第30条 やむを得ない事由により理事会に出席できない理事は、あらかじめ通知された事項について、書面をもって表決し、又は他の出席理事を代理人として表決権を行使することができる。この場合において、前2条の適用については、出席したものとみなす。

2 前項の書面は、理事会の開催の日の前日までに本研究所に到達しないときは、無効とする。

3 第1項の代理人は、代理権を証する書面を本研究所に提出しなければならない。

(議事録)

第31条 理事会の議事については、議事録を作成しなければならない。

2 議事録は、議長が作成し、少なくとも次の事項を記載し、議長及び出席理事のうちから、その理事会において選任された議事録署名人2人以上が署名押印しなければならない。

(1) 日時及び場所

(2) 理事の現在数及び出席理事（書面表決者及び表決委任者を含む。）の氏名

(3) 議案

(4) 議事の経過の概要及びその結果

(5) 議事録署名人の選任に関する事項

3 議事録は、事務所に備え付けておかなければならない。

第5章 評議員及び評議員会等

(評議員)

第32条 本研究所に、評議員8人以上12人以内を置く。

2 評議員は、学識経験者の中から理事会で選出し、理事長がこれを委嘱する。

3 第19条から第21条までの規定は、評議員について準用する。

(評議員会)

第33条 評議員会は、評議員をもって構成する。

2 評議員会は、この寄附行為に別に定めるもののほか、本研究所の運営に関し、理事長の付議する事項について審議し、又は理事長に対して意見を述べることができる。

3 評議員会は、理事長が招集する。

4 評議員会の議長は、その都度評議員会で互選する。

5 理事及び監事は、評議員会に出席して意見を述べることができる。

(規定の準用)

第34条 第25条第5項及び第28条から第31条までの規定は、評議員会について準用する。この場合において、これらの規定中「理事」とあるのは、「評議員」と読み替えるものとする。

(専門委員会)

第35条 理事長は、本研究所の業務の円滑な運営を図るため、必要と認めるときは理事会の議決を経て、専門委員会を置くことができる。

2 専門委員は、理事会の承認を得て、専門的な知識を有する者のうち理事長が委嘱する。

3 専門委員会の運営に関し必要な事項は、理事会において定める。

第6章 事務局等

(事務局)

第36条 本研究所の事務を処理するため、事務局を置く。

2 事務局に、職員を置く。

3 事務局及び職員に関する事項は、理事会の議決を経て、理事長が別に定める。

(書類及び帳簿の備付け)

第37条 理事長は、事務所に、この寄附行為で別に定めるもののほか、次に掲げる書類及び帳簿を備え付けておかなければならない。

- (1) 寄附行為
- (2) 理事、監事、評議員等及び職員の名簿及び略歴書
- (3) 許可、認可等及び登記に関する書類
- (4) 収入及び支出に関する帳簿及び証拠書類
- (5) その他必要な書類及び帳簿

第7章 賛助会員

(賛助会員)

第38条 本研究所の目的に賛同するものは、本研究所の賛助会員となることができる。

2 賛助会員は、理事会で別に定めるところに従い、賛助会費を納めるものとする。

3 賛助会員に関する規程は、理事会の議決を経て、理事長が別に定める。

第8章 寄附行為の変更及び解散

(寄附行為の変更)

第39条 この寄附行為は、理事会において、理事現在数の3分の2以上の多数による議決を経、かつ、農林水産大臣の認可を受けなければ変更することができない。

(解散)

第40条 本研究所は、民法第68条第1項第2号から第4号までの規定による場合のほか、理事会において、理事現在数の3分の2以上の多数による議決を経、かつ、農林水産大臣の認可を受けなければ解散することができない。

(残余財産の処分)

第41条 本研究所が解散した場合において、その債務を弁済してなお残余財産があるときは、理事会において、理事現在数の3分の2以上の多数による議決を経、かつ、農林水産大臣の許可を受けて、本研究所と類似の目的を有する他の公益法人に寄附するものとする。

第9章 雑則

(細則)

第42条 この寄附行為に定めるもののほか、本研究所の事業の運営上必要な細則は、理事会の議決を経て、理事長が別に定める。

附 則

1 この寄附行為は、本研究所の設立許可の日（昭和62年10月30日）から施行する。

2 本研究所の設立初年度の事業計画及び収支予算は、第15条の規定にかかわらず、設立発起人会において定めるところによる。

3 本研究所の設立当初の事業年度は、第13条の規定にかかわらず、設立許可の日から昭和63年9月30日までとする。

4 本研究所の設立当初の役員は、第17条第2項及び第4項の規定にかかわらず、別紙のとおりとし、その任期は、第19条第1項の規定にかかわらず設立後、最初に開催される評議員会において選任された役員が就任するまでとする。

8

5 本研究所の設立当初の評議員は、第32条第2項の規定にかかわらず、別紙のとおりとし、その任期は、第32条第3項で準用する第19条第1項の規定にかかわらず、設立後、最初に開催される理事会において選任された評議員が就任するまでとする。

附 則

この寄附行為の変更は、農林水産大臣の認可の日（昭和63年11月24日）から施行する。

附 則

この寄附行為の変更は、農林水産大臣の認可の日（平成元年3月31日）から施行する。

附 則

この寄附行為の変更は、農林水産大臣の認可の日（平成8年11月29日）から施行する。

附 則

この寄附行為の変更は、農林水産大臣の認可の日（平成11年10月20日）から施行する。—

Annex 100: Government of Japan, *Cetacean Research Capture Project Implementation Guidelines*, Directive issued by order of the Administrative Vice-Minister for Agriculture, Forestry and Fisheries, 62 Sea Fisheries No. 3775, (17 December 1987)

[1] **Cetacean Research Capture Project Implementation Guidelines**

62. Sea Fisheries No. 3775

17 December 1987

Directive issued by order of the
Administrative Vice-Minister for
Agriculture, Forestry and Fisheries

1. Aim

In view of the International Whaling Commission (IWC) giving its consideration to a review of the total prohibition of commercial whaling (the moratorium) by the end of 1990, this project seeks to contribute to the implementation of the comprehensive evaluation of cetacean resources through the promotion of a comprehensive evaluation based on the collection of the required scientific survey data through the sample capture of cetaceans and natural resources scientific theory.

2. Project implementing organisation

The organisation responsible for the implementation of this project shall be the Institute of Cetacean Research (hereinafter referred to as “the ICR”).

3. Project content and implementation methods

The ICR shall conduct biological surveys, marine ecology surveys and other survey activities through sampling capture in the Antarctic Ocean and other sea areas to gather the biological scientific data on cetacean resources needed to inform the review of the moratorium, and the Director-General of the Fisheries Agency shall, separately, provide instructions on specific survey content and implementation methods.

4. Direction and supervision

The Director-General of the Fisheries Agency shall provide the necessary direction and supervision for implementation of the Cetacean Research Capture Project.

5. Reporting

The ICR shall provide the Director-General of the Fisheries Agency with reports on the implementation of the Cetacean Research Capture Project.

6. Government subsidies

The Government shall provide subsidies to meet part of the expenses required to implement this project, as prescribed separately and within budgetary limits.

7. Payment of profits

When the Director-General of the Fisheries Agency recognises on the basis of a report provided pursuant to Item 5 that a profit has been generated by the implementation of this project, the Director-General of the Fisheries Agency shall, pursuant to separate guidelines, require that the project's primary implementing organisation return that profit to the Government.

However, such payment shall not exceed the amount of the subsidy provided for the project in question.

[2] 8. Other matters

Matters concerning implementation of this project other than those stipulated in these Guidelines shall be subject to guidelines made separately by the Director-General of the Fisheries Agency.



鯨類調査捕獲事業実施要領

62水海第3775号
昭和62年12月17日
農林水産事務次官依命通達

第1 目的

本事業は、国際捕鯨委員会（IWC）が1990年までに商業捕鯨全面禁止（モラトリアム）の見直しについて検討を行うことに鑑み、このための鯨資源に関する包括的評価の実施に資するため、鯨類のサンプリング捕獲等により必要とされる科学的調査データの収集及び科学的資源論に立脚した包括的評価の促進を図ることを目的とする。

第2 事業の実施主体

この事業の実施主体は、財団法人日本鯨類研究所（以下「鯨類研究所」という。）とする。

第3 事業の内容及び実施方法

鯨類研究所は、モラトリアム見直しに資するため必要とされる鯨資源の生物学的科学データを収集するため、南氷洋等において、サンプリング捕獲による生物学的調査及び海洋・生態環境調査等を行うものとし、具体的な調査内容及び実施方法については、水産庁長官が別に定めるところによるものとする。

第4 指導及び監督

水産庁長官は、鯨類調査捕獲事業の実施につき、必要な指導及び監督を行うものとする。

第5 報告書の提出

鯨類研究所は、鯨類調査捕獲事業の実施につき、水産庁長官に報告書を提出するものとする。

第6 国の助成

国は、この事業の実施に必要な経費の一部について、予算の範囲内において別に定めるところにより補助するものとする。

第7 収益納付

水産庁長官は、第5の報告に基づき、この事業の実施により収益が生じたと認めるときは、水産庁長官が別に定めるところにより、当該事業実施主体に対して、国に納付させるものとする。

ただし、当該納付金は当該事業に係る補助金額を限度とする。



第8 その他

この事業の実施については、この要領の定めるもののほか、水産庁長官が別に定めるところによるものとする。

Annex 101: Government of Japan, *Re: Implementation of the Cetacean Research Capture Project*, Directive of the Director-General of the Japan Fisheries Agency, 1987 Sea Fisheries No. 3777, (17 December 1987 as updated to 28 March 2007)

[1] **RE: Implementation of the Cetacean Research Capture Project**

1987 Sea Fisheries No. 3777
17 December 1987
Directive
Director-General
Japan Fisheries Agency

Amendment: 1988 JFA SEA FISHERIES No. 3734
6 December 1988
Amendment: 1989 JFA SEA FISHERIES No. 3019
24 October 1989
Amendment: 1990 JFA SEA FISHERIES No. 2967
1 November 1990
Amendment: 1994 JFA SEA FISHERIES No. 1574
23 June 1994
Amendment: 1995 JFA SEA FISHERIES No. 1206
17 May 1995
Amendment: 1995 JFA SEA FISHERIES No. 1730
25 July 1995
Amendment: 1995 JFA SEA FISHERIES No. 2262
26 October 1995
Amendment: 1996 JFA SEA FISHERIES No. 1122
20 May 1996
Amendment: 1997 JFA SEA FISHERIES No. 921
16 April 1997
Amendment: 2000 JFA ADMINISTRATION No. 1873
26 July 2000
Amendment: 2002 JFA ADMINISTRATION No. 994
25 June 2002
Amendment: 2004 JFA ADMINISTRATION No. 1288
23 July 2004
Amendment: 2005 JFA ADMINISTRATION No. 1650
12 August 2005
Amendment: 2005 JFA ADMINISTRATION No. 3876
23 March 2006
Amendment: 2006 JFA ADMINISTRATION No. 3985
28 March 2007

I. Project content and implementation methods

The project content and implementation methods pursuant to Item 3 of the Cetacean Research Capture Project Implementation Guidelines (1987 JFA Sea Fisheries No. 3775 of 17 December 1987; hereinafter referred to as “the Guidelines”) shall be as follows.

(1) The collection of the following data necessary for, in the Antarctic Ocean, the monitoring of the ecosystem with a focus on minke whales, fin whales, humpback whales; and, in the northwest Pacific Ocean, the surveying of the prey of minke whales, Bryde’s whales, sei whales and sperm whales as well as the determination of different whale stocks.

- (a) Density of whale populations compared across different sea areas, seasons and survey years.
 - (b) Biological characteristics, blubber thickness, weight of stomach contents, pollution build-up compared across different sea areas, seasons and survey years.
 - (c) Biological characteristics necessary to distinguish different whale stocks.
 - [2] (d) Measurements of prey volumes consumed and inferred consumption preferences (northwest Pacific Ocean).
 - (e) Values of other biological characteristics.
- (2) The data obtained in the above surveys shall contribute to the drafting of materials to be submitted to the International Whaling Commission (IWC) following initial analysis and examination.

(3) Vessels to be used

- | | |
|--------------------------|---|
| Antarctic Ocean: | 1 research base vessel 3 specimen sampling vessels 2 dedicated sighting survey vessels 1 load ship |
| Northwest Pacific Ocean: | 1 research base vessel 3 specimen sampling vessels 1 whale prey inspection vessel |

Note: The whale prey inspection vessel will be used when approved as necessary by the Director-General, Japan Fisheries Agency.

(4) Survey periods

- | | |
|--------------------------|--|
| Antarctic Ocean: | From 1 April to 30 June of the same year, and from 1 November to 31 March of the following year. |
| Northwest Pacific Ocean: | From 1 April to 30 September of the same year. |

(5) Maximum capture quotas

- | | |
|--------------------------|--|
| Antarctic Ocean: | Antarctic minke whales: 850 (10% allowance) Fin whales: 50 Humpback whales: 50 |
| Northwest Pacific Ocean: | Minke whales: 100 Bryde's whales: 50 Sei whales: 100 Sperm whales: 10 |

II. Application for approval of sale of whale meat

- (1) In the event that the organisation responsible for the project implementation shall conduct whale meat sales it shall submit in advance an application for permission to the Director-General, Japan Fisheries Agency in accordance with Form 1 (appended separately).
- (2) The sales period duration prescribed in the application stated in Paragraph 1 shall be up to one year from the time of commencement of sale.
- (3) In the event that sales are not terminated within the period of sale as stated in Paragraph 2 (in the event that there remains unsold whale meat), an Application for Approval of Sales Adjustment shall be submitted to the Director-General, Japan Fisheries Agency, in accordance with Form 2 (appended separately), and the sales period shall be up to one year from the time of commencement of sale following the adjustment.

III. Submission of whale meat sales reports

[3] The organisation responsible for implementing the program shall submit a report stating the details of the sale of whale meat from this project in accordance with Form 3 (appended separately) to the Director-General, Japan Fisheries Agency, soon after the end of organisation's financial accounting year.

IV. Payment of profits

Payments of profits to the Government pursuant to Item 7 of the Guidelines shall be calculated according to the following formula.

$$E_i = 1/2 \{(A_i - B_i) - (C_i - D)\} \times D/C_i$$

Where:

A_i: Proceeds of sales from this research (excluding the amount equivalent to consumption tax)

B_i: Sales expenses (excluding the amount equivalent consumption tax)

C_i: Expenses incurred by subsidy project

D: Government subsidies provided to the project

E_i: Profit amount to be paid

鯨類調査捕獲事業の実施について

| | | |
|------|-------------|-------|
| | 62水海第 | 3777号 |
| | 昭和62年12月17日 | |
| | 水産庁長官通達 | |
| (改正) | 63水海第 | 3734号 |
| | 昭和63年12月6日 | |
| (改正) | 元水海第 | 3019号 |
| | 平成元年10月24日 | |
| (改正) | 2水海第 | 2967号 |
| | 平成2年11月1日 | |
| (改正) | 6水海第 | 1574号 |
| | 平成6年6月23日 | |
| (改正) | 7水海第 | 1206号 |
| | 平成7年5月17日 | |
| (改正) | 7水海第 | 1730号 |
| | 平成7年7月25日 | |
| (改正) | 7水海第 | 2262号 |
| | 平成7年10月26日 | |
| (改正) | 8水海第 | 1122号 |
| | 平成8年5月20日 | |
| (改正) | 9水海第 | 921号 |
| | 平成9年4月16日 | |
| (改正) | 12水管第 | 1873号 |
| | 平成12年7月26日 | |
| (改正) | 14水管第 | 994号 |
| | 平成14年6月25日 | |
| (改正) | 16水管第 | 1288号 |
| | 平成16年7月23日 | |
| (改正) | 17水管第 | 1650号 |
| | 平成17年8月12日 | |
| (改正) | 17水管第 | 3876号 |
| | 平成18年3月23日 | |
| (改正) | 18水管第 | 3985号 |
| | 平成19年3月28日 | |

第 1 事業の内容及び実施方法

鯨類調査捕獲事業実施要領（昭和62年12月17日付け62水海第3775号農林水産事務次官依命通達。以下「要領」という。）第3に基づく調査内容及び実施方法は、次のとおりとする。

- 1 南極海のクロミンククジラ、ナガスクジラ及びゼトウクジラ等を中心とする南極海生態系のモニタリング並びに北西太平洋のミンククジラ、ニタリクジラ、イワシクジラ及びマッコウクジラの摂餌生態調査、系統群解明等に必要な以下の情報等を収集する。
 - ① 鯨群密度の海域、季節及び調査年間比較
 - ② 生物学的特性値、脂肪厚、胃内容物重量及び汚染の蓄積度合いなどの海域、季節及び調査年間比較

- ③ 系統群判別に必要な生物学的特性値
- ④ 摂餌量及び嗜好性の推定（北西太平洋）
- ⑤ その他の生物学的特性値

2 上記の調査で得られたデータについて、初期的な分析、検討を行い、国際捕鯨委員会（IWC）等に提出するための資料の作成に資する。

3 使用する船舶

| | | | |
|-------|-------|---|---|
| 南極海 | 調査母船 | 1 | 隻 |
| | 標本採集船 | 3 | 隻 |
| | 目視専門船 | 2 | 隻 |
| | 中積船 | 1 | 隻 |
| 北西太平洋 | 調査母船 | 1 | 隻 |
| | 標本採集船 | 3 | 隻 |
| | 餌調査船 | 1 | 隻 |

ただし、餌調査船については水産庁長官が必要と認めた場合に限る。

4 調査期間

| | |
|-------|------------------------------------|
| 南極海 | 4月1日から同年6月30日及び11月1日から翌年3月31日までの期間 |
| 北西太平洋 | 4月1日から同年9月30日までの期間 |

5 捕獲上限頭数

| | | |
|-------|----------|-----------------|
| 南極海 | クロミンククジラ | 850頭（アローランス10%） |
| | ナガスクジラ | 50頭 |
| | ザトウクジラ | 50頭 |
| 北西太平洋 | ミンククジラ | 100頭 |
| | ニクリクジラ | 50頭 |
| | イワシクジラ | 100頭 |
| | マッコウクジラ | 10頭 |

第2 鯨肉等の販売承認申請について

- 1 事業実施主体は鯨肉等の販売を行う場合には、別記様式第1号によりあらかじめ水産庁長官に承認申請書を提出するものとする。
- 2 第1項の申請書に定める販売期間は、販売開始から1年以内とする。
- 3 2項で定めた販売期間内に販売が終了しなかった場合（鯨肉等に売れ残りが生じた場合）、別記様式第2号により、売れ残った鯨肉等について販売変更承認申請を水産庁長官に提出することとし、変更後の販売期間は販売開始から1年以内とする。

第3 鯨肉等の売上状況報告書の提出

事業実施主体は、別記様式第○号により当該事業実施に伴う鯨肉等の売上状況を記載した報告書を、事業実施主体の毎事業年度終了後、速やかに水産庁長官に提出するものとする。

第 4 収益納付

要領第7に基づく国に対する納付金は、次の算式により得られた金額とする。

$$E_i = \frac{1}{2} \{ (A_i - B_i) - (C_i - D) \} \times \frac{D}{C_i}$$

A_i : 当該調査により得られた売上高（消費税相当額を除く。）

B_i : 販売経費（消費税相当額を除く。）

C_i : 補助事業に要した経費

D : 本事業に係る国庫補助金

E_i : 納付すべき収益額

Annex 102: Government of Japan, 'Report to the Working Group on Socio-Economic Implications of a Zero Catch Limit' (1989) IWC/41/21, 41 [excerpt]

IWC/41/21

REPORT TO THE WORKING GROUP ON SOCIO-ECONOMIC IMPLICATIONS OF A ZERO CATCH LIMIT

The Government of Japan
1989

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EXECUTIVE SUMMARY

Japanese pelagic and large-type coastal whaling suspended operations in 1987 and the last of the commercial whaling operations closed down at the end of 1987.

Small-type whaling continued to operate as a stable fishery until the 1988 season, when an IWC-imposed zero-

catch limit for minke whale reduced the production of this coastal fishery by almost half.

The result of these restrictions on whaling has caused a number of direct and indirect impacts of a social, economic, cultural, and health-related nature which adversely affects whalers and their families, whale-related small businesses and other institutions in the whaling towns.

At the dissolution of the last remaining pelagic and large-type coastal whaling companies in 1987, a total of 789 full-time and 42 part-time employees lost their jobs.

Seventy-three percent of the 507 former pelagic whalers have found re-employment in a new company that provides crews and vessels for fishery inspection and research purposes. However, these new positions provide salaries about 15 percent less than formerly paid to whalers, and the work is seasonal and often short-term.

Those former commercial whalers who have not found employment are entitled to up to 12 months government unemployment benefits, as well as receiving severance pay from the companies at the time their employment was terminated. The 42 part-time employees received no company or government benefits.

After one year following termination of their employment only 28 percent of former large-type coastal whalers had found permanent jobs; a further 18 percent had obtained temporary or part-time employment. All former whalers with jobs now receive less wages than they received as whalers, and in most cases, none of the additional company benefits they received as whalers.

Small-type coastal whaling employed 75 full-time and 38 part-time seasonal workers in 1987, the last year of this stable fishery, before the zero-catch limit was imposed on the minke whale quota, at which time small-type whalers lost their jobs in the summer 1988.

Some small-type whaling operations rehired some of their workers for the late summer/fall Baird's beaked and pilot whale fishery in 1988; however the 50 percent of workers rehired received salaries reduced by as much as 50 percent. In addition, the supplemental pay and bonuses, including shares of whale meat, were considerably reduced in 1988 for those whalers otherwise fortunate enough to be rehired.

Small-type coastal whalers in most cases are ineligible for government unemployment benefits, and due to the small-business nature of the small-type whaling operations, did not receive large dismissal allowances.

Those whalers not re-employed in the fashion

TABLES

Table 1: Employment data, Nippon Kyôdô Hogeï, 1976-1987

| | Number of Employees: | | Retired: | | Left employ: | | Annual payroll (¥Millions) |
|-------|----------------------|------|----------|------|--------------|------|-------------------------------|
| | Vessels | Land | Vessels | Land | Vessels | Land | |
| 1976 | 1466 | 97 | — | | — | | 1,174 |
| 1977 | 1456 | 97 | 2 | | 10 | | 2,074 |
| 1978 | 1300 | 95 | 3 | | 156 | 2 | 4,998 |
| 1979 | 679 | 87 | 1 | | 621 | 11 | 3,756 |
| 1980 | 668 | 88 | 3 | | 11 | 3 | 3,594 |
| 1981 | 665 | 83 | 2 | 3 | 5 | 6 | 3,742 |
| 1982 | 664 | 83 | 5 | 2 | 9 | 5 | 4,200 |
| 1983 | 651 | 81 | 5 | 2 | 13 | 2 | 4,081 |
| 1984 | 636 | 75 | 10 | 2 | 15 | 6 | 4,236 |
| 1985 | 591 | 65 | 29 | 2 | 45 | 10 | 3,966 |
| 1986 | 541 | 55 | 26 | 2 | 50 | 10 | 3,679 |
| 1987* | 464 | 43 | 68 | 9 | 77 | 12 | 3,989 |

*The company closed down in November 1987.

Source: Nippon Kyôdô Hogeï company records

Table 2: Economic situation of Nippon Hogeï (large-type whaling company) 1976-87

| Year | Catcher Boats | | Land Stations | Wages & Bonuses (¥Millions) | Capital Losses (¥Millions) | Losses Due to: |
|------|---------------|----------|---------------|--------------------------------|-------------------------------|----------------------------------|
| | No. | Tonnage | | | | |
| 1976 | 2 | 1,035.60 | 2 | 408 | | |
| 1977 | 3 | 1,466.51 | 2 | 646 | | |
| 1978 | 3 | 1,466.51 | 2 | 550 | | |
| 1979 | 3 | 1,466.51 | 2 | 714 | | |
| 1980 | 3 | 1,466.51 | 2 | 856 | | |
| 1981 | 3 | 1,466.51 | 3 | 841 | 6 | Wakkanai facility closed |
| 1982 | 3 | 1,825.40 | 3 | 692 | 8 | Scrapped 399.44 ton catcher boat |
| 1983 | 2 | 1,189.24 | 3 | 676 | 11 | Scrapped 636.26 ton catcher boat |
| 1984 | 2 | 1,189.24 | 3 | 603 | | |
| 1985 | 2 | 1,189.24 | 3 | 681 | | |
| 1986 | 2 | 1,189.24 | 3 | 574 | | |
| 1987 | 2 | 1,189.24 | 3 | 591 | 113 | * |

*Losses due to closing land facilities at Ayukawa (¥39 Million), Ogasawara (¥42 Million) and Taiji (¥9 Million) and scrapping two catcher boats (431 and 758 tons; ¥23 Million)

Source: Nihon Hogeï company records

A CRITICAL EVALUATION OF THE RELATIONSHIP BETWEEN CASH ECONOMIES AND SUBSISTENCE ACTIVITIES

The Government of Japan
1992

ABSTRACT

Controversy surrounding the term 'subsistence' results from its widespread misuse in everyday speech as well as in many jurisdictional situations where it is applied in the absence of an appropriate definition. Despite these misunderstandings, the term subsistence is usually well defined and unambiguously used in the (specialist) scientific literature.

The purpose of this paper is to provide a full explanation of how the term subsistence is currently defined and used in recent scientific studies, and to make clear the relationship that exists between subsistence and those economic systems with which it is integrated in varying degree.

Much of the critical research on the nature of subsistence has been carried out in Arctic hunting and fishing societies, most of which are heavily dependent upon harvesting and consuming marine living resources. In view of this, particular attention will be given to those recent research understandings of subsistence that are likely to assist in resolving the continuing definitional problems encountered during IWC discussion.

INTRODUCTION

The International Whaling Commission (IWC) recognizes three forms of whaling: those conducted for either commercial, aboriginal-subsistence, or research purposes. The IWC is empowered by contracting parties to set harvest quotas for stocks of certain species of whale that are subject to either commercial or aboriginal-subsistence whaling interest. At the present time a zero quota (i.e. a whaling moratorium) applies to all stocks of baleen and sperm whales subject to commercial exploitation.

Aboriginal-subsistence whale fisheries are not subject to this whaling moratorium. This exemption even applies to so-called 'protection stocks' which, under IWC management rules, are considered so seriously depleted as to require full protection. In such cases, quotas are set at low levels in order to partially satisfy the subsistence need of the whale-dependent communities and at the same time allow recovery of the depleted whale stocks to occur.

However, at the present time IWC has a problem in providing a similar selective exemption in order to accommodate the subsistence needs of whale-dependent communities when the community members are non-aboriginal people.

This paper looks at some of the reasons underlying this present difficulty. For example, it appears that some

participating in IWC discussions fail to recognize that non-aboriginal people also practice subsistence. There is a failure to recognize that 'subsistence' and 'commercial' are false opposites and therefore cannot alone provide an inappropriate basis for regulating whale fisheries.

Over the past several decades definitions of 'aboriginal-subsistence' (at the IWC) and 'subsistence' (in North American legal and regulatory practice) have changed as changing circumstances and scientific understanding improved. This report is offered as a contribution to better decision-making in respect to subsistence whale fisheries, whether conducted by aboriginal or non-aboriginal people.

SEMANTIC AND CLASSIFICATORY MUDDLES

The term 'subsistence' in everyday speech commonly implies bare existence or a livelihood that only provides in minimal degree life's necessities. This is only one of several definitions of the term 'subsistence' provided in dictionaries of the English language. (See Note 1.)

In the context of the IWC, 'subsistence' is generally linked to an equally ambiguous term 'aboriginal'. Ambiguity exists, not only because the term 'aboriginal' is not defined, but because it is considered as interchangeable with terms such as 'indigenous' and 'native' which in fact have quite different meanings that vary according to context.

It seems likely that making a critical distinction between the terms aboriginal, indigene and native in whaling matters could indeed be useful, for in many fishery and wildlife regimes preferred access is often provided to users who demonstrate long-term dependence upon and priority use of local resources.

It appears that for many it is difficult to accept the idea that non-aboriginal people engage in subsistence activities. Though in IWC documents the terms 'native' and 'indigenous' are used interchangeably with 'aboriginal', only *some* natives (e.g. Inuit/Yuit, Greenlanders and Bequians) are permitted by IWC to practice subsistence, whereas some *other* natives (of Iceland, Japan, Korea, Norway or Spain) cannot do so.

The main reason for this distinction appears to relate to the belief that aboriginal and non-aboriginal people can be categorically distinguished by reference to a simple classification system involving such opposed characteristics as:

“primitive:advanced (in respect to technology)
simple:complex (social and political arrangements)

traditional:non-traditional ('culture'; see Note 2)
 non-commercial:commercial (economic transactions)
 non-monetized:monetized (economic exchanges)
 local:non-local (resource acquisition)

From this it seems that aboriginal whaling, at least in idealized form, is characteristically 'primitive', 'simple', 'traditional', 'non-commercial', 'non-monetized' and 'local' in nature. In contrast to this ideal type is 'commercial whaling', also treated as a single idealized, and equally unreal, type.

However true such characterizations of aboriginal whaling might have been in the past, in the modern world they no longer apply.

CHANGING NOTIONS ABOUT ABORIGINAL SUBSISTENCE WHALING

In 1931 the International Convention for the Regulation of Whaling (ICRW) provided an exemption for whaling carried out by aboriginal people providing they only used "canoes, pirogues or other exclusively native craft propelled by oars or sails" and did not use firearms in whaling.

The 1946 revisions to the ICRW removed the earlier restriction placed on the use of modern technology, and in 1964 the requirement that only aboriginal people could engage in aboriginal whaling was also removed.

At the present time it appears that the principal regulatory requirement to be met in aboriginal whaling is that the product is to be used locally by aboriginal people. The term 'aboriginal' is not defined, though in definitions of 'aboriginal subsistence whaling' and 'local aboriginal consumption' (see below) the term is used interchangeably with the terms 'indigenous' and 'native'. According to a 1981 IWC report:

"Aboriginal subsistence whaling means whaling, for purposes of aboriginal consumption carried out by or on behalf of aboriginal, indigenous or native people who share strong community, familial, social and cultural ties related to a continuing traditional dependence on whaling and on the use of whales.

"Local aboriginal consumption means the traditional uses of whale products by local aboriginal, indigenous or native communities in meeting their nutritional, subsistence or cultural requirements. The term includes trade in items which are by-products of subsistence catches."

In summary, it is evident that within the IWC a progressive broadening of the criteria under which aboriginal subsistence whaling is allowed has occurred. First, the requirement that only traditional, non-mechanized equipment could be used was changed, then processing of the product outside of the community was permitted, then aboriginal whaling could be carried out by non-aboriginal people, and finally trade in by-products of the hunt became permissible. These changes are explicitly stated in the written rules (the Schedule) of the International Whaling Commission.

In the past two or three years there have been two implicit 'rule' changes in respect to aboriginal subsistence whaling, that recognize the necessity of commercial sale and non-local consumption of whale meat in aboriginal-subsistence whaling operations in certain aboriginal whaling communities (see Dahl 1989a; Petersen 1989; Josefson 1990; Caulfield 1991a).

THE MEANING OF SUBSISTENCE

To the non-specialist the term subsistence relates in important ways to an individual's economic and material circumstances. However, studies by specialists consistently stress that the importance of subsistence activities only in part relates to economic ends. For example, the critical importance of fish and wildlife harvesting to any group can be assessed "by the extent to which that activity is central to reproducing its social relations of production, for example, through the socialization of children, mutual aid and sharing, and the reinforcement of stewardship and use arrangements with respect to land and resources" (Usher 1981: 61).

In support of the notion that subsistence involves issues outside of the economic sphere, it is frequently noted that subsistence harvesting often persists when it is very expensive in monetary terms and in some cases, questionably cost-effective (Veltre and Veltre 1983: 185-193; Dahl 1989b: 35). For example, a decade ago, the estimated capital cost of an Alaskan bowhead hunting crew's equipment was estimated at more than \$10,000 (Worl 1980: 312-313; IWC 1982: 39), and annual operating costs to the captain were about \$6,000 (Kruse 1986: 149).

Similar high costs have been noted for Canadian (Wenzel 1991: Table 6.13) and Greenlandic hunters (Caulfield 1991a: Table 9; 1991b: 18). In terms of realizing strictly economic goals, these costs certainly appear large when the probability of the crew successfully landing a whale may be quite small.

To explain this apparent economic irrationality requires that the true nature of the term 'subsistence' be understood. In its most general yet technically correct formulation, subsistence consists of those cultural values that socially integrate the economic relations of particular groups of people into their daily lives and environment (Wenzel 1991: 57). Thus, for subsistence to continue to operate depends primarily upon secure social relations, and only secondarily upon individual skills and special equipment.

Subsistence then "is a set of culturally established responsibilities, rights and obligations that affect every man, woman and child each day" (*ibid.*: 60). Subsistence activities are those actions that contribute to the continued functioning of various essentially non-material aspects of the everyday life of individuals and a community.

A subsistence society is understood to be a group of people whose production, use and consumption of local resources occurs in ways that are consistent with traditional patterns maintained by kinship-based social structures. Such societies possess detailed traditional knowledge of

their environment, and particularly those resources important in their food-producing and ceremonial activities. Traditional knowledge, required for harvesting and processing subsistence resources, is transmitted from generation to generation principally by oral means and requires an extended period of learning through experience. This knowledge and experience are most often obtained by the individual maintaining close association with an appropriate member of the local community, who is often related by kinship or by some other socially meaningful arrangement.

Subsistence activities, with their emphasis upon local production and consumption, enhance social relationships within a local community. However, they may also serve social and cultural ends among members of a larger, non-local, community of people who are linked through shared language, history, or culture (see Note 2).

Given the importance accorded to kinship in tradition-based societies, the ideal production unit continues to be based upon skilled individuals at a household or family level of organization. In such societies, large corporate groups and a highly capitalized technological infrastructure (the basis of the contrasting capitalist mode of production) are not appropriate means of food production (Usher 1981: 58). Indeed, in subsistence societies it is the *relations among people* that wildlife harvesting generates and sustains, and not the relations between people and resources, that are of paramount importance (*ibid.*: 61).

The importance of harvesting local food resources to the health and reproduction of subsistence societies resides, therefore, in the social values embedded in the various components of the subsistence complex. It is the result of the seasonal repetition and transfer of appropriate knowledge and behaviour to succeeding generations that important aspects, indeed core values, of the culture of the group are reproduced over time, and the cultural identity of the individual and society thereby assured:

“It is through capturing, processing, distributing, celebration, and consuming naturally occurring fish and animal populations that subsistence societies define the nutritional, physical health, economic, social, cultural, and religious components of their way of life.”

(Langdon 1984: 3)

TOWARDS A DEFINITION OF SUBSISTENCE

In an extensive review of the substantial literature detailing subsistence activities occurring throughout Alaska, these well-defined food-extractive systems are characterized as possessing:

- 1) a **mixed economy**, with mutually supportive market and subsistence sectors;
- 2) a **domestic mode of production**, where production capital, land and labour are controlled by extended kin-based production units;
- 3) a stable and complex **seasonal round of production** activities within the community, tied

to the seasonal arrival, and variable yields, of fish and game resources;

4) substantial non-commercial **networks for sharing**, distributing and exchange of food and materials;

5) **traditional systems of land/water use and occupancy**;

6) complex **inter-generation systems of belief**, knowledge and values associated with resource uses, passed on between generations as the cultural and oral traditions and customs of the society.

(After Wolfe 1983: 272)

In respect to the nature of these ‘mixed economies’ referred to above, the interrelatedness of subsistence and market economies is immediately apparent if one considers the extent to which dependence upon imported and purchased goods needed to engage in subsistence activities has increased during, at least, this present century. For many Alaskan natives “participation in the market sector of the economy through the commercial sale of fish and furs and through remunerative employment enables the hunter to participate in subsistence activities” (Wolfe 1986: 109).

In view of the high degree of dependence that subsistence harvesters have upon access to cash, it has frequently been observed in Alaskan aboriginal societies, that increasing cash incomes correlates with larger, not smaller, quantities of subsistence-derived food in the householders’ diet (Wolfe 1986: 113; Kruse 1991: 320; Langdon 1991a: 283).

ADMINISTRATIVE AND LEGISLATIVE DEFINITIONS OF SUBSISTENCE

In 1978 the Alaska State Legislature passed a subsistence law that recognized “the needs, customs and traditions of Alaskan residents” and granted subsistence use priority over other (commercial or recreational/sport) use of renewable resources.

In 1980 the U.S. Congress passed a federal law, The Alaska National Interest Lands Conservation Act (ANILCA), granting rural residents’ priority over urban users of subsistence resources on federal lands.

However, a series of court cases in Alaska since 1985 (see Caldwell 1991) resulted in rural residents’ priority use of subsistence resources being challenged, and subsequently ruled unconstitutional. As a result of these court decisions, there is considerable uncertainty at the present time over who in Alaska may or may not engage in subsistence, though current proposals coming before the State Legislature early in 1992, will likely reaffirm the priority of subsistence use over other uses of the State’s fish and wildlife resources (Campbell 1991: 10).

In Alaska, the State Boards of Fish and Game do not place trade or economic gain outside of subsistence use:

“... use patterns in which the hunting or fishing effort or the products of the effort are distributed or shared among others within a definable community of persons, including through

customary trade, barter, sharing and gift-giving... [such] a community may include specific villages or towns with a historical preponderance of subsistence users, and encompasses individuals, families, or groups who in fact meet the criteria described in this subsection;

"... use patterns which include reliance for subsistence purposes upon a wide diversity of the fish and game resources of an area, and in which that pattern of subsistence uses provides substantial economic, cultural, social, and nutritional elements of the subsistence users life."

(Boards of Fish and Game, December 1981, quoted in Langdon 1984: 26-27)

BROADENING THE BASIS OF SUBSISTENCE IN ALASKA

It would appear that the proposed new subsistence law in Alaska, in addition to reaffirming that subsistence use has priority over other uses of renewable resources, proposes moving away from the notion that subsistence is related to long-term 'customary and traditional' use of resources. In its place the focus is placed upon a particular way of life.

The proposed legislation will allow any resident having at least one year of residence in Alaska to sign a declaration stating that subsistence is and has been a principal characteristic of his or her way of life for three of the past five years.

In the current Alaskan proposals, subsistence is defined as the taking and use of wild fish and game as part of a way of life. Among six stated criteria to be satisfied for resource use to be considered subsistence use, one is that the use "provides substantial economic, cultural, social or nutritional elements of the subsistence user's life" (Campbell 1991: 10).

Clearly, this proposed new legal order is designed to allow all those having lived in Alaska for at least one year the choice of engaging in subsistence activities, irrespective of their cultural background, economic status or place of residence in the state. Consequently it will allow a person engaging in commercial or recreational use to qualify as a subsistence user of wildlife and fish resources. Subsistence is confirmed as having important economic and food producing value to the user at the present time, irrespective of its importance, or lack of importance, to the earlier circumstances of the current user and his or her family. According to the Governor of Alaska:

"Subsistence is not something that can be defined only by where you live, or how much money you make, or what race you are, but rather by how you live. In discussions throughout the state, there has been general agreement that subsistence is a way of life."

(Hickel 1991).

THE USE OF MONETIZED TRANSACTIONS IN SUBSISTENCE

As these United States regulations make explicit, monetary transactions are understood to be a necessary part of everyday subsistence harvesting. Indeed, cash is only one medium of exchange among many, thus "the introduction of cash into this system, either from wages or the community store, does not necessarily indicate that the exchange is commercial rather than subsistence" (Lonner 1986: 21).

In one current court case the inland people of Tanana claim that their commercial sale of salmon roe harvested incidental to subsistence fishing constitutes customary trade, as allowed in the definition of subsistence (Caldwell 1991: 8). In other cases before the courts, the coastal Tlingit and Haida of southeast Alaska argue that their commercial sale of herring roe on kelp is culturally consistent with their subsistence use of this resource since at least the time of contact (Langdon 1991b).

In Greenland, as in Canada and Alaska, those occupationally classed as hunters usually constitute the low-income groups in society, such that financial compensation is required if a continued supply of the valued products they alone can produce is to reach others in society. The most suitable compensation occurs by way of money-based trading in the town markets or through cash purchases from the hunters by wholesale buyers (see Table 1).

It is by these rational means that the important distribution channels for traditional, indeed staple, foods are maintained in even the most rural and traditional parts of contemporary Greenlandic society (IWC 1989). Indeed, in respect to Greenland aboriginal marine hunting and fishing activities, it has been concluded that the differentiation between commercial and non-commercial activity is quite meaningless (Dahl 1989b: 40).

The Alaskan situation is similar to that existing in Greenland. In his comprehensive review of Alaskan subsistence practices, Langdon writes: "the one most important characteristic... is that subsistence is now integrated with the cash economy in the lives of all Alaskan Natives" (Langdon 1984: 5). That study points out that commercial exchange of subsistence products occurs in over half of the twelve native regions of Alaska, including, e.g. the Arctic Slope, Bristol Bay, the Bering Straits (*ibid*: 8; see e.g. Worl 1980: 314).

In a study of beluga whale hunting in northwest Alaska, the 1982 cash price of the whale meat and muktuk being sold locally was \$4.50 per pound, and in food stores in the distant city of Anchorage was \$7.00 per pound (Feldman 1986: 159). However, in Alaska as in Canada, it appears that in particular native communities some subsistence items are not considered appropriate for selling (for cash) due to their high symbolic or ritual significance (Fienup-Riordan 1986: 178).

DOES SUBSISTENCE PRODUCTION DIFFER FROM COMMODITY PRODUCTION?

Subsistence activities, as detailed above, occur within a mixed economy that necessarily includes both market and non-market transactions, both of which may involve cash exchange. The use of cash or the use of the market therefore does not provide a critical distinction between subsistence and commercial operations.

Rather, the distinction between subsistence and commercial activities are to be sought in the degree to which market forces, as opposed to essentially non-market forces, determine the purpose and extent of the economic activity. These non-market forces usually involve such social institutions and concerns as family, various alliances extending beyond the family, community identity, and social status and prestige. Market forces, involving such strictly economic factors as maximizing financial profitability and competitive economic advantage (increased market share) do not apply to subsistence activities.

The reason that subsistence persists in such non-industrialized societies, despite the interaction that occurs with powerful commercial forces that sustain the dominant society, is because subsistence satisfies particularly important non-economic needs in such societies, needs that can only be satisfied by either engaging in subsistence or being enabled to consume the products of subsistence. It is the continuing commitment of members of these (often small and/or distinct and peripheral) socio-cultural communities to their distinctive identity, that sustains subsistence production even as it diminishes in strictly economic importance. This identity it should be noted, is most often related to particular systems of local resource use.

CONCLUSIONS

One of the sustaining beliefs of much environmentalist thinking in recent years is that industrial (i.e. capitalist) economic activity is necessarily harmful to environmental preservation.

The basis of this belief is the Marxian notion that within 'primitive' societies there was no development of cash or commoditization, but that once these modern evils penetrated such societies their disintegration and downfall was set into motion.

However, such theoretical formulations are not sustained by empirical evidence, for it is now understood that most such 'primitive' societies have been involved with commoditization and external trade for hundreds, and in many cases thousands, of years, yet they persist today in recognizably distinct form.

It is apparent that considerations of scale or degree are relevant criteria in trying to distinguish between various

types of economic organization. In a large number of different small-scale foraging societies engaged in subsistence in, e.g., tropical rain forests, the Kalahari desert, or the Arctic, no simple distinction can be made between 'subsistence' and 'commercial' transactions based on the use or absence of cash or markets (see Note 3).

Indeed, questions such as "how much monetization?" or "what degree of market dependence?" in any given society may be impossible to answer because such relationships vary from individual to individual, from household to household, from market to market, from commodity to commodity and from day to day. This difficulty has been recognized in the scientific literature, together with the consequent conclusion that it is unhelpful and unwise to attempt to distinguish between 'subsistence' and 'commercial' activities in regard to these mixed-economy coastal whaling societies (e.g. Akimichi et al. 1988: 80-83; Dahl 1989b: 40; Caulfield 1991b: 3).

In conclusion it might be stated that the intent to sustain local social, cultural and economic activity intergenerationally in its essential form and content (notwithstanding ongoing changes to improve its efficiency and safety) is the primary characteristic that distinguishes subsistence and petty commodity enterprises on the one hand from industrial (i.e., wholly commercial) enterprises on the other.

In contrast, the principal goal of wholly commercial economic enterprises is to achieve increased productivity/profitability in order to maximize strictly economic goals. In pursuit of these profit-maximizing goals, commercial enterprises may become totally transformed so that, unlike subsistence and petty-commodity enterprises, there is no primary intent to ensure the enterprise's reproduction is essentially unchanged form over time.

NOTES

1. To illustrate this potential for confusion that can exist when inappropriate dictionary definitions of technical terms are used, the word 'dolphin' has at least seven dictionary meanings, only one of which applies to marine mammals. Even where the dictionary makes reference to the marine mammal dolphin, it provides varyingly accurate definitions to either the cetacean family Delphinidae (Chambers 1988 and Oxford 1990) or the two families Delphinidae and Platanistidae (Webster's 1988). The term 'dolphin' also variously applies to (1) a buoy, bollard or cluster of piles for boat mooring, (2) a protective structure on a bridge, (3) a constellation, (4) a spar on a ship, (5) variously a single species (Oxford 1990), or two species of a single genus (Chambers 1988), or a whole family of *marine* fish (Webster's 1988), or (6) a South American *freshwater* fish (Oxford 1990).

The word 'fishery' in the widely used Webster's New

World, Chambers English, and the Concise Oxford dictionaries refers variously to catching, packing and selling fish, a place for catching fish, the right to catch fish, the art or practice of catching fish, etc. No reference is made to fisheries based upon seal, whale or clams for example.

The term 'subsistence' enjoys as many varied and limited definitions as do words like 'dolphin' and 'fishery' in English-language dictionaries.

2. The term culture is used in the generally accepted anthropological sense to mean the distinctively human activity of systemically making, organizing, valuing and communicating changing thoughts, artifacts, behaviors and symbols.
3. A recent critical review of the scientific literature on hunter-gather societies concluded that "many of these groups were involved in interethnic and international trade long before 16th-century European expansion" and that Westerners have consistently failed to understand that these societies have been, often for long periods of time, 'commercial foragers' (Headland and Reid:51; see also Wilmsen 1989).

In regard to such hunting-fishing-gathering peoples' economic relations, another recent review states: "the appearance of cash and commoditization are usually seen as the first manifestation of modernity and as evidence of the impact of market economies among people previously untouched by them... [however]... such impacts go back five thousand years or more in some cases and certainly encompass virtually all foragers today" (Peterson 1991: iff).

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Annex 104: Government of Japan, Japan Fisheries Agency, "Whale Meat Consumption Per Capita in Japan", under cover of facsimile from Takanori Ohashi, Japan Fisheries Agency, to Mr Puplick, Chairman, National Task Force on Whaling, Government of Australia, 18 April 1997



FISHERIES AGENCY

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April 18, 1997

Mr. Puplick
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National Task Force on Whaling
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Australia
Fax: 06 274 1006

D/P

Dear Mr. Puplick,

According to the instruction from Mr. Shima, IWC Commission for Japan, I am pleased to submit herewith "Table for Whale meat consumption per capita in Japan" as attached.

Sincerely

Takanori Ohashi

Far Seas Fisheries Division.

Whale meat consumption per capita in Japan

| | Production (ton) | Import (ton) | Export (ton) | Supply 1 (ton) | Total Population 2 (thousands) | Consumption (Kg) |
|------|---------------------|-----------------|-----------------|-------------------|-----------------------------------|---------------------|
| 1946 | 55,000 | — | — | 55,000 | 75,750 | 0.726 |
| 1947 | 82,000 | — | — | 82,000 | 78,101 | 1.050 |
| 1948 | 84,000 | — | — | 84,000 | 80,002 | 1.050 |
| 1949 | 87,000 | — | — | 87,000 | 81,773 | 1.064 |
| 1950 | 71,000 | — | — | 71,000 | 83,200 | 0.853 |
| 1951 | 52,000 | — | — | 52,000 | 84,541 | 0.615 |
| 1952 | 56,000 | — | — | 56,000 | 85,808 | 0.653 |
| 1953 | 56,000 | — | — | 56,000 | 86,981 | 0.644 |
| 1954 | 71,000 | 0 | 0 | 71,000 | 88,239 | 0.805 |
| 1955 | 76,000 | 0 | 0 | 76,000 | 89,276 | 0.851 |
| 1956 | 89,000 | 0 | 0 | 89,000 | 90,172 | 0.987 |
| 1957 | 112,000 | 0 | 0 | 112,000 | 90,928 | 1.232 |
| 1958 | 138,000 | 0 | 0 | 138,000 | 91,767 | 1.504 |
| 1959 | 143,000 | 105 | 0 | 143,105 | 92,641 | 1.545 |
| 1960 | 154,000 | 98 | 0 | 154,098 | 93,419 | 1.650 |
| 1961 | 179,000 | 33 | 49 | 178,984 | 94,287 | 1.898 |
| 1962 | 218,258 | 13,886 | 7,636 | 224,508 | 95,181 | 2.359 |
| 1963 | 186,627 | 12,793 | 9,995 | 189,425 | 96,158 | 1.970 |
| 1964 | 193,075 | 24,279 | 38,752 | 178,602 | 97,182 | 1.838 |
| 1965 | 213,982 | 18,818 | 34,221 | 198,579 | 98,275 | 2.021 |
| 1966 | 180,215 | 21,020 | 8,351 | 192,884 | 99,036 | 1.948 |
| 1967 | 168,942 | 28,564 | 20,589 | 176,917 | 100,196 | 1.766 |
| 1968 | 156,766 | 11,158 | 20,383 | 147,541 | 101,331 | 1.456 |
| 1969 | 136,094 | 12,588 | 19,571 | 128,111 | 102,536 | 1.259 |
| 1970 | 138,230 | 15,396 | 14,454 | 140,172 | 103,720 | 1.351 |
| 1971 | 135,009 | 17,837 | 11,149 | 141,697 | 105,145 | 1.348 |
| 1972 | 121,926 | 18,277 | 2,173 | 138,030 | 107,595 | 1.283 |
| 1973 | 97,679 | 25,477 | 0.3 | 123,156 | 108,104 | 1.129 |
| 1974 | 89,592 | 28,578 | 0.5 | 118,170 | 110,573 | 1.069 |
| 1975 | 75,370 | 28,822 | 0.3 | 104,192 | 111,940 | 0.931 |
| 1976 | 43,616 | 32,476 | 172 | 75,920 | 113,094 | 0.671 |
| 1977 | 42,468 | 36,760 | 0.1 | 79,228 | 114,185 | 0.694 |
| 1978 | 24,327 | 34,006 | 0.1 | 58,333 | 115,190 | 0.506 |
| 1979 | 19,074 | 27,449 | 0.04 | 46,523 | 116,155 | 0.401 |
| 1980 | 20,538 | 25,378 | 0.03 | 45,916 | 117,060 | 0.392 |
| 1981 | 19,701 | 18,942 | 0.96 | 38,642 | 117,902 | 0.328 |
| 1982 | 21,016 | 19,812 | 1.35 | 40,627 | 118,728 | 0.342 |
| 1983 | 21,665 | 18,838 | 0.21 | 40,503 | 119,536 | 0.339 |
| 1984 | 21,064 | 16,738 | 0 | 37,802 | 120,305 | 0.314 |
| 1985 | 14,885 | 16,898 | 0 | 31,583 | 121,049 | 0.261 |

Supply is calculated as: production+(export-import)

Total population number is based on "Statistic outlook of Japan 1996 edition"

Figures from 1946 to 1962 are taken from "Food Supply and Demand Table"

Compiled by Ministry of Agriculture, Forestry, and Fisheries.

Figures after 1962 are taken from "Fish Product Trade Statistics"

There is no data for whale meat export and import during 1946 to 1953

Consumption is calculated as: production/total population.

Whale Products (Metric Tons) Production by the Japanese Whaling Industry (1966-1985)

| <u>Year</u> | <u>Whale Oil</u> | <u>Whale Meat</u> | <u>Others</u> | <u>Total</u> |
|-------------|------------------|-------------------|---------------|--------------|
| 1966 | 88,545 | 180,215 | 11,080 | 279,840 |
| 1967 | 81,838 | 168,943 | 12,837 | 263,618 |
| 1968 | 81,213 | 156,766 | 16,850 | 254,829 |
| 1969 | 72,467 | 135,024 | 15,443 | 223,934 |
| 1970 | 72,604 | 139,230 | 15,836 | 227,670 |
| 1971 | 71,775 | 135,009 | 16,319 | 223,103 |
| 1972 | 61,196 | 121,926 | 11,350 | 194,472 |
| 1973 | 50,250 | 97,921 | 15,794 | 163,965 |
| 1974 | 42,794 | 89,592 | 13,141 | 145,527 |
| 1975 | 40,326 | 74,072 | 12,616 | 127,014 |
| 1976 | 24,518 | 43,594 | 9,187 | 77,299 |
| 1977 | 21,054 | 42,473 | 8,189 | 71,716 |
| 1978 | 12,827 | 24,327 | 5,008 | 42,162 |
| 1979 | 7,626 | 19,075 | 4,105 | 30,806 |
| 1980 | 7,166 | 20,538 | 4,540 | 32,224 |
| 1981 | 5,803 | 19,701 | 3,249 | 28,753 |
| 1982 | 4,686 | 21,016 | 2,910 | 27,713 |
| 1983 | 3,015 | 21,665 | 1,710 | 26,390 |
| 1984 | 2,713 | 21,064 | 1,477 | 25,254 |
| 1985 | 2,307 | 14,885 | 1,564 | 18,755 |

Notes:

* Others include whale bone or baleen products - tennis rackets, fishing rods, cartridges, etc.

Source: Fisheries Agency of the Japanese Government, *Outline of Japanese Whaling* (Tokyo: 1988), p. 17.

Annex 105: Government of Japan, “Plan for the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) – Monitoring of the Antarctic Ecosystem and Development of New Management Objectives for Whale Resources”, 2005, SC/57/O1 [not including Appendices]

<STRUCTLY CONFIDENTIAL UNTIL THE OPENING PLENARY OF IWC/57>

SC/57/O1

Plan for the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II) - Monitoring of the Antarctic Ecosystem and Development of New Management Objectives for Whale Resources

GOVERNMENT OF JAPAN

ABSTRACT

The Japanese Whale Research Program under Special Permit in the Antarctic (JARPA) was conducted between 1987/88 and 2004/05 austral summer seasons, under Article VIII of the International Convention for the Regulation of Whaling. The IWC Scientific Committee conducted an interim review of JARPA results in 1997. In January 2005, a JARPA review meeting called by the Government of Japan was held.

JARPA provided a wide variety of information on biological parameters of the Antarctic minke whale such as the natural mortality coefficient and changes over time in the age at maturity as well as narrowing down the parameters of relevance for stock management. JARPA also elucidated that there are two stocks in the research area but their geographical boundaries are different from those used by the IWC. Further, JARPA found that pollutant concentration in whale tissues, such as heavy metals and PCBs, was extremely low. JARPA has thus successfully obtained data related to the initially proposed objectives. The review meeting conducted in January 2005 agreed that results from JARPA are consistent with the behaviour to be expected of baleen whale populations competing for a dominant single food resource, krill. The meeting also agreed that the results obtained provide clear support for the need to take species-interaction (ecosystem) effects into account in understanding the dynamics of the baleen whale species in the Antarctic ecosystem, and predicting future trends in their abundance and population structure.

Based on these considerations, the Government of Japan will launch a new comprehensive study under the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II), combining lethal and non-lethal methods, starting from the 2005/06 austral summer season. The first two seasons (2005/06 and 2006/07) will be dedicated to feasibility studies. The practicability and appropriateness of sighting methods in the enlarged area and sampling procedures given the increased sample size and additional species will be examined. Methods for catching, flensing and taking biological measurements of large body-sized whales will be tested. The full-scale JARPA II will start from the 2007/08 season. It will be a long-term research program with the following objectives 1) Monitoring of the Antarctic ecosystem, 2) Modelling competition among whale species and developing future management objectives, 3) Elucidation of temporal and spatial changes in stock structure and 4) Improving the management procedure for the Antarctic minke whale stocks. JARPA II will focus on Antarctic minke, humpback and fin whales and possibly other species in the Antarctic ecosystem that are major predators of Antarctic krill. Annual sample sizes for the full-scale research (lethal sampling) are 850 (with 10% of allowance) Antarctic minke whales (Eastern Indian Ocean and Western South Pacific Stocks), 50 humpback whales (D and E-Stocks) and 50 fin whales (Indian Ocean and the Western South Pacific Stocks). During the feasibility study, a maximum annual sample size of 850±10% Antarctic minke whales will be sampled. A maximum of ten fin whales will be sampled in each season. Humpback whales will not be taken during the feasibility study.

The research methods for the JARPA II are basically the same as the previous JARPA with some modifications. The program involves both non-lethal research techniques such as sighting surveys, biopsy sampling, acoustic surveys for prey species and the collection of oceanographic data as well

as lethal sampling since collection of certain information, of vital importance to the overall study, requires examination of internal organs such as ovaries, earplugs and stomachs.

A comprehensive review will be conducted following completion of the first 6 years of the research. Cruise reports will be submitted annually to the IWC/SC.

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I. INTRODUCTION

In 1982, the IWC adopted the moratorium on commercial whaling on the grounds of insufficient scientific knowledge concerning whales. The Government of Japan lodged an objection, but withdrew it in 1985, and the 1986/87 whaling season marked the last commercial operation in the Antarctic by Japan. Thereafter, all commercial whaling in the Antarctic has been suspended to this day.

In order to resolve the scientific uncertainties and pave the way for the resumption of sustainable whaling, Japan started a research program, the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA), under Article VIII of the International Convention for the Regulation of Whaling. The main purpose was to elucidate biological parameters of Antarctic minke whales (GOJ, 1987). The program was launched in the 1987/88 austral summer season as a two-year feasibility study (1987/88 and 1988/89 seasons). The full program started in the 1989/90 season as a long-term program over eighteen years, including the two years of feasibility studies. Since all commercial whaling had been suspended in the Antarctic, the world's largest source of whale resources, JARPA was in effect the only comprehensive research program that provided a time series of useful biological and ecological information for the management of whale stocks in the Antarctic.

The IWC Scientific Committee conducted an interim review of JARPA results in 1997 (IWC, 1998). It was agreed that information from JARPA has the potential to improve the management of Antarctic minke whales.

In January 2005, a review meeting of JARPA was hosted by Japan, in which scientists from various countries participated. JARPA provided a wide variety of information on biological parameters such as the natural mortality coefficient and changes over time in the age at maturity as well as narrowing down the parameters of relevance for stock management. The program had also elucidated that there are two stocks in the research area but the geographical boundaries between these stocks are different from those used by the IWC to manage baleen whale species in the Antarctic. Further, JARPA found that pollutant concentration in whale tissues, such as heavy metals and PCBs, was extremely low. JARPA has thus successfully obtained data related to the initially proposed objectives. It is considered that the results will greatly contribute to the rational management of the Antarctic minke whale stocks.

The effect of worldwide climate changes, including global warming, is becoming apparent in the Antarctic Ocean. Elucidating the impacts of these changes requires monitoring of the Antarctic marine ecosystem.

The results of the JARPA sighting surveys indicate a rapid recovery of the once depleted humpback and fin whales, while the increasing trend in abundance of Antarctic minke whales, that had been indicated after other larger baleen whales were substantially decreased due to past over hunting, has been halted. These results suggest the possibility that the composition of baleen whales in the Antarctic is starting to undergo a major shift at the present time.

Against the backdrop of these changes in the Antarctic ecosystem, the Government of Japan will launch a new comprehensive study under the Second Phase of the Japanese Whale Research Program under Special Permit in the Antarctic (JARPA II), combining lethal and non-lethal methods, starting from the 2005/06 austral summer season. The first two seasons (2005/06 and 2006/07) will be dedicated to feasibility studies. The full-scale JARPA II will start from the 2007/08 season. It is expected to be a long-term research program focused on Antarctic minke, humpback and fin whales, crabeater seals, and possibly other species in the Antarctic ecosystem that are major predators of Antarctic krill (*Euphausia superba*). JARPA II intends to monitor the quantitative and qualitative changes of important species of whales, pinnipeds and possibly sea birds, and the environmental factors surrounding them. The goal is to construct a competition model among whale species based on the data obtained. JARPA II thus aims to contribute to the establishment of a new and improved management system for whales based on the ecosystem approach.

Initially, there were as many as 200,000 blue whales in the Antarctic, but their number was greatly reduced by over-hunting, and their take was banned in 1964. After forty years, however, they still number less than 2,000 and are far from reasonably recovered (Branch *et al.*, 2004). Certainly the humpback and possibly also the fin whales, on the other hand, although they too had been greatly reduced in number and their take also subsequently banned, have made appreciable recoveries in recent years. In Area IV of the Antarctic Ocean, there have been as many sightings of the humpback as of the Antarctic minke whales (Ishikawa *et al.*, 2004). We should consider a management scheme that will provide for the recovery of blue whales.

In 1992, the Revised Management Procedure (RMP) was completed by the Scientific Committee. It was adopted by the IWC in 1994 as the procedure to be used in future commercial whaling (IWC, 1995). However with the exception of whaling operations carried out by Norway, which has lodged an objection to the commercial whaling moratorium, it has not been implemented after twelve years since its completion. Some aspects of the RMP require improvements because it has become clear during the twelve years that the current formulation of the RMP could make the implementation process almost unworkable. In JARPA II, better estimates of the Maximum Sustainable Yield rate (MSYR), which is an important parameter for improving the RMP, will be obtained. Also new definitions of the management areas based on stock information will be developed. This information is important for the improvement of the RMP and its implementation.

The Government of Norway intends to develop a management procedure based on the ecosystem approach in an effort to control the size of marine mammal populations given their impact on fishery resources (Ministry of Fisheries, 2004). The U.S. government implements a fishery management scheme in the Bering Sea and the Gulf of Alaska that takes into consideration the securing of prey for marine mammals (North Pacific Fishery Management Council, 2003). Japan also has been active in multi-species management through the implementation of the Japanese Whale Research Program under Special Permit in the North Pacific, Phase II (JARPN II), and is working to develop a more accurate management system for fishery resources using data obtained from JARPN II.

Looking to the future, the IWC will need to consider a multi-species management approach in the Antarctic Ocean, which has the world's largest whale resources, for the conservation and sustainable use of these resources. Multi-species management also should allow for the recovery of depleted whale species. JARPA II should make great contributions towards this goal.

II. RESEARCH BACKGROUND

1. Outline of JARPA results

As mentioned earlier, JARPA was launched in the austral summer season of 1987/88. The Antarctic minke whale was the only whale species that was still commercially harvested immediately prior to that time, but the uncertainties of the biological parameters used in the 1980s to calculate catch quotas under the New Management Procedure (NMP) were the target of much criticism at the IWC Scientific Committee. Thus, the main objective of the JARPA program was to estimate biological parameters, including the natural mortality coefficient, required for the effective management of this species. The second objective was to elucidate the role of cetaceans in the Antarctic ecosystem, and to this end surveys were included to estimate the abundance of each whale species and the diet of the Antarctic minke whale, which was the most abundant and hence chosen as representative of baleen whale species. The program was to be implemented over eighteen years (including two years as feasibility studies) and to cover Areas IV and V with a sampling of $300 \pm 10\%$ Antarctic minke whales from each Area in alternate years (GOJ, 1987).

The efforts of the IWC Scientific Committee then shifted to the completion of an RMP, which was finished in 1992. The key factors of the RMP are abundance estimates and stock structure, and MSYR takes on much of the role played previously by natural mortality. In the meantime, environmental changes such as global warming and the ozone hole became worldwide concerns, and interest in their effects on cetaceans grew in the IWC. In response, Japan added the elucidation of minke whale stock structure and the effects of environmental changes on cetaceans to the research objectives of JARPA from the 1995/1996 austral summer season (GOJ, 1995). The research area was expanded to include the eastern part of Area III and the western portion of Area VI with an additional sampling of $100 \pm 10\%$ whales. JARPA was thus continued with a sample size of $400 \pm 10\%$ and ended in March 2005.

Much has been achieved by JARPA. The IWC Scientific Committee conducted an interim review in 1997, and evaluated the program as shown below (IWC, 1998):

i. 'JARPA has already made a major contribution to understanding certain biological parameters (e.g. direct measures of the age at sexual maturity) pertaining to minke whales in Areas IV and V, yet such analyses have not fully addressed potential problems related to stock structure'.

ii. 'Under the objective of elucidating the role of minke whales in the Antarctic ecosystem, JARPA has collected data on body condition that, in conjunction with the data on biological parameters, should result in

an improved understanding of the status of minke whales in these Areas. These data are likely to be useful in testing various hypotheses related to aspects of the 'krill surplus' model.'

iii. 'Under the objective of elucidation of the effects of environmental change on cetaceans, there is considerable uncertainty in how biological parameters of minke whales may vary in relation to environmental change. Therefore, more effort is needed to develop meso-scale studies to integrate physical and biological oceanography and prey distribution with minke whale studies'

The results of JARPA were also evaluated in the following manner:

The results of JARPA, while not required for management under the RMP, have the potential to improve the management of minke whales in the Southern Hemisphere in the following ways: a) reductions in the current set of plausible scenarios considered in Implementation Simulation Trials; and b) identification of new scenarios to which future Implementation Simulation Trials will have to be developed (e.g. the temporal component of stock structure).'

The results of analyses of JARPA data could be used perhaps to increase the allowed catch of minke whales in the southern hemisphere without increasing the depletion risk above the level indicated by the existing Implementation Simulation Trials of the RMP for these minke whales'.

The IWC Scientific Committee will review the results of JARPA following the 2005 Annual Meeting. Prior to this meeting, the Government of Japan has held a JARPA Review meeting in January 2005 so that the results from JARPA can be taken into account in the plan for JARPA II. The JARPA results can be summarized as follows.

Regarding the estimation of biological parameters, improved age data have been obtained and age composition data that reflects the stock structure have been collected. Sighting information, collected along with these biological data, has not shown any statistically significant change in minke whale abundance. The natural mortality coefficient of the Antarctic minke whale has been calculated using the planned Tanaka's method (Tanaka, 1990) and the ADAPT VPA as well, and found to be $M = 0.05$ for Tanaka's method (Tanaka *et al.*, 2005) and 0.05-0.08 for ADAPT VPA (Mori and Butterworth, 2005 and Kitakado *et al.*, 2005). As for the age at sexual maturity, it was found that it had changed to eight years old in the late 1970s from eleven to twelve in the late 1940s (Kato, 1987; Cooke *et al.*, 1997; Thomson *et al.*, 1999). This result would probably be an important one to elucidate the reason for the earlier likely rapid increase of minke whales.

As for the research on the role of cetaceans in the ecosystem, quantitative analyses on the stomach content of Antarctic minke whales were conducted by evaluating the weight of the stomach in relation to the weight of the whale. It was found that the daily amount of krill consumed by one minke whale was 200 to 300 kg, (corresponding to 3 to 5% of body weight). The yearly amount consumed by Antarctic minke whales in Area IV was estimated to be 1,740,000 to 1,930,000 tons, equivalent to about 30% of the rough krill biomass estimate in that Area (Tamura and Konishi, 2005). Also a halt, after the 1980s, in the trend of whales to become sexually mature at younger age (Zenitani and Kato, 2005), an increase in age at physical maturity (Bando *et al.*, 2005) and a decrease in blubber thickness (Ohsumi *et al.*, 1997; Konishi and Tamura, 2005) have been reported. Australian coastal surveys as well as JARPA results have confirmed that humpback whales are increasing surprisingly rapidly; assessments combining all the data (Johnston and Butterworth, 2005) indicate current abundance for the stocks in Areas IV and V to be approaching 20,000, with the Area IV stock soon to reach its pre-exploitation abundance. Sighting surveys during JARPA have also found that there are some 9,000 fin whales. Their distribution range has also expanded southwards, strongly indicating increasing competition among the whale species for krill in that region (Appendices 1 and 2).

In the JARPA Review meeting, it was agreed that, viewed broadly, results from JARPA are consistent with the behavior to be expected of baleen whale populations competing for a dominant single food resource, krill.

Surveys on the effect of environmental changes on cetaceans indicated that pollutant concentration such as heavy metals and PCBs in whales can be used as indicators of global contamination. It was also found that pollutant concentration in whales in the Antarctic was extremely low, compared with common minke whales in the Northern Hemisphere, and that there was a declining trend in such concentration in recent years (Fujise *et al.*, 1997; Yasunaga *et al.*, 2005).

With regard to stock structure of the Antarctic minke whale, results of the analyses based on mtDNA have been reported annually to the Scientific Committee. The Committee had noted that only preliminary

conclusions about stock structure can be drawn at this stage and that more concrete conclusions will be able to be made following the completion of different analyses. It further supported the suggestion that additional analyses using alternative groupings and analytical methods should be conducted (IWC, 2003).

It has been recognized that the most effective way to address questions on stock identity is to consider results from several techniques: genetics and non-genetics (Donovan, 1991; Perrin, 2001; Rugh *et al.*, 2003).

In response, the study on stock structure under the JARPA was extended by using several biological markers (genetic and non-genetic) and more detailed groupings of samples. These approaches were used for examining samples of JARPA from 1987/88 to 2003/04 and results were presented to the JARPA Review Meeting (Pastene *et al.*, 2005a).

Results from the different approaches showed similar patterns and were consistent in regard to the hypothesis of two stocks in the JARPA research area. Probably these stocks are related to breeding areas in the eastern Indian Ocean and western South Pacific Ocean, respectively. A soft boundary between stocks at 165°E has consequently been proposed for management purposes. Names have been proposed for these two stocks: the Eastern Indian Ocean Stock (I-Stock) and the Western South Pacific Ocean Stock (P-Stock). It should be noted that the pattern of stock structure found is not consistent with the traditional IWC boundary between Areas IV and V.

2. Global environmental changes

Various phenomena caused by global warming have been observed recently worldwide, including frequent floods, receding and diminishing glaciers, rise in seawater temperature and coral reef bleaching. There is concern in the Arctic regarding the effect of melting ice on marine mammals, including the polar bear (Hassol, 2004). Air and seawater temperatures have risen in the Antarctic, resulting in the major break-up of the Larsen Ice Shelf in 2002. The rise in temperature is particularly evident in the Antarctic Peninsula, where it has risen by as much as 5 degrees Celsius in winter, and the receding ice has caused a shift in penguin species distribution (Croxall *et al.*, 2004).

Further, it has been reported that Antarctic krill abundance in the south western Atlantic has been reduced by 80% from the level in 1970s due to the rise in seawater temperature (Atkinson *et al.*, 2004). In Areas IV and V, which are covered by JARPA, there has been no clear indication of any connection between the rise in sea water temperature and the decrease of krill, but we cannot rule out the possibility that such a phenomenon may occur in the entire Antarctic Ocean in the future.

Major environmental changes such as global warming may greatly affect krill reproduction in the Antarctic Ocean and thus change the carrying capacity for cetacean species, as well as altering the behaviour and habits of other krill predators.

It is therefore necessary to promote surveys of global marine ecosystems including the polar regions such as the Antarctic, as well as research on and the collection of data about the effects on the marine ecosystem and on possible future changes of ecosystems. This is because the effects of global environmental change are unlikely to be limited to the Antarctic Ocean and will affect all the world's oceans.

In addition to global warming, it is important to monitor environmental contaminants such as mercury and PCBs on a global scale since they are dispersed worldwide. Organochlorines, heavy metals and other highly residual pollutants spread worldwide, once they are released into the atmosphere. To have an accurate account of global contamination by these pollutants and to predict future contamination, it is necessary to identify their temporal and spatial behaviour. The monitoring of contamination levels in the atmosphere and seawater is important as a direct method, but the amount in the environment is generally extremely low. However, certain kinds of pollutants will be highly concentrated in top predators of the food web. It is necessary, therefore, to investigate the pattern of pollutant accumulation in the top predators themselves and to examine how they are biologically affected in order to determine the effect of the contaminants.

3. Necessity to improve the implementation of management procedure on Antarctic minke whale stocks

Although the IWC Scientific Committee completed the Revised Management Procedure for the regulation of commercial whaling in 1992 (IWC, 1993), with the exception of operations carried out by Norway that has lodged an objection, whaling based on the RMP has not been resumed to this day. The RMP is overly concerned with the protection of whale stocks and thus too conservative in terms of rational utilization of

resources. Stock hypotheses, tuning levels, MSYR and other parameters are chosen unduly conservatively because of argued uncertainties in biological understanding. One of the deficiencies of the RMP is the large variation in catch quotas depending on such choices, and agreement is difficult to achieve as shown in the case of RMP implementation simulation trials for North Pacific common minke whales (IWC, 2004). It is therefore of primary importance to conduct research that will reduce the range of uncertainties in such factors, as is the aim of JARPA II.

Furthermore, although the matter has not yet been taken up at the IWC, the necessity of a multi-species management approach has been recognized worldwide, and some such approaches are already in place in the U.S. and Norway (North Pacific Fishery Management Council, 2002; Ministry of Fisheries, 2004). Many baleen whales commonly consume krill in the Antarctic ecosystem, and as stated above, results from JARPA are consistent with the behaviour to be expected of baleen whale populations competing for a dominant single food resource, krill. Therefore, it is necessary for the IWC, as well as its member countries, to develop a management method based on multi-species models.

III. RESEARCH NEED AND OBJECTIVES

1. Research need

The large cetacean community in the Antarctic has historically undergone extensive changes and another major transition has been taking place in recent years, with the recovery of some whale species from past over-hunting. In addition, significant global environmental changes that have the potential to affect whale populations are occurring.

In view of the above, there is a need to systematically monitor changes of environmental conditions in the Antarctic over the long-term, as well as changes of biological parameters and changes in the abundance of cetaceans inhabiting the Antarctic Ocean. There is also a need to monitor how cetaceans adapt to global warming and the shifts in the ecosystem structure caused by human activities so as to provide scientific basis for the comprehensive management of whale stocks, employing control of whale populations if needs be.

More than forty years have gone by since the severe decline in the size of blue whale population, but this species remains at a low level of abundance even though some increase has recently been confirmed. There is a possibility that their niche has already been mostly taken over by Antarctic minke and other whale species that have been showing an increasing trend of abundance in recent years. To deal with this situation, which has anthropogenic roots, all management options should be considered.

As has been already mentioned, JARPA data have shown that the increase in minke whales has been halted together with the reversal in the trend of age at maturity towards younger ages and a trend of decreasing blubber thickness. The humpback and fin whales, on the other hand, have shown a rapid increase in abundance. In Area IV, for instance, humpback whale biomass is now much larger than that of the Antarctic minke whale, indicating that the balance among the whale species is in transition (Ishikawa *et al.*, 2004; Appendices 1 and 2). It is necessary to study and analyse these changes by conducting research that includes not only minke whales but also humpback and fin whales. Also, the effects of global warming are becoming apparent in the Antarctic and we need to study the effect on the cetaceans as soon as possible.

The RMP, which has been developed as a management procedure, is based on a single species management model, although it is supposedly applicable even when carrying capacity increases twofold or declines to half. However, the need to allow for such a wide range of uncertainty renders the RMP overly conservative in its utilization of whale resources, and this could be improved if good multi-whale-species models were developed as a basis upon which to create a better RMP. Also, it seems plausible that the take of one whale species may have positive effect on the recovery of another, but such processes have not been incorporated into the current RMP.

Since the ecosystem is undergoing a major shift, we should have a better management tool to achieve appropriate utilization of more than one whale species with a better RMP, as the current RMP is a basically single species management model.

To this end, there is a need to: a) to monitor cetaceans and various environmental factors in their habitats (population trend, biological parameters such as age at maturity, krill abundance, oceanographic environment, etc.); b) to construct a competition model among whale species, verifying various hypotheses based on the data obtained by past JARPA and through future monitoring, and c) to establish future management

objectives. For instance, it may be possible and desirable, through selective harvesting, to accelerate the recovery of blue and fin whales toward the early days when the blue and fin whales were the dominant species. Sustainable use of these resources as a management objective would be assisted by models that investigate the effects of takes of one species of whales on another.

It is essential for the construction of such models to obtain data not only of the Antarctic minke but also humpback and fin whales through the research programs. There is a need to build an ecosystem model, taking due account of the competition for krill among whale species, based on the monitoring data obtained and other information, while utilizing data from CCAMLR concerning other krill predators.

Information on stock structure of the main whale species comprising the Antarctic marine ecosystem is also important for a better interpretation of the abundance estimates and trends, for estimation of biological parameters and for the implementation of management procedures. The amount of information on stock structure differs among blue, fin, humpback and minke whales.

As for fin and blue whales, there is very little information on their stock structure. The available information is based on mark-recapture studies conducted during the period of commercial whaling. There is a need to collect new relevant data, including genetics data, to elucidate the present stock structure in these species and to investigate how the structure may differ from what has been postulated in the past. Both blue and fin whales have experienced substantial changes in abundance and some changes in stock structure might be expected with time (e.g. changes in geographical boundaries between stocks).

As a result of JARPA much more information on stock structure in the Antarctic feeding ground is now available for Antarctic minke and humpback whales (Pastene *et al.*, 2005a; Pastene *et al.*, 2005b). However, as noted above, changes in abundance with time have been observed in these two species and it is possible that such changes have had an effect on stock distribution and boundaries for these species. Monitoring of stock status and trends require that these changes in stock structure be investigated. This is important for management purposes. For example catch quotas based on stocks will have to be adjusted for shifting stock boundaries; otherwise, there is the risk of a negative impact on the stock.

The IWC has adopted the RMP for the regulation of commercial whaling, but it has yet to be applied, with the exception of operations carried out by Norway that has lodged an objection. We need better estimation of the MSYR in order to respond to any concerns over the implementation of the RMP and to improve its likely deficiencies concerning inefficient utilization of whale resources. Currently, RMP *Small Areas* for minke whales in the Antarctic have been established as longitudinal sectors of 10°, but at the very least, we need to redefine appropriate *Small Area* according to information on stock structure. Also, another of the deficiencies of the current RMP is the zero catch quota that it turns out when carrying capacity declines due to competition among whale species. The decrease in abundance caused by the competition is misinterpreted by the current RMP as an over-hunting so that catches are set unnecessarily low. That part needs also to be improved by the use of more realistic multi-whale-species models.

2. Research objectives

The objectives of the research program can be summarized into the following four categories. The first two years will be spent on feasibility studies, which will be described in Chapter VI.

1) Monitoring of the Antarctic ecosystem

As has been already mentioned, the Antarctic ecosystem is undergoing a major change. JARPA II will monitor the changes over the years of various environmental variables, prey density and abundance, and abundances and biological parameters of three baleen whales: the Antarctic minke, humpback and fin whales. The obtained data will be indicators of changes in the Antarctic ecosystem, and the observations and records will have a great significance in themselves. Appropriate utilization and management of whale stocks will become possible by understanding how whales respond and adapt to changes in the environment and the ecosystem structure. The data will also be used for the construction and operation of a model of competition among whale species, which is the second objective of the research program.

B) MONITORING OF WHALE ABUNDANCE TRENDS AND BIOLOGICAL PARAMETERS

JARPA II will monitor changes over the years in abundance by mean of sighting surveys, and changes in recruitment, pregnancy rate, age at maturity and other biological parameters by sampling survey.

II) MONITORING OF KRILL ABUNDANCE AND THE FEEDING ECOLOGY OF WHALES

JARPA II will monitor the yearly amount of prey consumption and the change in blubber thickness of whales over the years. Meso-scale surveys will be conducted, if possible, to investigate prey distribution and abundance. Changes in the biological environment of whales will be monitored.

III) MONITORING OF THE EFFECTS OF CONTAMINANTS ON CETACEANS

The temporal and spatial behavior of pollutants is global and they become highly concentrated through the food web. By investigating top predators including cetaceans, JARPA II will elucidate the pattern of contaminant accumulation and the effects of the toxins on them. Together with other data it should also give an accurate picture of global contamination and help predict future trends.

Species unaffected by contaminants are important as the controls for wildlife studies (IWC, 1999) and JARPA II will collect data on these species in the Antarctic Ocean. Results from JARPA II will also be linked with those obtained by JARPN II in the western North Pacific to elucidate pollutant behavior in cetaceans using methods of comparative biology. Concurrent analysis on prey species and environmental samples (air and sea water) in both the North Pacific and Antarctic will also be carried out in order to elucidate and consider pollutant behavior in the marine ecosystem and their global dynamics. Results will be compared to those obtained in the North Atlantic if access to the data is possible. Effects of these contaminants on whale species will also be considered using epidemiological, pathological, and toxicological methodologies. Specific objectives are as follows:

- * To elucidate the pattern of pollutant accumulation in whales in the Antarctic and the western North Pacific, and the pattern of changes in their biological processes;

- * To elucidate the pollutant behavior in the marine ecosystems of the Antarctic and the western North Pacific; and

- * To elucidate the biological effects of pollutants on cetaceans.

IV) MONITORING OF CETACEAN HABITAT

Monitoring of changes in water temperature, salinity, ice and other oceanographic and meteorological factors will be conducted. This will make it possible to promptly note changes in the environment in connection with the ecosystem model (the second research objective) and the management of minke whale stocks (the fourth research objective).

2) Modelling competition among whale species and future management objectives

I) CONSTRUCTING A MODEL OF COMPETITION AMONG WHALE SPECIES

There is a strong indication of competition among whale species in the research area. We need to consider hypotheses related to this competition and clarify the mechanism of resource fluctuation to be able to construct a model that will show the dynamics of competitive whale species to better allow the sustainable use of resources in the future.

Several hypotheses, including the krill surplus hypothesis and the process of resource increase due to the age at sexual maturity changing to younger ages will be tested. A model of competition among whale species incorporating these results will be constructed. Some details of the model are discussed in Section IV-4-2.

II) NEW MANAGEMENT OBJECTIVES INCLUDING THE RESTORATION OF THE CETACEAN ECOSYSTEM

Little can be achieved by using a single species management system for monitoring the whole ecosystem and identifying measures for the recovery of depleted cetaceans, in the context of changing cetacean population balance. Management objectives and policies including the major whale species are necessary. JARPA II will look into specific matters shown below and contribute to the future work of the IWC Scientific Committee.

- * Establishing future management objectives

Possible management objectives or goals would include: maintaining the present condition, in other words, preserving the existing relative abundances among the whale species; promoting relative abundances that favour whale species with high economic value; or accelerating the recovering of blue and fin whales. The advantages and disadvantages as well as the practicability of achieving alternative objectives need to be considered.

- * Estimating surplus production (and hence allowable catch) by species under some of the management objectives.

Surplus production (and hence allowable catch) under different suitable management objectives will be estimated and the advantages and disadvantages examined.

* Contribute towards a multi-whale-species management

Management strategies and tactics to achieve a selected management goal and to maintain that goal once achieved will be considered.

3) Elucidation of temporal and spatial changes in stock structure

As shown in Appendix 3, there is not sufficient information on current stock structure of fin and blue whales in the Antarctic. Most of the available information comes from the period of commercial whaling and is based on non-genetic data (e.g. distribution of catches and mark-recapture). According to that information, boundaries among IWC Areas were probably valid for blue whales (Donovan, 1991, Mackintosh, 1942). In the case of the fin whale the information obtained in the past suggested a structure based on oceanic basin. These species have experienced substantial changes in abundance and it is possible that the current stock structure does not match that described in the past. The research objective here is to investigate current stock structure and to compare it to that suggested in the past.

As indicated in Appendix 3, in the cases of humpback and Antarctic minke whales, much more information on stock structure in the Antarctic is now available for the feeding ground (Pastene *et al.*, 2005a; Pastene *et al.*, 2005b). These species have also experienced changes in abundance over the years and therefore temporal changes in the stock structure can be expected. The research objective here is to investigate shifts in stock boundaries (or equivalently changes of the relative proportions of stocks in mixing areas) on a temporal (yearly) basis.

In the case of the Antarctic minke whale an additional objective is to investigate the western boundary of the East Indian Ocean Stock (Pastene *et al.*, 2005a). This objective will be covered through surveys in an extended research area (west of Area III) to be conducted in the future.

4) Improving the management procedure for Antarctic minke whale stocks

JARPA II research objectives will ultimately lead to the improvement of the whale stock management procedures. In other words, the first objective will provide information on biological parameters (such as MSYR) necessary for managing the stocks more efficiently under a revised RMP, the second will lead to examining a multi-species management model for the future and the third will supply information for establishing management areas in the Antarctic Ocean.

An unrealistic rate of 1% of mature female population size was used as the MSYR for the implementation of the RMP on Antarctic minke whales agreed in 1993. Also, because there was little data on stock structure at that time, *Small Areas* were defined by 10° longitudinal sectors, which is also unrealistic. In view of the above, JARPA II will attempt to provide data for the following improvements:

* Improvement of MSYR estimates for Antarctic minke whales;

* Redefinition of appropriate management Areas; and

* Incorporation of effects arising from the inter-species relationships among the whale species. For instance, should the carrying capacity for the minke decline due to competition with other whale species, minke whale stocks would still be at their full capacity and a robust level even if abundance decreased for this reason. With the current RMP, the catch quota for the foregoing scenario would be heavily (but unnecessarily) reduced, even to zero; it would fail to function as a realistic basis for management and needs to be improved.

IV. RESEARCH METHOD

1. Research area

JARPA began with surveys in Areas IV (70°-130°E) and V (130°E-170°W). From the austral summer season 1995/96, the research area was extended to include the eastern part of Area III (35°-70°E) and the western part of Area VI (170°-145°W). The stock structure of Antarctic minke whales was therefore investigated in an area spanning 180 degrees in longitude. With regard to the Antarctic minke whale, it was found that there were two independent stocks in the research area and a soft boundary at 165°E (middle of Area V) was proposed for management purposes (Pastene *et al.*, 2005a). To the west of this boundary line, but especially in Area IV, humpback whales have shown a rapid increase in recent years, and have surpassed

the Antarctic minke whale in biomass. Fin whales have also shown a rapid increase with an abundance estimate of about 9,000 animals in Area IV+III (Appendix 1). On the other hand, there has been significant decrease in blubber thickness of the minke whales and a reversal in the trend of age at maturity toward younger ages (Bando *et al.*, 2005; Konishi and Tamura, 2005; Zenitani and Kato, 2005), which strongly indicates competition among the whale species in the area.

The eastern part of Area V, mostly made up of the Ross Sea, comprises the main area of distribution of the West South Pacific Stock of Antarctic minke whales. This stock has a remarkably large abundance. The level of competition in this sector might be different from that in the area west of 165°E, because some differences in the temporal trend of some biological parameters of minke whale were found between whales distributed west and east of this boundary (Bando *et al.*, 2005). Comparative studies of both areas will be useful to understand the pattern of competition among whale species.

The area to be covered by JARPA II will basically be the same as in JARPA: the eastern part of Area III, Areas IV and V, and the western part of Area VI (35°E - 145°W). In the first year, JARPA II will survey the East Indian Ocean Stock of Antarctic minke whales in a longitudinal span of 140° on the western side of the research area (35°E - 175°E). In the second year, JARPA II will survey the Western South Pacific Stock in a longitudinal span of 95° on the eastern side of the research area (130°E - 145°W). Thus, surveys repeat in the western region and eastern region every two years (Fig. 1).

The area from 130°E to 175°E will be covered every year, and the reason is as follows. At the JARPA Review Meeting, it was pointed out that there exists a 'soft boundary' between the East Indian Ocean Stock (I-Stock) and the Western South Pacific Stock (P-Stock) of minke whales in the vicinity of 165°E and that further survey is necessary to better establish the range over which the stocks mix. Therefore, it has been decided to survey the area from 130°E to 175°E every year in order to elucidate the pattern of stock mixing at that particular sector. That is to say, minke whales will be taken west of 175°E in the first year and east of 130°E in the second.

Regarding humpback whales, the stock boundary between the D and E stocks is currently placed at 130°. The D-Stock (breeding grounds located off the west coast of Australia) occurs on the west of the boundary, in Area IV, while the E-Stock (breeding grounds located off the east coast of Australia) is distributed to the east in Area V (IWC, 2001). This boundary also applies to fin whale stocks: the Indian Ocean Stock occurs on the west of 130°E and the Pacific Stock on the east. However, some mixing on the feeding grounds between the two humpback stocks has been postulated in the past, and is supported by mark return data. The D stock is currently estimated to return to its pristine abundance over the next 10 years (Johnston and Butterworth, 2005), providing an ideal opportunity which should not be missed to gain understanding of the dynamics of the population and how biological parameter values change in such circumstances, while the E stock which is still at a relatively lower level serves as a control.

In the Ross Sea, especially, a comprehensive ecosystem survey (a meso-scale survey) might be conducted, if possible.

2. Research period

JARPA II will start in the 2005/06 season and the first two seasons are the feasibility study, investigating the feasibility and practicability of sighting and sampling survey methods.

Full-scale research will commence from the 2007/08 season and a period of six years (including two years of feasibility study) has been established as the research phase. At the end of this phase, a review will be held and revisions made to the program if required.

3. Target whale species for lethal sampling

The species to be caught for research purposes are the Antarctic minke whales of the Eastern Indian Ocean and Western South Pacific Stocks; humpback whales of the D and E-Stocks, and fin whales of the Indian Ocean and the Western South Pacific Stocks.

Viewed overall, sampling of the three species in two Areas provides an important opportunity to gain insight into the dynamics of whale and inter-species competition through comparative analysis. In Area IV, minke whales may decrease in response to competition, recovery of humpback whales may soon slow as they approach their pristine level, and fin whales are increasing. By contrast in Area V, there is less evidence of negative impacts on minke whales at present, humpbacks are at a relatively lesser proportion of their pristine

abundance than in Area IV, and hence together with fin whales seem likely to continue to increase. Thus the different comparisons possible across species and Areas provide important potential insights into whale dynamics, and consequently appropriate management actions for sustainable utilization.

4. Survey methods and items

Sighting and sampling methods are planned as described below. Their practicability and suitability will be examined in the feasibility studies, after which they will be improved and changed as necessary.

* Sighting survey method

As a general rule, the surveys will cover areas south of 60°S. The areas will be divided into six sectors (eastern Area III, western Area IV, eastern Area IV, western Area V, eastern Area V and western Area VI). As a general rule the four sectors on the west side (eastern Area III, western Area IV, eastern Area IV, and western Area V) will be surveyed in the first year and the three sectors on the east side (western Area V, eastern Area V and western Area VI) in the second year. After the first two years, JARPA II will cover the survey area alternately. These sectors will be divided further into southern and northern strata, over which surveys will be conducted using two dedicated sighting vessels, basically employing the method used in SOWER. However, JARPA II will record sightings of seals and possibly other krill predators in additions to whales.

* Sampling method

Three sampling/sighting vessels will be employed. Antarctic minke whales will be taken in the area south of 62°S. Density index of Antarctic minke whales based on sighting data from JARPA is low in the latitudinal band between 60°S and 62°S (less than 10% of the whole latitudinal range). This indicates that sampling of Antarctic minke whales in this latitudinal band has a low importance. As described in section IV-1 above, the longitudinal sector from 35°E to 175°E will be stratified and surveyed in the first year and that from 130°E to 145°W in the second year. Survey courses will be established by the line transect method as in JARPA. A maximum of two minke whales per school sighted will be taken by random sampling. Humpback and fin whales will be taken by the same method as for the Antarctic minke whale.

Analytical methods by research objective are shown below.

1) *Monitoring of the Antarctic ecosystem*

In monitoring whales and habitat conditions, it is very important to detect any changes as soon as possible, identify the factors and predict their effects on the stocks, and to provide information necessary for the development of appropriate management policies. Data collected by the JARPA program were for the purpose of estimating biological parameters of minke whale stocks, but they included useful monitoring items. Thus, in order to secure continuity with the data collected in JARPA, we will continue to monitor the following:

J) MONITORING OF WHALE ABUNDANCE TRENDS AND BIOLOGICAL PARAMETERS

According to the results of JARPA the current abundance of Antarctic minke whales migrating to the research area shows no statistically detectable trend. However, as mentioned earlier, the trend of the age at sexual maturity toward younger ages has halted and blubber thickness has decreased, which may affect recruitment and abundance in the future. JARPA II intends to elucidate quantitative changes in minke whale stocks by carrying out sighting surveys and by estimating parameters, including recruitment and mortality, with population demographic model analyses such as VPA. This will also serve to monitor possible changes in carrying capacity.

JARPA II will monitor changes in the ages at sexual and physical maturity, pregnancy rate, blubber thickness and other items using the whales sampled in the program. Analysis of the JARPA data has indicated that the earlier decrease in the age at maturity of Antarctic minke whales has either now stabilized or even reversed. Changes in this biological parameter are considered to be a key factor in understanding minke whale stock abundance trends. JARPA II will, therefore, elucidate qualitative changes in the stocks by focusing analyses on mature whales, which are directly involved in reproduction, through the monitoring of changes in the age at sexual maturity, pregnancy rate, etc.

In order to monitor changes in the level of genetic diversity over time, JARPA II will examine the temporal variation of key genetic indices: the number of mtDNA haplotypes and nucleotide diversity, the number of

microsatellite alleles per locus and the level of microsatellite heterozygosity. Changes in the indices of genetic diversity will be used as a rough index for abundance variations.

II) MONITORING OF KRILL ABUNDANCE AND THE FEEDING ECOLOGY OF WHALES

As in JARPA, stomach content and weight will be examined by direct sampling. Apart from identification of the prey species, body length and growth stage will be investigated for krill in the stomachs and for those obtained by net sampling. In this way prey species and prey size selectivity by whales can be investigated. JARPA II will also monitor the changes in diurnal consumption, calculated by stomach content weight and basal metabolism rate, as was done in JARPA.

Changes in nutritional condition, including meal size, body fatness, girth and blubber thickness will be monitored as in JARPA. Prey availability will be evaluated by comparing the nutritional condition of whales with oceanographic conditions and information on prey.

At the mid-term review of JARPA held in 1997, the necessity of an ecosystem survey at the meso-scale level was pointed out (IWC, 1998). In the 2004/05 JARPA, *Kaiyo Maru*, the research vessel of the Japanese Fisheries Agency, conducted ecosystem surveys linked with sampling surveys by the *Nisshin Maru* fleet. In Phase II, if possible, the habitat environment of whales will be monitored and also the biomass of lower trophic level species will be surveyed once every two or three years using an echo sounder.

III) MONITORING OF THE EFFECTS OF CONTAMINANTS ON CETACEANS (APPENDIX 4)

The Antarctic is a remote area, far from the middle latitude regions of the Northern Hemisphere, which is the main source of pollutants including organochlorines. The Antarctic Ocean is considered the terminus of global contamination, and therefore monitoring of the area is important in considering future global contamination. The area also has significance as a control region for considering biological effects on cetaceans in the North Pacific, which is close to the contamination sources. Monitoring will be done with the following points in mind:

- * Elucidation of changes in pollutant accumulation in cetaceans of the Antarctic Ocean and the western North Pacific and their biological processes;

- * Elucidation of pollutant behavior in the marine ecosystem of the Antarctic and the western North Pacific; and

- * Elucidation of the biological effects of pollutants on cetaceans.

In the Antarctic Ocean (a non-contaminated area), JARPA II intends to examine the distribution and behavior of contaminants such as organochlorines and heavy metals in cetaceans that are at the top trophic level and their prey, together with those in the marine ecosystem, including samples from the environment such as of air and of sea water. Data will be compared to those obtained in the western North Pacific (a contaminated area). We will also collect background readings on the biological effects of pollutants on wild animals in the Antarctic Ocean and in the western North Pacific, and gather data on the thresholds of toxic effects through environmental toxicological research and pathological monitoring. Also, the data obtained will be compared with data on minke whales in the western North Atlantic, if possible.

IV) MONITORING OF CETACEAN HABITAT

Oceanographic and meteorological observations will be carried out while monitoring the environment, including sea ice, surface temperature, sea surface height and chlorophyll α concentration over the entire research area, using satellite data. JARPA II will investigate the relationships between oceanographic data and species distribution, including cetaceans, by real-time or time series analysis. JARPA II also intends to actively cooperate with international organizations and projects on oceanographic surveys.

2) Modelling competition among whale species and future management objectives

D CONSTRUCTING A MODEL OF COMPETITION AMONG WHALE SPECIES

JARPA II will test several hypotheses explaining changes in abundance of baleen whale species in the Antarctic ecosystem (i.e. blue, fin, humpback, and Antarctic minke whales that prey on Antarctic krill south of 60°S) and aim to construct a model that simulates their changes. The model is called a "model of competition among whale species". The following sets out the concepts underlying the model and related hypotheses (Appendix 6).

CONCEPTS OF THE MODEL

Regions south of 60°S in the Antarctic have a high bio-productivity and are rich in Antarctic krill. They are the major feeding grounds of large whales such as blue, fin, humpback and Antarctic minke whales. The carrying capacity of whale species depends on the available biomass of krill.

Before the start of commercial whaling in 1904, all whale stocks were at the level of full carrying capacity, with a balance maintained among whale species (1- Hypothesis of constant overall carrying capacity).

Whaling first began on the blue whale, the largest species yielding the greatest oil production, and the humpback whale that was a species relatively easy to catch. The level of catches on these two species increased rapidly and the stocks were greatly diminished. Next, whaling moved on to fin whales in the mid 1930s, and the stocks of this species were also severely depleted. The substantial reduction in abundance of these species, which are important components of the ecosystem, resulted in a substantial surplus of krill (2- Krill surplus hypothesis).

Because of its small size and limited oil output, Antarctic minke whale was not exploited at that time. They fed on the surplus of krill and rapidly increased their abundance, with the age at sexual maturity changing to younger ages (2- Hypothesis of krill surplus and 3 - Hypothesis of changing carrying capacity by species).

The catch of humpback, blue and fin whales was banned in 1963, 1964 and 1976, respectively. The age at sexual maturity shifted to younger ages in the humpback and fin whales and an increasing trend in their abundance has become apparent in recent years. Humpback whales now surpass the Antarctic minke whales in biomass in Area IV (4- Hypothesis of stock increase due to a declining age at sexual maturity and 5- Hypothesis of a predominant species in the ecosystem).

Antarctic minke whale stocks would probably decrease in number if the current conditions continue (6- Hypothesis of declining pregnancy rates and/or juvenile survival rates due to inadequate trophic conditions and 7- Hypothesis of competition among whale species).

The current extent of recovery of blue whales is very limited despite the fact that catch of this species has been banned since 1964. It is possible that the chance of mating is low as a consequence of the extremely small number of animals (8- Hypothesis about the causes of slow recovery).

Extensive climatic changes, including global warming, have become apparent in the Antarctic. For instance, the average winter temperature in the Antarctic Peninsula has gone up as much as by 5°C. There is also a possibility of a major decline in the abundance of prey species (krill) due to the rise in surface temperature. Such changes or variations in krill abundance could consequently affect the baleen whale stocks (9- Hypothesis about the effects of environmental changes on cetaceans).

Along with humpback and fin whales, the recovery rate of the blue would probably increase from now on (Branch *et al.*, 2004) and the balance among whale species in the Antarctic ecosystem will continue to change, although the pace of such changes would likely differ by geographical areas.

JARPA II will aim to construct a multi-whale species balance model among whale species that will reproduce the processes described above. The changes in abundance by species in the research area and the factors affecting these changes need to be investigated. Also, further changes in the future will be predicted, and surplus production will be estimated from abundance data for each species, so that appropriate management objectives can be considered through use of the model.

There is an initial ecosystem model of the Antarctic Ocean developed by Mori and Butterworth (2004): a cetacean competition model over krill. For the western North Atlantic, Scenario C (Schweder *et al.*, 2000; Zhu *et al.*, 2004) and Gadget (Begley, 2004; Olafsdottir and Begley, 2004), which also take competition into account, are being developed. JARPA II will make selections after carefully considering the advantages and disadvantages of these models and their appropriateness to the Antarctic ecosystem.

The construction of the model will start with krill as the sole prey species and the four baleen whale species, which will compete for the prey. Although it seems a simple ecosystem model and we expect to be able to match population abundances and trends indicated by JARPA II. In the future, JARPA II will incorporate pinnipeds such as crabeater seals, and seabird predators as well as cephalopods, which all prey on Antarctic krill, to construct a more realistic ecosystem model.

III) NEW MANAGEMENT OBJECTIVES INCLUDING THE RESTORATION OF THE CETACEAN ECOSYSTEM

JARPA II will consider establishing new management objectives or goals including the recovery of the blue whale when the model of competition among whale species has been developed to a certain extent. This can also be done by comparing the results of work to improve the minke whale management procedure with the knowledge obtained directly from monitoring activities.

Possible management goals could be accelerating the recovery of blue and fin whales, maximization of total production or increasing the productivity of specific whale species in relation to their economic value.

JARPA II will further examine the advantages and disadvantages of alternate management goals. JARPA II will also examine the possible effects of the resumption of commercial whaling on the relative numbers of the various species and stocks and aim to provide advice on management policies for whaling that will meet chosen management objectives.

3) *Elucidation of temporal and spatial changes in stock structures*

Genetic and biological markers will be sampled and/or observed from samples taken in the monitoring surveys of whales. Biopsy sampling will be conducted on blue, fin and humpback whales.

Analyses of mtDNA control region sequencing and nuclear DNA microsatellites will be conducted. Other biological markers will also be analyzed.

Further, JARPA II will develop tagging methods for data loggers (TDR) and satellite tagging transmitters, and trace migration routes of the tagged whales in order to elucidate stock structure.

Based on the analysis, we will better elucidate fin and blue whale stock structure. Also, the spatial and temporal variation in stock boundaries (or equivalently changes of the relative proportions of stocks in mixing areas) of the Antarctic minke and humpback whales will be tracked.

4) *Improving the management procedure for Antarctic minke whale stocks*

* Estimation of MSYR

Recruitments over the years are estimated by VPA based on age and abundance data. Recruitments are fit to the Pella-Tomlinson reproduction model to estimate MSYR.

* Re-establishment of management Areas for the Antarctic minke

The management area for the East Indian Ocean Stock and West South Pacific Stock should be re-established using the results obtained from the third research objective. That is to say, by elucidating the degree of intermingling and changes according to year in sector VW where the Indian Ocean Stock is expected to be mixed with the West South Pacific Stock. *Small Areas* would be specified. As for the other sectors, *Small Areas* that have been established by a longitudinal span of 10 degrees should be abolished in favour of more biologically realistic choices.

* Incorporation of effects due to inter-species relations among species

An examination will be made of whether or not the current RMP has functions that meet inter-specific phenomena (for instance, decline in carrying capacity and abundance decrease) that have become apparent from research under the first and second objectives. If not, consideration will be given as to how to incorporate them into the calculation of catch limits under a refined RMP.

V. SAMPLE SIZES

I. Antarctic minke whales

First, the sample size necessary for the monitoring of biological parameters has been calculated. The sample size was calculated not in relation to the precision of the parameter estimates themselves, but to detect significant temporal changes in the estimates. Changes in the age at sexual maturity and blubber thickness are very important since they indicate changes in abundance trends or shifts in prey conditions. A sample size needed to detect changes in a six-year period (by applying past rate of change, that is, the slope of the regression) has been adopted as the pertinent criterion. Required sample sizes are then calculated as follows:

Age at sexual maturity: Age at sexual maturity shifted toward younger age at an annual rate of 0.2 years during the period of commercial whaling years, but presently it has stabilized. It is important to determine when it starts to increase. It is not plausible that the changes of age at sexual maturity starts at the rate of 0.2 year, rather it will have a period of slower change rate, and therefore annual rate of 0.1 year was chosen. Sample size at a detection level of yearly rate of change of 0.1 year is 1,288 animals/year (Appendix 6).

Apparent pregnancy rate: The apparent pregnancy rate of minke whales is high and is 90% or more. Sample size necessary to detect the change of 1.0-1.5% at the initial stage when change begins is 663-1,617 animals (Appendix 6).

Blubber thickness: Similarly, sample size for the detection of a yearly rate of change of 0.5 mm. observed in the past is 818 to 971 animals (Appendix 7).

The sample size necessary for pathological monitoring (effect of contaminant on whale species) is 864 animals/year at 10% of the prevalence rate, which was expected for the free-ranging whale by using data from the feasibility observation in the JARPA surveys (Appendix 4).

The sample size necessary for detecting yearly change in mixing proportion between Antarctic minke whale stocks in Area VW is shown in Appendix 3. The mixing rate in the 1996/97 season was different from those of other seasons. Results obtained showed that for non-overlapping 95% credibility intervals between the estimates of the mixing proportions over Area VW, a sample size in that region of about 300 will be required. This sample size will provide the power to detect an annual change as big as the one that appears to have occurred in 1996/97. The abundance in Area VW is approximately 1/3 of that in the research area of each year. Therefore, about 300 samples are expected in Area VW under the total sample size of 900 animals. This means that the necessary sample size in Area VW will be ensured.

Mark-recapture analysis is useful for abundance estimates and the elucidation of behavior patterns. Such analysis has been conducted in recent years based on biopsy sampling and genetic identification of individuals. However, this has not proved to be practical since non-lethal sampling has been involved, which means that the numbers of samples obtained are small in relation to the amount of effort involved. Large-scale biopsy sampling is also inefficient in offshore waters for baleen whale species.

An alternative method that offsets these deficiencies has been developed recently based on catches. Mother-fetus pairs in the catches are examined using a set of microsatellites. Based on the genetic profiles, the potential father of the fetus is sought among the rest of whales in the catches. Attempts are being made to estimate the abundance and to elucidate stock structure and behavior patterns based on the positions where the parents were taken (for example, Skaug and Oien, 2004). The method could also be useful for estimating differences in reproductive success rates between individuals or groups of whales differing in life histories and ages.

In Norway, a total of 288 mother-fetus pairs were examined out of 3,301 whales in the DNA register, and five possible fathers were identified. Based on this, the abundance of male minke whales was estimated to be 38,400, but the figure is imprecise. If this method is applied in JARPA II, at least 800-1,000 animals per year will be necessary even if the samples are pooled for the three seasons in the six years (Appendix 8).

In summary, as the minimum number of sample size, 663 animals were calculated for apparent pregnancy rate. However, for most of the other parameters, the sample sizes calculated were in a range of 800-1,000 animals with more than 800 being desirable. Therefore, the sample size of minke whales was set at 850 \pm 10%. The allowed range of \pm 10% was applied since, based on the past data on school density, there are annual changes in school density on the line transects, which are determined in advance.

2. Humpback whales

The sample size required for the monitoring of important biological parameters in this species has been examined. Changes in the pregnancy rate and age at sexual maturity are very important since they indicate changes in the trend of abundance or shifts in prey conditions. A sample size needed to detect changes observed in past years (that is, slopes of regression) has been adopted as the criterion.

The results of sample size calculations for pregnancy rate and age at sexual maturity (Appendix 6) are outlined below. There were hardly any data on the age at sexual maturity so those for fin whales were used instead. A sample size for a six-year period is preferable since the research program will be reviewed every six years, but in the case of humpback whales the resulting values for this period were large so that we have decided to use the sample size required for twelve years, as a precautionary approach.

Apparent pregnancy rate: 41 to 181 animals for a yearly rate of change of 1.5 to 3% observed in the past (Appendix 6).

Age at sexual maturity: 131 animals for a yearly rate of change of 0.1 years (for fin whales) (Appendix 6).

Considering these results, we have decided on a sample size of 50.

3. Fin whales

Sample size was determined under the same conditions and criteria as for the humpback whale.

Apparent pregnancy rate: 55 to 107 animals for a yearly rate of change of 2 to 2.5% observed in the past (Appendix 6).

Age at sexual maturity: 131 animals for a yearly rate of change of 0.1 years (Appendix 6).

For the DNA analysis, samples of 20 to 50 animals have been recommended (Hoelzel, 1991).

As with humpback whales, we have decided on a sample size of 50.

VI. FEASIBILITY STUDIES

1. Necessity and objectives

As explained earlier area will be enlarged, sample size will be increased and new species added. The objective of the feasibility study is to examine the practicability and appropriateness of sighting methods and sampling procedures, and improve them as necessary.

Catches of humpback and fin whales were banned in the Antarctic in 1963 and 1976, respectively. Crews and research staff of the research fleet have no experience in catching and flensing these two large-sized whales. Thus, it is necessary to examine the practicability of methods of hunting, hauling, flensing and biological sampling.

If possible, detailed surveys of krill and the marine environment will be also carried out during the feasibility studies.

2. Survey period

The first two seasons (2005/06 and 2006/07) will be allocated to the feasibility studies.

3. Survey methods

As a general rule, sighting and sampling methods will be the same as explained in Section IV-4 above.

4. Sample size

As mentioned in Section V-1, a maximum of 850±10% Antarctic minke whales will be sampled from the first year. The practicability and appropriateness of sighting methods in the enlarged area and sampling procedures given the increased sample size will be examined.

A maximum of ten fin whales will be sampled in each season. These samples will be used to check the practicability of catching, flensing and taking of biological measurements of large whale species. There is little information for fin whales in recent years, and preliminary data on food habit and maturity will be obtained in the feasibility study.

Humpback whales will not be taken during the feasibility study.

VII. EFFECT ON THE STOCKS

Based on the results of the Hitter-Fitter Method (Appendix 9), no adverse effect on Antarctic minke whale stocks is expected.

As regards humpback whales, their steady recovery has been reported (Bannister and Hedley, 2001; Paterson, Paterson and Cato, 2001; Johnston and Butterworth, 2005). Using the population dynamics model by Johnston and Butterworth (2005), the effect of take of 50 animals on the stock was examined. The results showed that the take of 50 animals per year hardly delays their recovery to the pristine level (Appendix 9).

The abundance estimate of fin whales (Appendix 1) does not cover their entire range and is therefore greatly underestimated. The planned sample size is fifty animals each year, which comes to twenty-five a year from each stock which is less than 1% of the underestimated abundance. Therefore it is considered to have no adverse effect on the stocks. During the feasibility study the sample size is ten animals each year (effectively only 5 a year from each stock). The effect is therefore negligible.

VIII. RESEARCH VESSELS, RESEARCH ORGANIZATIONS AND FOREIGN PARTICIPATION

1. Research vessels

The whale research fleet will be composed of two dedicated sighting vessels (*Kyoshin Maru No.2* and the other undecided vessel), three sampling vessels (*Yushin Maru No.2*, *Yushin Maru*, and *Kyo Maru No.1*) and one research base vessel (*Nisshin Maru*). If possible, other vessel will engage in more detailed surveys on prey and marine environment.

2. Research organizations

(1) Institute of Cetacean Research (ICR)

(2) National Research Institute of Far Seas Fisheries (NRIFSF) and other institutes of the Fisheries Research Agency (FRA)

(3) Other research institutes

3. Participation of foreign scientists

Participation of foreign scientists will be welcomed, so long as they meet the qualifications established by the Government of Japan. The required qualifications are the same as for JARPN II.

IX. NECESSITY OF LETHAL METHODS

The necessity of using lethal methods was already discussed at the 1997 JARPA Review meeting (IWC, 1998).

Parameters related to age and stomach content surveys, which are essential for the objectives of JARPA II, cannot be obtained using non-lethal methods alone. JARPA results showed that the meal size, blubber thickness and age at physical and sexual maturity strongly suggested inter and intra species competitions (Tamura and Konishi, 2005; Bando *et al.*, 2005; Zenitani and Kato, 2005; Konishi and Tamura, 2005; Fujise *et al.*, 2005). These parameters are essential for monitoring of the Antarctic ecosystems, and therefore lethal sampling is necessary for JARPAIL.

X. UTILIZING EXISTING DATA

1. Data from commercial whaling

Pregnancy rates and age at sexual maturity, of humpback, fin, and blue whales have been estimated based on data from commercial whaling (Appendix 6. Lockyer, 1979). They are valuable information and will be compared with the data obtained in JARPA II.

Biological data on Antarctic minke whales obtained from past commercial whaling and JARPA have been already compared. They are a valuable time series of data required for connecting from past to future.

2. Data from JARPA

Data from JARPA are highly valuable from the standpoint of monitoring. In JARPA II environmental and biological data will be collected as a continuation of JARPA.

XI. OTHERS

1. Processing of whale samples

All the whales sampled will be treated as stipulated in Paragraph 2, Article VIII of the International Convention for the Regulation of Whaling. Tissue samples will be taken from all whales and DNA data registered for market control (individual identification).

2. Report to the IWC Scientific Committee

A report of research cruises will be submitted to the annual or other meetings of the IWC Scientific Committee and other organizations, every time a cruise has been completed. The report of the two feasibility cruises will be submitted to the IWC/SC after they have been completed. When the full-scale research

program has been launched, a comprehensive report will be submitted to the IWC/SC after each six-year research period.

3. Whale killing methods

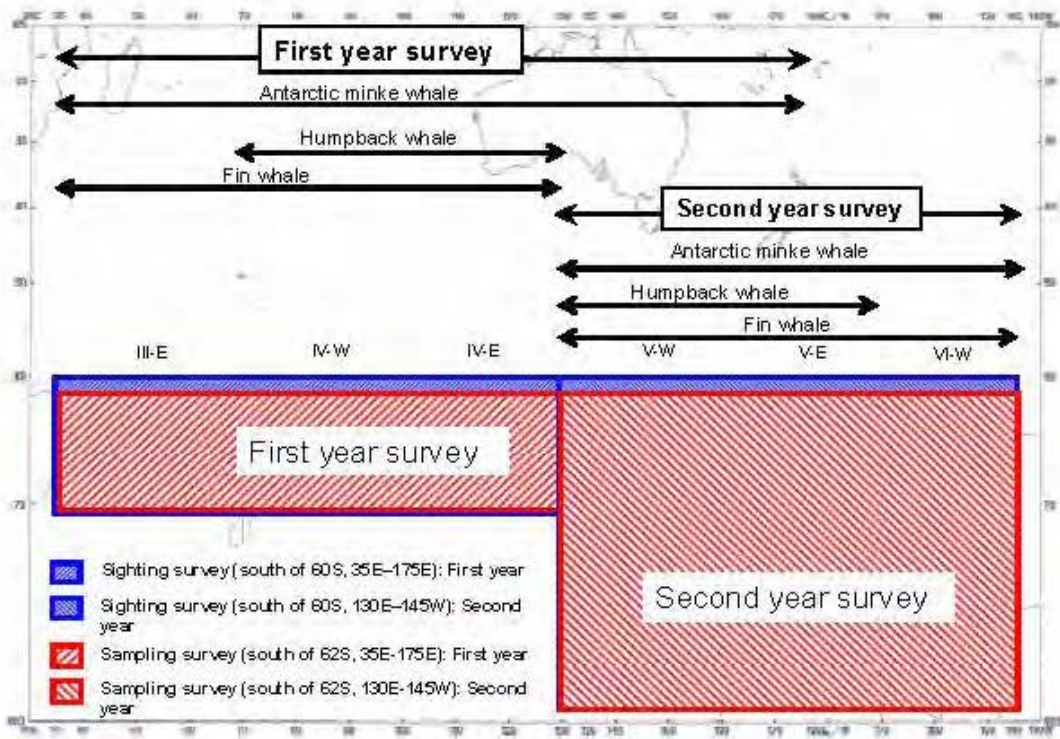
All whales will be taken using explosive grenades. If instantaneous death is not achieved by the primary killing method, a suitable secondary method, such as a large caliber rifle or another explosive grenade will be chosen, depending on whale species and the condition of the hunted animal.

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Annex 106: Government of Japan, Administrative Vice-Minister, Ministry of Agriculture, Forestry and Fisheries (T Shirasu), Transcript of Press Conference, 14 April 2008 [excerpts translated]

**Summary of Press Conference – Mr Shirasu, Administrative Vice-Minister
Ministry of Agriculture, Forestry and Fisheries**

[1] Main Issues

- Research whaling
- Toyako Summit agenda items
- Importation of Chinese vegetables

Date and time: 2 pm to 2:13 pm, Monday 14 April 2008
Location: Press Conference Room, Ministry of Agriculture, Forestry and Fisheries

Reporter: Tomorrow the Antarctic research whaling ships will return to their home ports. According to this morning's press release, the number of whales captured was short of the target, most likely due to the Sea Shepherd's obstructive actions. Please give us your views and assessment of the survey whaling including this last run of confrontations.

Mr Shirasu: As you have said, having completed the research whaling, the Nisshin Maru is scheduled to enter port tomorrow. This year, the ship took evasive action in response to the obstructive activities, resulting in a shortfall in the total number of survey days. This, in turn, meant that the number captured fell below the target.

For your information, the capture targets were 850 minces and 50 fins, together a total target of 900 whales. However, the actual number of whales captured was 551 minces. This was at approximately 60% of the target, and we consider it very regrettable that the target was unable to be reached. With regard to the details of the survey results, I am scheduled to receive a briefing from the head of the survey fleet tomorrow afternoon, when I will seek to be informed of them.

That said, for our part, as we are repeating each time at the outset, scientific whaling is the collection of scientific knowledge which is permitted by the International Whaling Commission, and as it is a permitted survey which is contributing scientifically at the IWC to our understanding of issues regarding sustainable whale eco-systems, we wish to continue it without any further fuss.

[...]

[2] Reporter: This is a question in connection with the whales. With the number as low as 60% of the target or the plan, what are your views about how this will affect future survey research, and, as the whales are the source of income which is used for the next survey in the next financial year, what will the impact be in this area – with only 60%?

Mr Shirasu: With regard to that, there have been years when, for a variety of reasons, the planned capture targets have not been met. With regard to the issue as to the immediate impact on the following year's survey whaling, when we draft next year's survey plan we will have to conduct a detailed examination and make our assessment, and this will take into account this year's exact capture figures and sales of whales. At the present stage, we don't

see this as immediately causing a major change to the survey whaling we are doing at the moment.

In any case, this survey whaling, as I have been saying, is carried out in various forms, including, of course, sightings surveys, and, naturally, there is the research which cannot be done without actually capturing the whale. Of course, I haven't yet been able to receive a full report about the research results, but with regard to the collection of scientific knowledge, as we see it, there's nothing to suggest that the required research couldn't be done due to that.

Reporter: If there was no required research that they couldn't do, doesn't this mean that the catch targets in the program were set at slightly above the necessary number from the start?

Mr Shirasu: No, that's not the case. I mean, look, what I've been saying is this: the specific amount that I've been saying—that was about 60%—and that catch number is a fact. On the quantitative level, the catch has been limited to this amount; as I said, I have not yet received a briefing on the fine details of what specific information, what research was done, and what results came up. But, as a general statement, I would say that there hasn't been any excessive setting of research catch targets. Although the regular sightings surveys and research carried out through capture were done at the 60% level, at the present stage, I'm saying that I believe the required research was done.

[...]

農林水産省

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白須農林水産事務次官記者会見概要

| | |
|--------|--|
| 日時 | 平成20年4月14日(月曜日)14時00分～14時13分 於 本省会見室 |
| 主な質疑事項 | <ul style="list-style-type: none"> ● 調査捕鯨について ● 洞庭湖サミットの議題について ● 中国産野菜の輸入について |

記者

南極の調査捕鯨が、明日船が帰港しますが、今日午前中の発表でも捕獲されたクジラの数が、おそらくシー・シェパードの妨害行為等の影響もあって、数が目標的には届いていませんが、今回の一連の騒動も含めて調査捕鯨に対するご見解と評価を教えてください。

次官

お話のとおり明日、日新丸が調査捕鯨を終えまして入港する予定になっておるわけでございます。本年度の調査捕鯨につきましては、やはり妨害活動の回避というふうなことがございまして、調査日数全体として不足が生じたわけでございまして、その結果、捕獲頭数としては予定を下回ったわけでございます。ちなみに捕獲の予定頭数は、ミンククジラ850頭、ナガスクジラ50頭ということで合計900頭の予定だったわけでございますが、捕獲の実績頭数としては、ミンククジラ551頭ということでございます。そんなことで約6割という水準だったわけでございまして、計画に達することができなかったというのは誠に遺憾(いかん)なことであるというふうに思っております。詳細の結果については調査団長が明日午後、説明を行うということになっておりますので、そこでお聞きをいただきたいわけでございますが、私の方としては、毎回、前から申し上げておりますようにこの調査捕鯨はIWC(国際捕鯨委員会)で認められた科学的知見の集積ということで、持続的なクジラの生態系の問題とかそういうことを把握することによって、IWCにおいて、私どもが科学的に貢献をしていこうということと認められた調査でございますので、今後ともこの点については盡々(しゆくしゆく)とやってまいりたいというふうに考えているわけでございます。

記者

世銀(世界銀行)とIMF(国際通貨基金)の合同開発委員会で、食料高騰問題を(洞庭湖)サミットの議題にすべきだという議論があったというふうに報道されておりますし、日本もサミットの議題にすることを表明したという報道もあるようですが、日本として食料高騰問題について、サミットで扱うことについての政府内の意見調整はどうなっているのか、お聞かせください。

次官

今、お話のとおり、13日にワシントンで開催をされました世界銀行と国際通貨基金の合同開発委員会におきまして、世銀のゼーリック総裁が食料価格高騰の中で貧困国への支援につきまして、「各国政府ができるだけ早く対応することが重要である」と、こういう発言があったということについての報道がございますことは承知をいたしております。先日のG8の開発大臣会合の場でも見解が一致したわけでございますが、食料価格高騰の問題はやはり開発全般、特にその中でもアフリカに対して深刻な影響を及ぼすというふうなことで、国際社会が真剣に取り組むべき問題であるというふうに私どもも考えておるわけでございます。途上国の食料安全保障を確保することのためには、なんといってもこれら諸国において、農業生産自体が生産性の向上ということを図ることが不可欠でございまして、したがって、ご案内のとおり5月に第4回のアフリカ開発会議、横浜で

開催されるわけですが、ここでもアフリカ農業が重要な議題の一つになっているわけですが、この中でも農業生産性の向上のための協力というのが、議題の一つとして取り上げられることになっているわけですが。また、その成果はサミットにもつなげていくことにされているわけですが。したがって、私どもとしては、外務省なりJICA(独立行政法人国際協力機構)なりと、そういった関係機関とも連携をしまして、我が国は途上国における農業生産性の向上という点については、技術協力というふうな格好での、技術を活用した支援というもの、そういう用意は十分あるわけですから、そういったことを通じて、途上国の申し上げておられるような農業生産性の向上ということに貢献をしてみたいというふうな考えにしているわけですが。

記者

いずれにしても、サミットでは取り上げられるという理解でよろしいですか。

次官

ですから、具体的にサミットの中で議題でどうだとかという点については、前回申し上げておりますように、これはやはり関係国と協議をして具体的にどういう議題になるのかという点については、今後の協議によって決まってくるだろうということになります。

記者

クジラの関係ですけれども、目標、計画の6割にとどまったということで、今後の調査研究に与える影響ですとか、あるいはクジラは収入源、来年度の、次回の調査に充てるという立付けになっているわけですが、それに与える影響ですとか、6割にとどまったということの影響面、どのようにお考えでしょうか。

次官

そのところは、年々(としとし)にやはりいろいろな理由で予定頭数に届かなかった年もあるわけですし、それが直ちに次の年の調査補給にどう影響があるかという点については、私どもも今回の具体的な頭数、クジラの販売なり、そういったことも含めて来年度の調査計画を立てる上で具体的に検討をして判断をしていかなくてはいけないということになっています。これが直ちに、今行っております調査補給に大きな変更を及ぼすというふうなことは、視察隊においては私どもとしては考えておりません。いずれにしてもこの調査補給というものは、申し上げておりますように、やはりいろいろな形でのクジラの、もちろん目視での調査もありますれば、具体的にクジラを捕獲して行わなくては分からない調査というものも当然あるわけですが、そういった科学的な知見を累積するという面における調査については、まだ、もちろん私今回の結果について十分報告を受けておりませんが、それによって何か必要な調査が行えなかったということではないというふうな考えをしております。

記者

必要な調査ができなかったということではないということは、あらかじめ計画値というのが、必要頭数よりちょっと多めに設定されているんですか。

次官

いや、そういうことじゃないんです。ですから、申し上げているように、具体的に今回申し上げている6割くらいにとどまったと、それは頭数としては事実です。量的にはそういうことにとどまったわけですが、それによって具体的にどういう知見が、どういった調査が行われて、どういった結果が出てきたかということについての詳細は、申し上げたように、まだ報告を受けたわけではございませんが、一般論として申し上げれば、決して何か過大な調査の頭数を設定しているというわけではなくて、そういうことについての一般的な目視、それから具体的に捕獲して行う調査ということについての6割という水準であったけれども、必要な調査は行われたのではないかとこの段階では申し上げているわけです。

記者

中国産の野菜の輸入状況なんですけれども、3月の第4週ですと、3月の第3週に比べて4割ぐらい増えていますかね。だから、回復の兆(きざ)しがやや見えたかなということが考えられると思うんですけども、その後はいかがでしょうか。4月の第1週とかは。

次官

4月の第1週の数字でございます。3月31日からの1週間の中国産野菜の輸入検査の実績ということですが、前週に比べまして約10パーセントの減少というふうに、今度はなっただけでございます。

おっしゃるとおり、その前の週は40パーセントの増ということでございましたので、ところが、今回はですね、この1週間は10%の減というふうなことで。したがって、なかなかこの判断は難しいことかと思えます。

かつまた、今申し上げている10パーセントの減になったというこの1週間の数字は、対前年の同時期の比較でいきますと、67パーセントという水準でございまして、これは、3月全体の対前年同期比が55パーセントという数字でございますので、その3月全体の前年の55パーセントと比較すれば、この1週間の数字は67パーセントということですから、それは、ちょっと平均よりは増えているというふうなことでございます。

したがって、40パーセント増だったのが、前週と比べれば、マイナス10パーセントということなので、そここのところ、なんとも、申し上げることは難しいかと思っております、引き続き、こういった品目毎の問題もありましようし、あるいは時期による輸入量の変動もあろうかと思っておりますので、そこらへんも踏まえて、今後とも良く注視していく必要があるだろうというふうにご考えております。

以上

[ページトップへ](#)

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〒100-8950 東京都千代田区霞が関1-2-1 電話:03-3502-8111(代表)

農林水産省

Summary of press conference – Minister Akamatsu, Agriculture, Forestry and Fisheries

Main questions: Effects of the arrest of an anti-whaling group member

Date and time: 09:05 to 09:50, Tuesday 9 March 2010

Location: Ministry Briefing Room

[...]

Reporter: If you'll allow me to return to the subject of bluefin tuna, what do you make of this situation by which Japanese food culture, whether it be whales or bluefin tuna or dolphins, is being challenged by environmental groups from the standpoint of environmental protection?

Minister: Well, there was that business with the Academy Awards yesterday, of course. I hear that "Oceans" is also on a similar theme and I'd like to see it, although it's finishing this week. In any case, regarding the dolphins in Taichi-cho, Wakayama Prefecture, many of the specific depictions in the film are based on misunderstandings. So, the message is very much to the effect that Japanese are so barbaric; how can they kill these cute dolphins in such a horrible way, et cetera, and I think this is very unfortunate.

However, in that respect, the fact is that there is a food chain, and if we didn't eat these species, that food chain would be disrupted, but we have to move this debate forward based on the basic consideration of how to make effective use of these resources, in other words exploit just what is necessary to the minimum extent necessary. Otherwise, especially in the case of whales and bluefin tuna, in fact all kinds of tuna, since these are fundamental to Japan's food culture, we can't give them up, and although it might take time, I think we must do what we can to seek understanding about these matters.

Therefore, I said before and I will repeat myself, it will not work to simply tell them something like "research whaling is permitted so we'll just do as we please and you shouldn't complain". Rather, with regard to the whales in the Antarctic Ocean, let's say the catch is 800 whales, well we don't actually need 800; I mean it's more than we need – we would have enough material for research with that or less than that number of whales. So, because this is the case, even if it does mean reducing our catch, maybe to one-half or two-thirds, I'm not sure, I think that research will still be necessary from here on, so there are various ways of conducting that research, so we could just do that. The greater problem at the moment is rather whether or not we can resume commercial whaling in Japan's coastal waters. If we do this, it will revitalise small fishing towns all over Japan, and moreover, these whales off the coast of Japan currently gobble up 3-5 hundred million tons of squid, small fish such as horse mackerel and so forth. So from the point of view of managing these resources sustainably, it is in fact necessary that we perform a

thinning out of them as appropriate, so I am definitely keen to take this kind of proposal forward. Actually as part of the behind the scenes negotiations we are currently engaged in, Japan, together with the US, which has been the greatest anti-whaling proponent, are putting this forward as a joint proposal and are now trying to persuade other countries. This change requires a three-quarters majority, so at the moment we're trying our best to secure this.

[...]

赤松農林水産大臣記者会見概要

| | |
|----------------|---|
| 日時 | 平成22年3月9日（火曜日）9時05分～9時50分 於:本省会見室 |
| 冒頭発言 主な質疑事項 | (冒頭発言)公共建築物木材利用促進法案の閣議決定について (冒頭発言)閣議の報告について 大西洋クロマグロを巡る情勢、ワシントン条約締結国会議への対応について 反捕鯨団体メンバーの逮捕の影響等について 食料・農畜・農村基本計画に係るスケジュールについて 諫早河干拓事業検討委員会について 熊本県大蘇ダムに係る対応について 公共建築物木材利用促進法案について |

記者

クロマグロのお話に戻って恐縮なのですが、クジラですとか、クロマグロ、あるいはイルカと、日本の食文化が環境保護団体、環境保護の立場から問われている。こういう事態について、大臣はどのように受け止めていらっしゃるのでしょうか。

大臣

昨日、アカデミー賞の、あの話題もありましたね。僕も、今度、今選中で終わっちゃうからあれなんですけれども、「オーシャンズ」も、何かそういう中身だと聞いていますので、あれも見たいと思うのですが、とにかく、(和歌山県)太地町のイルカの話なんかは、かなり具体的な中身は願解に基づくものが多いんですね。だから、こんなに日本人は野蛮で、こんなかわいいイルカちゃんを、こんな殺し方で殺しているとかいうような、非常に、こういうメッセージになっているので、残念に、これは思います。

ですけれども、そういう意味で言えば、食物連鎖ですから、食べることを否定したら何も成り立たなくなっちゃうのであれですけれども、後はいかに有効活用して、必要なものを必要なだけ、最小限、やっぱり利用していくという基本的な考え方で進まざるを得ないと、特に、クジラだとか、それから、クロマグロなんていう、クロマグロに限りません、マグロ魚類ということについては、これは、日本の基本的な食文化なものだから、これを否定するわけにはいかないし、是非、時間はかかるかも知れませんが、地道に、こういうことの、やっぱり理解を求めていくということしかないと思えますね。

ですから、さっきも、まあ、繰り返しになりますけれども、いわゆる調査捕鯨は認められているんだと、だから、おまえらにとにかく言われる必要はないと、俺はやりたいただけやるぞ、みたいなことでやったのじゃあ、これほうまくいきませんから、むしろ、南氷洋のクジラなんていうのは、例えば、800頭あったって、800頭要らないのですから、要らないというか、そんなに捕りすぎたって、調査の資料は十分それで、それ以下でも驚きますし、まあ、そういうことがありますので、それは、例えば、半分なのか、3分の2になるかは分かりませんが、とにかく減らしてでも、必要な調査は、これはもう、これからでも必要だと思いますから、いろいろなやり方、調査でもあると思いますけれど、それをやっていけばいいことで、それよりも、むしろ、一番、今、困っているのは、日本沿岸の商業捕鯨を再開できるかどうか、これをやっていけば、日本各地の小さな漁港が、また再び豊って、しかも、今、沿岸に来ている、そういうクジラが、3億トンから5億トン、バカバカバカバカ、みんな、イカだ。あるいは、小さな魚ですね、アジだとか、そういうのをみんな食べちゃうわけですから、むしろ、そういうところを、資源の、持続的な、やっぱり維持を図っていくという意味では、やっぱり適正に間引きしていくことも必要なので、これは、そういう提案を、是非、していきたいし、現に今、水面下でやっている交渉では、そういうことを、一番の反捕鯨国であるアメリカと、日本と一緒にな

って、共同提案しながら、今、各国を説得しているというところで、何とか、これが、変える場合は4分の3になりますので、4分の3以上取れるように、今、努力しているというところでございます。

Annex 108: Government of Japan, Tokyo Legal Affairs Bureau Nakano Branch, *Certified Record of All Closed Register Particulars: Kyodo Senpaku Kaisha Ltd, Corporate Registration No. 0100-01-041436 (22 December 2010)*

Certified Record of All Closed Register Particulars

Kyodo Senpaku Kabushiki Kaisha
Corporate Registration No. 0100-01-041436
4-5 Toyomi-cho, Chuo-ku, Tokyo

| | | |
|------------------------------------|---|---|
| Head Office | <u>2-4 Kasumigaseki 3-chome, Chiyoda-ku, Tokyo</u> | |
| | <u>8-3 Higashi-Nihombashi 2-chome, Chuo-ku, Tokyo</u> | <u>Moved 11 April 1988</u> |
| Purposes | <u>(1) Undertake commissioned surveys of cetaceans and other marine resources</u> <u>(2) Marine transportation and lease of vessels</u> <u>(3) Purchase and sale of daily necessities and sundries</u> <u>(4) Business incidental to and associated with each of the above</u> | |
| Per-share value of par value stock | <u>¥50,000</u> | |
| Notes regarding Executives | <u>Director Hiroshi OGAWA</u> | <u>Reappointed 28 January 1998</u> |
| | <u>Director Hiroshi OGAWA</u> | <u>Reappointed 27 January 2000</u> <u>Entered in register 10 February 2000</u> |
| | <u>Director Hiroshi OGAWA</u> | <u>Reappointed 29 January 2002</u> <u>Entered in register 21 February 2002</u> |
| | <u>Director Hiroshi OGAWA</u> | <u>Reappointed 29 January 2004</u> <u>Entered in register 3 March 2004</u> <u>Resigned 27 January 2006</u> <u>Entered in register 27 February 2006</u> |
| | <u>Director Osamu ITO</u> | <u>Reappointed 28 January 1998</u> |
| | <u>Director Osamu ITO</u> | <u>Reappointed 27 January 2000</u> <u>Entered in register 10 February 2000</u> <u>Resigned 29 January 2002</u> <u>Entered in register 21 February 2002</u> |

Serial no. *Ta-405838* *Underlined particulars have been erased from the register. 1 / 8

Kyodo Senpaku Kaisha, Ltd.
 Corporate registration no. 0100-01-041436
 4-5 Toyomi-cho, Chuo-ku, Tokyo

| | | |
|--|------------------------------------|---|
| | <u>Director Hitoshi YAMAMOTO</u> | Reappointed 28 January 1998 |
| | <u>Director Hitoshi YAMAMOTO</u> | Reappointed 27 January 2000 Entered in register 10 February 2000 |
| | <u>Director Hitoshi YAMAMOTO</u> | Resigned 29 January 2002 Entered in register 21 February 2002 |
| | <u>Director Tadashi IMAI</u> | Reappointed 28 January 1998 |
| | <u>Director Tadashi IMAI</u> | Resigned 27 July 1999 Entered in register 5 August 1999 |
| | <u>Director Mitsuhiro HAYAKAWA</u> | Reappointed 28 January 1998 |
| | <u>Director Mitsuhiro HAYAKAWA</u> | Resigned 27 July 1999 Entered in register 5 August 1999 |
| | <u>Director Kenichi SUZUKI</u> | Appointed 28 January 1998 |
| | <u>Director Kenichi SUZUKI</u> | Reappointed 27 January 2000 Entered in register 10 February 2000 |
| | <u>Director Kenichi SUZUKI</u> | Reappointed 29 January 2002 Entered in register 21 February 2002 |
| | <u>Director Kenichi SUZUKI</u> | Reappointed 29 January 2004 Entered in register 3 March 2004 |
| | <u>Director Kenichi SUZUKI</u> | Reappointed 27 January 2006 Entered in register 27 February 2006 |
| | <u>Director Kenichi SUZUKI</u> | Resigned 30 June 2006 Entered in register 11 July 2006 |

Serial no. Ta-405838 *Underlined particulars have been erased from the register. 2 / 8

Kyodo Senpaku Kaisha, Ltd.
 Corporate registration no. 0100-01-041436
 4-5 Toyomi-cho, Chuo-ku, Tokyo

| | |
|-----------------------------------|---|
| <u>Director Takehiro TAKAYAMA</u> | Reappointed 28 January 1999 |
| <u>Director Takehiro TAKAYAMA</u> | Reappointed 29 January 2001 Entered in register 20 February 2001 |
| <u>Director Takehiro TAKAYAMA</u> | Reappointed 29 January 2003 Entered in register 4 March 2003 |
| <u>Director Takehiro TAKAYAMA</u> | Reappointed 28 January 2005 Entered in register 10 March 2005 |
| | Resigned 27 January 2006 |
| | Entered in register 27 February 2006 |
| <u>Director Noriyoshi HATTORI</u> | Appointed 28 January 1999 |
| <u>Director Noriyoshi HATTORI</u> | Reappointed 29 January 2001 Entered in register 20 February 2001 |
| <u>Director Noriyoshi HATTORI</u> | Reappointed 29 January 2003 Entered in register 4 March 2003 Resigned 29 January 2004 Entered in register 3 March 2004 |
| <u>Director Tajiro TSURUMOTO</u> | Appointed 28 January 1999 |
| <u>Director Tajiro TSURUMOTO</u> | Reappointed 29 January 2001 Entered in register 20 February 2001 |
| <u>Director Tajiro TSURUMOTO</u> | Reappointed 29 January 2003 Entered in register 4 March 2003 |
| <u>Director Kazuo YAMAMURA</u> | Appointed 28 January 1999 |

Serial no. *Ta-405838* *Underlined particulars have been erased from the register. 3 / 8

Kyodo Senpaku Kaisha, Ltd.
 Corporate registration no. 0100-01-041436
 4-5 Toyomi-cho, Chuo-ku, Tokyo

| | |
|-------------------------------------|--|
| <u>Director Kazuo YAMAMURA</u> | Reappointed 29 January 2001 Entered in register 20 February 2001 |
| <u>Director Kazuo YAMAMURA</u> | Reappointed 29 January 2003 Entered in register 4 March 2003 |
| <u>Director Kiyokazu FUKUI</u> | Appointed 27 July 1999 Entered in register 5 August 1999 Resigned 27 January 2000 Entered in register 10 February 2000 |
| <u>Director Hiroshi FUJII</u> | Appointed 27 July 1999 Entered in register 5 August 1999 Resigned 27 January 2000 Entered in register 10 February 2000 |
| <u>Director Norifumi YANAGIHARA</u> | Appointed 27 July 1999 Entered in register 5 August 1999 Resigned 27 January 2000 Entered in register 10 February 2000 |
| <u>Director Kiyokazu FUKUI</u> | Appointed 27 January 2000 Entered in register 10 February 2000 |
| <u>Director Kiyokazu FUKUI</u> | Reappointed 29 January 2002 Entered in register 21 February 2002 |
| <u>Director Kiyokazu FUKUI</u> | Reappointed 29 January 2004 Entered in register 3 March 2004 Resigned 28 January 2005 Entered in register 10 March 2005 |
| <u>Director Hiroshi FUJII</u> | Appointed 27 January 2000 Entered in register 10 February 2000 |

Serial no. *Ta*-405838 *Underlined particulars have been erased from the register. 4 / 8

Kyodo Senpaku Kaisha, Ltd.
 Corporate registration no. 0100-01-041436
 4-5 Toyomi-cho, Chuo-ku, Tokyo

| | |
|-------------------------------------|--|
| <u>Director Hiroshi FUJII</u> | Reappointed 29 January 2002 Entered in register 21 February 2002 |
| <u>Director Hiroshi FUJII</u> | Reappointed 29 January 2004 Entered in register 3 March 2004 Resigned 28 January 2005 Entered in register 10 March 2005 |
| <u>Director Norifumi YANAGIHARA</u> | Appointed 27 January 2000 Entered in register 10 February 2000 |
| <u>Director Norifumi YANAGIHARA</u> | Reappointed 29 January 2002 Entered in register 21 February 2002 |
| <u>Director Norifumi YANAGIHARA</u> | Reappointed 29 January 2004 Entered in register 3 March 2004 |
| <u>Director Norifumi YANAGIHARA</u> | Reappointed 27 January 2006 Entered in register 27 February 2006 Resigned 30 June 2006 Entered in register 11 July 2006 |
| <u>Director Mitsuhiro MURATA</u> | Appointed 29 January 2002 Approved 4 March 2002 Amended 4 March 2002 Resigned 29 January 2004 Entered in register 3 March 2004 |
| <u>Director Tadashi TOMIZAWA</u> | Appointed 29 January 2004 Entered in register 3 March 2004 |
| <u>Director Makoto ITO</u> | Appointed 29 January 2004 Entered in register 3 March 2004 |

Serial no. *Ta*-405838 *Underlined particulars have been erased from the register. 5 / 8

Kyodo Senpaku Kaisha, Ltd.
 Corporate registration no. 0100-01-041436
 4-5 Toyomi-cho, Chuo-ku, Tokyo

| | |
|--|--------------------------------------|
| <u>Director Mitsuyoshi MURAKAMI</u> | Appointed 29 January 2004 |
| | Entered in register 3 March 2004 |
| <u>Director Mitsuyoshi MURAKAMI</u> | Reappointed 27 January 2006 |
| | Entered in register 27 February 2006 |
| | Resigned 15 September 2006 |
| | Entered in register 3 October 2006 |
| <u>Director Yasuhisa ISHIKAWA</u> | Appointed 28 January 2005 |
| | Entered in register 10 March 2005 |
| <u>Director Yasuhisa ISHIKAWA</u> | Reappointed 27 January 2006 |
| | Entered in register 27 February 2006 |
| | Resigned 30 June 2006 |
| | Entered in register 11 July 2006 |
| <u>Director Hironobu IMAMURA</u> | Appointed 28 January 2005 |
| | Entered in register 10 March 2005 |
| <u>Director Hironobu IMAMURA</u> | Reappointed 27 January 2006 |
| | Entered in register 27 February 2006 |
| | Resigned 30 June 2006 |
| | Entered in register 11 July 2006 |
| <u>Representative Director Hiroshi OGAWA</u> <u>30-11 Misora 2-chome, Yotsukaido-shi, Chiba</u> | Appointed 28 January 1999 |
| <u>Representative Director Hiroshi OGAWA</u> <u>30-11 Misora 2-chome, Yotsukaido-shi, Chiba</u> | Reappointed 27 January 2000 |
| | Entered in register 10 February 2000 |
| <u>Representative Director Hiroshi OGAWA</u> <u>30-11 Misora 2-chome, Yotsukaido-shi, Chiba</u> | Reappointed 29 January 2002 |
| | Entered in register 21 February 2002 |
| | Resigned 29 January 2004 |
| | Entered in register 3 March 2004 |

Serial no. *Ta-405838* *Underlined particulars have been erased from the register. 6 / 8

Kyodo Senpaku Kaisha, Ltd.
 Corporate registration no. 0100-01-041436
 4-5 Toyomi-cho, Chuo-ku, Tokyo

| | |
|---|---|
| <u>Representative Director Kazuo YAMAMURA</u> 1012Yokohama Terrace, 7-14 Daimachi, Kanagawa-ku, Yokohama-shi | Appointed 29 January 2004 Entered in register 3 March 2004 |
| <u>Auditor Hiroharu MUKOYAMA</u> | Appointed 29 January 1997 |
| <u>Auditor Hiroharu MUKOYAMA</u> | Reappointed 27 January 2000 Entered in register 10 February 2000 Resigned 29 January 2003 Entered in register 4 March 2003 |
| <u>Auditor Shuji KUDO</u> | Appointed 28 January 1998 Resigned 27 July 1999 Entered in register 5 August 1999 |
| <u>Auditor Masahide KOIZUMI</u> | Appointed 27 July 1999 Entered in register 5 August 1999 |
| <u>Auditor Masahide KOIZUMI</u> | Reappointed 29 January 2001 Entered in register 20 February 2001 |
| <u>Auditor Masahide KOIZUMI</u> | Reappointed 29 January 2004 Entered in register 3 March 2004 Resigned 15 September 2006 Entered in register 3 October 2006 |
| <u>Auditor Motoo TAMURA</u> | Appointed 29 January 2003 Entered in register 4 March 2003 Resigned 15 September 2006 Entered in register 3 October 2006 |

Serial no. Ta-405838 *Underlined particulars have been erased from the register. 7 / 8

Kyodo Senpaku Kaisha, Ltd.
Corporate registration no. 0100-01-041436
4-5 Toyomi-cho, Chuo-ku, Tokyo

This is a certified record of all the particulars contained in the register which have been closed.

(Jurisdiction: Tokyo Legal Affairs Bureau)

22 December 2010

Tokyo Legal Affairs Bureau Nakano Branch
Registrar KOBAYASHI Toshiaki [official seal stamp]

Serial no. *Ta-405838* *Underlined particulars have been erased from the register. 8 / 8

閉鎖事項全部証明書

東京都中央区豊海町4番5号
 共同船舶株式会社
 会社法人等番号 0100-01-041436

| | | | |
|-----------|--|---------------|---------------|
| 本店 | 東京都千代田区霞が関三丁目2番4号 | | |
| | 東京都中央区東日本橋二丁目8番3号 | 昭和63年 4月11日移転 | |
| 目的 | (1) 鯨類その他の水産資源調査の受託 (2) 海上運送業及び船舶の賃貸借 (3) 日用品雑貨の売買 (4) 前各号に附帯関連する業務 | | |
| 額面株式1株の金額 | 金5万円 | | |
| 役員に関する事項 | 取締役 | 小川 洋 | 平成10年 1月28日重任 |
| | 取締役 | 小川 洋 | 平成12年 1月27日重任 |
| | | | 平成12年 2月10日登記 |
| | 取締役 | 小川 洋 | 平成14年 1月29日重任 |
| | | | 平成14年 2月21日登記 |
| | 取締役 | 小川 洋 | 平成16年 1月29日重任 |
| | | | 平成16年 3月 3日登記 |
| | | | 平成18年 1月27日退任 |
| | | | 平成18年 2月27日登記 |
| | 取締役 | 伊東 修 | 平成10年 1月28日重任 |
| 取締役 | 伊東 修 | 平成12年 1月27日重任 | |
| | | 平成12年 2月10日登記 | |
| | | 平成14年 1月29日退任 | |
| | | 平成14年 2月21日登記 | |

東京都中央区豊海町4番5号
 共同船舶株式会社
 会社法人等番号 0100-01-041436

| | | | |
|-----|-------------|---------------|---------------|
| | 取締役 | <u>山本均</u> | 平成10年 1月28日重任 |
| | 取締役 | <u>山本均</u> | 平成12年 1月27日重任 |
| | | | 平成12年 2月10日登記 |
| | | | 平成14年 1月29日退任 |
| | | | 平成14年 2月21日登記 |
| | 取締役 | <u>今井忠</u> | 平成10年 1月28日重任 |
| | | | 平成11年 7月27日辞任 |
| | | | 平成11年 8月 5日登記 |
| | 取締役 | <u>早川義彦</u> | 平成10年 1月28日重任 |
| | | | 平成11年 7月27日辞任 |
| | | | 平成11年 8月 5日登記 |
| | 取締役 | <u>鈴木賢一</u> | 平成10年 1月28日就任 |
| | 取締役 | <u>鈴木賢一</u> | 平成12年 1月27日重任 |
| | | | 平成12年 2月10日登記 |
| | 取締役 | <u>鈴木賢一</u> | 平成14年 1月29日重任 |
| | | 平成14年 2月21日登記 | |
| 取締役 | <u>鈴木賢一</u> | 平成16年 1月29日重任 | |
| | | 平成16年 3月 3日登記 | |
| 取締役 | <u>鈴木賢一</u> | 平成18年 1月27日重任 | |
| | | 平成18年 2月27日登記 | |
| | | 平成18年 6月30日辞任 | |
| | | 平成18年 7月11日登記 | |

整理番号 タ405838 * 下線のあるものは抹消事項であることを示す。

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東京都中央区豊海町4番5号
 共同船舶株式会社
 会社法人等番号 0100-01-041436

| | | | |
|-----|--------------|---------------|---------------|
| | 取締役 | <u>高山武弘</u> | 平成11年 1月28日重任 |
| | | | |
| | 取締役 | <u>高山武弘</u> | 平成13年 1月29日重任 |
| | | | 平成13年 2月20日登記 |
| | 取締役 | <u>高山武弘</u> | 平成15年 1月29日重任 |
| | | | 平成15年 3月 4日登記 |
| | 取締役 | <u>高山武弘</u> | 平成17年 1月28日重任 |
| | | | 平成17年 3月10日登記 |
| | | | 平成18年 1月27日辞任 |
| | | | 平成18年 2月27日登記 |
| | 取締役 | <u>服部則宜</u> | 平成11年 1月28日就任 |
| | | | |
| 取締役 | <u>服部則宜</u> | 平成13年 1月29日重任 | |
| | | 平成13年 2月20日登記 | |
| 取締役 | <u>服部則宜</u> | 平成15年 1月29日重任 | |
| | | 平成15年 3月 4日登記 | |
| | | 平成16年 1月29日辞任 | |
| | | 平成16年 3月 3日登記 | |
| 取締役 | <u>鶴本多次郎</u> | 平成11年 1月28日就任 | |
| | | | |
| 取締役 | <u>鶴本多次郎</u> | 平成13年 1月29日重任 | |
| | | 平成13年 2月20日登記 | |
| 取締役 | <u>鶴本多次郎</u> | 平成15年 1月29日重任 | |
| | | 平成15年 3月 4日登記 | |
| 取締役 | <u>山村和夫</u> | 平成11年 1月28日就任 | |
| | | | |

整理番号 タ405838

* 下線のあるものは株主事項であることを示す。

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東京都中央区豊海町4番5号
 共同船舶株式会社
 会社法人等番号 0100-01-041436

| | | |
|------------|-------------|---------------|
| <u>取締役</u> | <u>山村和夫</u> | 平成13年 1月29日重任 |
| | | 平成13年 2月20日登記 |
| <u>取締役</u> | <u>山村和夫</u> | 平成15年 1月29日重任 |
| | | 平成15年 3月 4日登記 |
| <u>取締役</u> | <u>福井清計</u> | 平成11年 7月27日就任 |
| | | 平成11年 8月 5日登記 |
| | | 平成12年 1月27日辞任 |
| | | 平成12年 2月10日登記 |
| <u>取締役</u> | <u>藤井浩</u> | 平成11年 7月27日就任 |
| | | 平成11年 8月 5日登記 |
| | | 平成12年 1月27日辞任 |
| | | 平成12年 2月10日登記 |
| <u>取締役</u> | <u>柳原紀文</u> | 平成11年 7月27日就任 |
| | | 平成11年 8月 5日登記 |
| | | 平成12年 1月27日辞任 |
| | | 平成12年 2月10日登記 |
| <u>取締役</u> | <u>福井清計</u> | 平成12年 1月27日就任 |
| | | 平成12年 2月10日登記 |
| <u>取締役</u> | <u>福井清計</u> | 平成14年 1月29日重任 |
| | | 平成14年 2月21日登記 |
| <u>取締役</u> | <u>福井清計</u> | 平成16年 1月29日重任 |
| | | 平成16年 3月 3日登記 |
| | | 平成17年 1月28日辞任 |
| | | 平成17年 3月10日登記 |
| <u>取締役</u> | <u>藤井浩</u> | 平成12年 1月27日就任 |
| | | 平成12年 2月10日登記 |

整理番号 タ405838

* 下線のあるものは控除事項であることを示す。

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東京都中央区豊海町4番5号
 共同船舶株式会社
 会社法人等番号 0100-01-041436

| | | |
|------------|-------------|---------------|
| <u>取締役</u> | <u>藤井浩</u> | 平成14年 1月29日重任 |
| | | 平成14年 2月21日登記 |
| <u>取締役</u> | <u>藤井浩</u> | 平成16年 1月29日重任 |
| | | 平成16年 3月 3日登記 |
| | | 平成17年 1月28日辞任 |
| | | 平成17年 3月10日登記 |
| | | |
| <u>取締役</u> | <u>柳原紀文</u> | 平成12年 1月27日就任 |
| | | 平成12年 2月10日登記 |
| <u>取締役</u> | <u>柳原紀文</u> | 平成14年 1月29日重任 |
| | | 平成14年 2月21日登記 |
| <u>取締役</u> | <u>柳原紀文</u> | 平成16年 1月29日重任 |
| | | 平成16年 3月 3日登記 |
| <u>取締役</u> | <u>柳原紀文</u> | 平成18年 1月27日重任 |
| | | 平成18年 2月27日登記 |
| | | 平成18年 6月30日辞任 |
| | | 平成18年 7月11日登記 |
| <u>取締役</u> | <u>村田光弘</u> | 平成14年 1月29日就任 |
| | | 平成14年 3月 4日許可 |
| | | 平成14年 3月 4日更正 |
| | | 平成16年 1月29日退任 |
| <u>取締役</u> | <u>富澤正</u> | 平成16年 3月 3日登記 |
| | | |
| <u>取締役</u> | <u>伊藤誠</u> | 平成16年 1月29日就任 |
| | | 平成16年 3月 3日登記 |

東京都中央区豊海町4番5号
 共同船舶株式会社
 会社法人等番号 0100-01-041436

| | | | |
|--|---|---------------|---------------|
| | 取締役 | <u>村上光由</u> | 平成16年 1月29日就任 |
| | | | 平成16年 3月 3日登記 |
| | 取締役 | <u>村上光由</u> | 平成18年 1月27日重任 |
| | | | 平成18年 2月27日登記 |
| | | | 平成18年 9月15日辞任 |
| | | | 平成18年10月 3日登記 |
| | 取締役 | <u>石川泰久</u> | 平成17年 1月28日就任 |
| | | | 平成17年 3月10日登記 |
| | 取締役 | <u>石川泰久</u> | 平成18年 1月27日重任 |
| | | | 平成18年 2月27日登記 |
| | | | 平成18年 6月30日辞任 |
| | | | 平成18年 7月11日登記 |
| | 取締役 | <u>今村博展</u> | 平成17年 1月28日就任 |
| | | | 平成17年 3月10日登記 |
| | 取締役 | <u>今村博展</u> | 平成18年 1月27日重任 |
| | | 平成18年 2月27日登記 | |
| | | 平成18年 6月30日辞任 | |
| | | 平成18年 7月11日登記 | |
| | 千葉県四街道市みそら二丁目30番11号 代表取締役 <u>小川洋</u> | | 平成11年 1月28日就任 |
| | 千葉県四街道市みそら二丁目30番11号 代表取締役 <u>小川洋</u> | | 平成12年 1月27日重任 |
| | | | 平成12年 2月10日登記 |
| | 千葉県四街道市みそら二丁目30番11号 代表取締役 <u>小川洋</u> | | 平成14年 1月29日重任 |
| | | | 平成14年 2月21日登記 |
| | | | 平成16年 1月29日退任 |
| | | | 平成16年 3月 3日登記 |

整理番号 タ405838

* 下線のあるものは抹消事項であることを示す。

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東京都中央区豊海町4番5号
 共同船舶株式会社
 会社法人等番号 0100-01-041436

| | | |
|--|---|--|
| | 横浜市神奈川区台町7番地14横浜テラス10 12号 代表取締役 <u>山村和夫</u> | 平成16年 1月29日就任 平成16年 3月 3日登記 |
| | <u>監査役</u> <u>向山洋治</u> | 平成 9年 1月29日就任 |
| | <u>監査役</u> <u>向山洋治</u> | 平成12年 1月27日重任 平成12年 2月10日登記 平成15年 1月29日退任 平成15年 3月 4日登記 |
| | <u>監査役</u> <u>工藤修司</u> | 平成10年 1月28日就任 平成11年 7月27日辞任 平成11年 8月 5日登記 |
| | <u>監査役</u> <u>小泉雅英</u> | 平成11年 7月27日就任 平成11年 8月 5日登記 |
| | <u>監査役</u> <u>小泉雅英</u> | 平成13年 1月29日重任 平成13年 2月20日登記 |
| | <u>監査役</u> <u>小泉雅英</u> | 平成16年 1月29日重任 平成16年 3月 3日登記 平成18年 9月15日辞任 平成18年10月 3日登記 |
| | <u>監査役</u> <u>田村元雄</u> | 平成15年 1月29日就任 平成15年 3月 4日登記 平成18年 9月15日辞任 平成18年10月 3日登記 |

東京都中央区豊海町4番5号
共同船舶株式会社
会社法人等番号 0100-01-041436

これは登記簿に登録されている閉鎖された事項の全部であることを証明した書面である。
(東京法務局管轄)

平成22年12月22日
東京法務局中野出張所
登記官

小林俊明



整理番号 タ405838

* 下線のあるものは抹消事項であることを示す。

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Annex 109: Government of Japan, Tokyo Legal Affairs Bureau Nakano Branch, *Certified Record of All Historical Register Particulars: Kyodo Senpaku Kaisha Ltd, Corporate Registration No. 0100-01-041436 (22 December 2010)*

Certified Record of All Historical Register Particulars

Kyodo Senpaku Kabushiki Kaisha
Corporate Registration No. 0100-01-041436
4-5 Toyomi-cho, Chuo-ku, Tokyo

| | | |
|---|---|---|
| Business Name | Kyodo Senpaku Kabushiki Kaisha | |
| Head Office | <u>8-3 Higashi-Nihombashi 2-chome, Chuo-ku, Tokyo</u> | Moved 11 April 1988 |
| | 4-5 Toyomi-cho, Chuo-ku, Tokyo | Moved 1 October 2001 Entry Registered 1 October 2001 |
| Means of public notification | Posted in the Official Gazette. | |
| Date of company's establishment | 5 November 1987. | |
| Purposes | <u>(1) Undertake commissioned surveys of cetaceans and other marine sources</u> | |
| | <u>(2) Marine transportation and lease of vessels</u> <u>(3) Process and trade of cetacean capture research by-products</u> <u>(4) Operation of food and beverage establishments</u> <u>(5) Worker outplacement services</u> <u>(6) Purchase and sale of daily necessities and sundries</u> <u>(7) Business incidental to and associated with each of the above</u> Amended 16 June 2006; entered in register 11 July 2006 | |
| | (1) Undertake commissioned surveys of cetaceans and other marine resources (2) Marine transportation and lease of vessels (3) Process and trade of cetacean products (4) Operation of food and beverage establishments (5) Worker outplacement services (6) Purchase and sale of daily necessities and sundries (7) Business incidental to and associated with each of the above Amended 29 January 2008; entered in register 21 February 2008 | |
| Total issuable stock | 7,600 shares | |
| Total issued stock, type and number | Total issued stock: 5,730 shares | |
| Stipulations on the issue of share certificates | Share certificates shall be issued for shares in this company. Entered in register 1 May 2006 pursuant to the provisions of Article 136, Act No. 87 of 2005 | |
| Capital value | ¥286,500,000 | |

Serial no. *Ta-405837* *Underlined particulars have been erased from the register. 1/5

Kyodo Senpaku Kaisha, Ltd.
 Corporate registration no. 0100-01-041436
 4-5 Toyomi-cho, Chuo-ku, Tokyo

| | | |
|---|--|---|
| Prescriptions concerning stock transfer limitations | Transfers of stock in this company require the approval of the board of directors. | |
| Notes regarding Executives | <u>Director Tajiro TSURUMOTO</u> | Reappointed 28 January 2005 Entered in register 10 March 2005 |
| | <u>Director Tajiro TSURUMOTO</u> | Reappointed 30 January 2007 Entered in register 1 March 2007 |
| | | Resigned 29 January 2009 Entered in register 17 March 2009 |
| | <u>Director Kazuo YAMAMURA</u> | Reappointed 28 January 2005 Entered in register 10 March 2005 |
| | <u>Director Kazuo YAMAMURA</u> | Reappointed 30 January 2007 Entered in register 1 March 2007 |
| | Director Kazuo YAMAMURA | Reappointed 29 January 2009 Entered in register 17 March 2009 |
| | <u>Director Tadashi TOMIZAWA</u> | Reappointed 27 January 2006 Entered in register 27 February 2006 |
| | | Resigned 29 January 2008 Entered in register 21 February 2008 |
| | <u>Director Makoto ITO</u> | Reappointed 27 January 2006 Entered in register 27 February 2006 |
| | <u>Director Makoto ITO</u> | Reappointed 29 January 2008 Entered in register 21 February 2008 |
| | Director Makoto ITO | Reappointed 28 January 2010 Entered in register 9 February 2010 |

Serial No. *Ta*-405837 *Underlined particulars have been erased from the register. 2/5

Kyodo Senpaku Kaisha, Ltd.
 Corporate registration no. 0100-01-041436
 4-5 Toyomi-cho, Chuo-ku, Tokyo

| | |
|------------------------------------|---|
| <u>Director Eiji ISHIHARA</u> | Appointed 15 September 2006 Entered in register 3 October 2006 |
| <u>Director Eiji ISHIHARA</u> | Reappointed 29 January 2008 Entered in register 21 February 2008 |
| | Resigned 29 January 2009 Entered in register 17 March 2009 |
| <u>Director Yasuyuki TERUKI</u> | Appointed 15 September 2006 Entered in register 3 October 2006 |
| <u>Director Yasuyuki TERUKI</u> | Reappointed 29 January 2008 Entered in register 21 February 2008 |
| | Deceased 22 January 2009 Entered in register 17 March 2009 |
| <u>Director Hirofumi NAKAYAMA</u> | Appointed 15 September 2006 Entered in register 3 October 2006 |
| <u>Director Hirofumi NAKAYAMA</u> | Reappointed 29 January 2008 Entered in register 21 February 2008 |
| | Resigned 30 January 2009 Entered in register 17 March 2009 |
| <u>Director Hirohisa SHIGEMUNE</u> | Appointed 29 January 2008 Entered in register 21 February 2008 |
| Director Hirohisa SHIGEMUNE | Reappointed 28 January 2010 Entered in register 9 February 2010 |
| <u>Director Toshio NUKUI</u> | Appointed 29 January 2008 Entered in register 21 February 2008 |
| Director Toshio NUKUI | Reappointed 28 January 2010 Entered in register 9 February 2010 |

Serial no. *Ta-405837* *Underlined particulars have been erased from the register. 3/5

Kyodo Senpaku Kaisha, Ltd.
 Corporate registration no. 0100-01-041436
 4-5 Toyomi-cho, Chuo-ku, Tokyo

| | | |
|---|--|--|
| | Director Toshikazu MIYAMOTO | Appointed 19 January 2009 Entered in register 17 March 2009 |
| | Director Yoshihiro FUJISE | Appointed 28 January 2010 Entered in register 9 February 2010 |
| | <u>Representative Director</u> <u>Kazuo YAMAMURA</u> <u>1012Yokohama Terrace, 7-14</u> <u>Daimachi, Kanagawa-ku,</u> <u>Yokohama-shi</u> | Reappointed 28 January 2005 Entered in register 10 March 2005 |
| | <u>Representative Director</u> <u>Kazuo YAMAMURA</u> <u>1012Yokohama Terrace, 7-14</u> <u>Daimachi, Kanagawa-ku,</u> <u>Yokohama-shi</u> | Reappointed 30 January 2007 Entered in register 1 March 2007 |
| | Representative Director Kazuo YAMAMURA 1012Yokohama Terrace, 7-14 Daimachi, Kanagawa-ku, Yokohama-shi | Reappointed 29 January 2009 Entered in register 17 March 2009 |
| | <u>Auditor</u> Hideki TOKORO | Appointed 15 September 2006 Entered in register 3 October 2006 |
| | | Resigned 29 January 2009 Entered in register 17 March 2009 |
| | <u>Auditor</u> Hideki TOKORO | Appointed 29 January 2009 Entered in register 17 March 2009 |
| | | Resigned 15 October 2009 Entered in register 15 October 2009 |
| | Auditor Akira NAKATA | Appointed 15 October 2009 Entered in register 15 October 2009 |
| Particulars concerning installation of board of directors | This company has established a board of directors. | Entered in register 1 May 2006 pursuant to the provisions of Article 136, Act No. 87 of 2005 |
| Particulars concerning appointment of auditor(s) | This company has an auditor. | Entered in register 1 May 2006 pursuant to the provisions of Article 136, Act No. 87 of 2005 |

Serial no. Ta-405837 *Underlined particulars have been erased from the register. 4/5

Kyodo Senpaku Kaisha, Ltd.
Corporate registration no. 0100-01-041436
4-5 Toyomi-cho, Chuo-ku, Tokyo

| | |
|---|---|
| Particulars concerning record of register entries | Transcribed 20 May 1999 pursuant to paragraph 3 of the supplementary provisions to Ministry of Justice Order No. 15 of 1988 |
|---|---|

This is a certified record of all the particulars contained in the register which have not been closed.

(Jurisdiction: Tokyo Legal Affairs Bureau)

22 December 2010

Tokyo Legal Affairs Bureau Nakano Branch
Registrar Toshiaki KOBAYASHI [official seal stamp]

Serial no. *Ta-405837* *Underlined particulars have been erased from the register. 5/5

履歴事項全部証明書

東京都中央区豊洲町4番5号
 共同船舶株式会社
 会社法人等番号 0100-01-041436

| | | |
|----------------------|--|--------------------------------|
| 商号 | 共同船舶株式会社 | |
| 本店 | 東京都中央区東日本橋二丁目8番3号 | 昭和63年 4月11日移転 |
| | 東京都中央区豊洲町4番5号 | 平成13年10月 1日移転 平成13年10月 1日登記 |
| 公告をする方法 | 官報に掲載してこれを行う | |
| 会社成立の年月日 | 昭和62年11月5日 | |
| 目的 | (1) 鯨類その他の水産資源調査の受託 (2) 海上運送業および船舶の賃貸借 (3) 鯨類捕獲調査副産物の加工および売買 (4) 料理・飲食店の経営 (5) 労働者派遣業 (6) 日用品雑貨の売買 (7) 前各号に附帯関連する業務 平成18年 6月16日変更 平成18年 7月11日登記 | |
| | (1) 鯨類その他の水産資源調査の受託 (2) 海上運送業および船舶の賃貸借 (3) 鯨類生産物の加工および売買 (4) 料理・飲食店の経営 (5) 労働者派遣業 (6) 日用品雑貨の売買 (7) 前各号に附帯関連する業務 平成20年 1月29日変更 平成20年 2月21日登記 | |
| 発行可能株式総数 | 7600株 | |
| 発行済株式の総数 並びに種類及び数 | 発行済株式の総数 5730株 | |
| 株券を発行する旨の定め | 当会社の株式については、株券を発行する 平成17年法律第87号第136条の規定により平成18年 5月 1日登記 | |
| 資本金の額 | 金2億8650万円 | |

東京都中央区豊海町4番5号
 共阿船舶株式会社
 会社法人等番号 0100-01-041436

| | | | |
|---------------|----------------------------|---------------|--|
| 株式の譲渡制限に関する規定 | 当会社の株式の譲渡については取締役会の承認を要する。 | | |
| 役員に関する事項 | 取締役 | <u>鶴本 多次郎</u> | 平成17年 1月28日重任 平成17年 3月10日登記 |
| | 取締役 | <u>鶴本 多次郎</u> | 平成19年 1月30日重任 平成19年 3月 1日登記 平成21年 1月29日退任 平成21年 3月17日登記 |
| | 取締役 | <u>山村 和夫</u> | 平成17年 1月28日重任 平成17年 3月10日登記 |
| | 取締役 | <u>山村 和夫</u> | 平成19年 1月30日重任 平成19年 3月 1日登記 |
| | 取締役 | <u>山村 和夫</u> | 平成21年 1月29日重任 平成21年 3月17日登記 |
| | 取締役 | <u>富 澤 正</u> | 平成18年 1月27日重任 平成18年 2月27日登記 平成20年 1月29日退任 平成20年 2月21日登記 |
| | 取締役 | <u>伊 藤 誠</u> | 平成18年 1月27日重任 平成18年 2月27日登記 |
| | 取締役 | <u>伊 藤 誠</u> | 平成20年 1月29日重任 平成20年 2月21日登記 |
| | 取締役 | <u>伊 藤 誠</u> | 平成22年 1月28日重任 平成22年 2月 9日登記 |

東京都中央区豊洲町4番5号
 共同船舶株式会社
 会社法人等番号 0100-01-041436

| | | | |
|--|-----|-------------|---------------|
| | 取締役 | <u>石原英司</u> | 平成18年 9月15日就任 |
| | | | 平成18年10月 3日登記 |
| | 取締役 | <u>石原英司</u> | 平成20年 1月29日重任 |
| | | | 平成20年 2月21日登記 |
| | | | 平成21年 1月29日辞任 |
| | | | 平成21年 3月17日登記 |
| | 取締役 | <u>照木康之</u> | 平成18年 9月15日就任 |
| | | | 平成18年10月 3日登記 |
| | 取締役 | <u>照木康之</u> | 平成20年 1月29日重任 |
| | | | 平成20年 2月21日登記 |
| | | | 平成21年 1月22日死亡 |
| | | | 平成21年 3月17日登記 |
| | 取締役 | <u>中山博文</u> | 平成18年 9月15日就任 |
| | | | 平成18年10月 3日登記 |
| | 取締役 | <u>中山博文</u> | 平成20年 1月29日重任 |
| | | | 平成20年 2月21日登記 |
| | | | 平成21年 1月30日辞任 |
| | | | 平成21年 3月17日登記 |
| | 取締役 | <u>重宗弘久</u> | 平成20年 1月29日就任 |
| | | | 平成20年 2月21日登記 |
| | 取締役 | <u>重宗弘久</u> | 平成22年 1月28日重任 |
| | | | 平成22年 2月 9日登記 |
| | 取締役 | <u>貫井敏夫</u> | 平成20年 1月29日就任 |
| | | | 平成20年 2月21日登記 |
| | 取締役 | <u>貫井敏夫</u> | 平成22年 1月28日重任 |
| | | | 平成22年 2月 9日登記 |

整理番号 タ405837

* 下線のあるものは経過事項であることを示す。

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東京都中央区豊海町4番5号
 共同船舶株式会社
 会社法人等番号 0100-01-041436

| | | |
|--|---|--|
| | 取締役 宮本 俊和 | 平成21年 1月29日就任 平成21年 3月17日登記 |
| | 取締役 藤瀬 良弘 | 平成22年 1月28日就任 平成22年 2月 9日登記 |
| | 横浜市神奈川区台町7番地14横浜テラス1012号 代表取締役 山村 和夫 | 平成17年 1月28日重任 平成17年 3月10日登記 |
| | 横浜市神奈川区台町7番地14横浜テラス1012号 代表取締役 山村 和夫 | 平成19年 1月30日重任 平成19年 3月 1日登記 |
| | 横浜市神奈川区台町7番地14横浜テラス1012号 代表取締役 山村 和夫 | 平成21年 1月29日重任 平成21年 3月17日登記 |
| | 監査役 所 英 樹 | 平成18年 9月15日就任 平成18年10月 3日登記 平成21年 1月29日辞任 平成21年 3月17日登記 |
| | 監査役 所 英 樹 | 平成21年 1月29日就任 平成21年 3月17日登記 平成21年10月15日辞任 平成21年10月15日登記 |
| | 監査役 中 田 晃 | 平成21年10月15日就任 平成21年10月15日登記 |
| | 取締役会設置会社に関する事項 | 取締役会設置会社 平成17年法律第87号第136条の規定により平成18年 5月 1日登記 |
| | 監査役設置会社に関する事項 | 監査役設置会社 平成17年法律第87号第136条の規定により平成18年 5月 1日登記 |

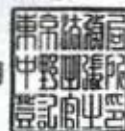
東京都中央区豊海町4番5号
共同船舶株式会社
会社法人等番号 0100-01-041436

| | |
|------------|--|
| 登記記録に関する事項 | 平成元年法務省令第15号附則第3項の規定により 平成11年 5月20日登記 |
|------------|--|

これは登記簿に記載されている閉鎖されていない事項の全部であることを証明した書面である。
(東京法務局管轄)

平成22年12月22日
東京法務局中野出張所
登記官

小林 俊 明



整理番号 タ405837

* 下線のあるものは特異事項であることを示す。

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Annex 110: Government of Japan, Japan Fisheries Agency, “Results of the 24th Antarctic Ocean Cetacean Capture Survey (JARPA II) in FY2010” (Press Release, 21 March 2011) at Ministry of Agriculture, Forestry and Fisheries website, <<http://www.jfa.maff.go.jp/j/press/enyou/110321.html>> on 18 April 2011

PRESS RELEASE

21 March 2011
Fisheries Agency

‘Results of the 24th Antarctic Ocean Cetacean Capture Survey (JARPA II) in FY2010’

We would like to announce the results of JARPA II in FY2010.

1. Date of Departure of the Whaling Fleet

Thursday, 2 December 2010

2. Whaling Fleet Vessels and Date of Return

Leader: Hajime Ishikawa (ICR)

Research Vessels:

Nisshin Maru (8,044 tonnes, Captain: Tomoyuki Ogawa, 119 crew members)

Monday, 21 March 2011, Tokyo Port, Tokyo prefecture

Yushin Maru (720 tonnes, Captain: Yasuaki Sasaki, 21 crew members)

Monday, 21 March 2011, Shimonoseki Port, Yamaguchi prefecture

Yushin Maru 2 (747 tonnes, Captain: Kiyoji Hirose, 22 crew members)

Monday, 21 March 2011, Shimonoseki Port, Yamaguchi prefecture

Yushin Maru 3 (742 tonnes, Captain: Toshiyuki Miura, 22 crew members)

Monday, 21 March 2011, Shimonoseki Port, Yamaguchi prefecture

3. Waters for Research

Southern Ocean south of 60 degrees latitude (from east of 35 degrees longitude and from west of 145 degrees longitude)

4. The Number of Catch

170 Antarctic minke whales and 2 fin whales

5. Implementing Agency

The Institute of Cetacean Research

6. Summary of the result of FY2010 scientific whaling

- The total distance covered for the research was 1,877.2 miles. Four species of baleen whales and four species of toothed whales were seen. Antarctic minke whales (530 groups, 1,576 whales), humpback whales (44 groups, 83 whales), fin whales (34 groups, 120 whales) were seen, in descending order.

- Other than lethal research, we took visual recordings of whale markings (*1) and took biopsy samples (*2) as observation survey of ocean environment and non-lethal research.

*1: The research is to film whales to identify an individual whale by external features (colour, shape of fins, scars).

*2: The research is to take samples of whales' skin to analyse DNA.

<Results from lethal research>

- We caught 62 male and 108 female Antarctic minke whales. Among the catch, 66.1% of the male whales and 87.0% of female whales were matured. 91.5% of the matured female whales were pregnant. The high percentage of pregnancy was normal, which indicated reproduction of Antarctic minke whales in the Southern Ocean was sound. Gender and maturity of Antarctic minke whales was very different between the different areas. Female whales concentrated in the Ross Sea, and immature female whales and matured male whales were populous outside of the Ross Sea.
- We caught two fin whales: one fin whale each from two different groups. One was 19.05 metres long and the other was 18.99 metres long. Both of the whales were male and ate Antarctic krill. The biological data collected from these whales, along with past samples obtained by JARPA, will be valuable data to understand the ecosystem in the Southern Ocean.
- We can obtain plenty of data and samples from all of the caught whales. This includes measurements such as earplugs (which is necessary to assess age), blubber thickness (which is necessary to assess nutrition and health), and parasites. This survey's records, data and samples will be analysed by researchers in a variety of fields, and it is expected to contribute to help progress research into cetacean resources. The results of the study will be announced at the IWC and academic societies.

<Results from non-lethal research, including sightings survey>

- The three species of whales were distributed in distinctly different waters. Most of the cetaceans seen in the Ross Sea were Antarctic minke whales. Until the ice completely opened, humpback whales were distributed off the ice edge of north Ross Sea. Blue whales were seen here and there from the ice edge to off the ice edge of the north Ross Sea (10 groups, 19 whales), and one blue whale was seen inside the Ross Sea.
- Killer whales formed a big group in the Ross Sea (5 groups, 136 whales). An attack by a killer whale on an Antarctic minke was seen and we successfully obtained biopsy samples.

7. Others

The anti-whaling organisation Sea Shepherd was obstructive during this season's JARPA. The Sea Shepherd's activities threatened the lives and property of Japanese vessels and scientific whaling crew members and it is not at all acceptable.

Although Japan has repeatedly requested countries concerned [to stop the obstructions] at every opportunity, including through diplomatic channels, the mother boat Nisshin Maru was chased by Sea Shepherd's vessel Bob Barker and it became difficult to ensure security of the whaling fleet.

Furthermore, because another Sea Shepherd vessel Steve Irwin was about to approach, we decided to cease this season's research in view of protecting the lives of crew member and the property of the whaling fleet.

Regarding obstruction activities against 24th JARPA,
ICR homepage (<http://www.icrwhale.org/gpandseaJapanc.htm>)

ここから本文です。

プレスリリース

平成 23 年 3 月 21 日

水産庁

第 24 次 南極海鯨類捕獲調査（平成 22 年度）の結果について

本年度の南極海鯨類捕獲調査（財団法人 日本鯨類研究所実施）の結果についてお知らせします。

1. 調査船団の出港日

平成 22 年 12 月 2 日（木曜日）

2. 調査船団の構成及び入港日

調査団長: 石川 創（財団法人 日本鯨類研究所）

調査船:

日新丸（8,044 トン 小川 知之 船長以下 119 名）

平成 23 年 3 月 21 日（月曜日）東京港（東京都）

勇新丸（720 トン 佐々木 安昭 船長以下 21 名）

平成 23 年 3 月 21 日（月曜日）下関港（山口県）

第二勇新丸（747 トン 廣瀬 喜代治 船長以下 22 名）

平成 23 年 3 月 21 日（月曜日）下関港（山口県）

第三勇新丸（742 トン 三浦 敏行 船長以下 22 名）

平成 23 年 3 月 21 日（月曜日）下関港（山口県）

3. 調査海域

南緯 60 度以南の南大洋（東経 35 度以東、西経 145 度以西）

4. 捕獲頭数

クロミンククジラ 170 頭及びナガスクジラ 2 頭

5. 実施機関

財団法人 日本鯨類研究所

6. 本年の調査の成果概要

・調査期間中の総探索距離は、1,877.2マイルでした。発見された鯨類はヒゲクジラ亜目4種及びハクジラ亜目4種であり、種別ではクロミンククジラ(530群1,576頭)、ザトウクジラ(44群83頭)、ナガスクジラ(34群120頭)の順に多く発見されました。

・捕獲調査のほか、海洋環境観測調査及び非致死的研究として、ザトウクジラ等の自然標識撮影(注1)及びバイオプシー標本採取(注2)等も行いました。

(注1) 外見上の特徴(色、ひれの形状、傷跡等)により鯨の個体識別ができるようにするため、発見された鯨を撮影するもの。

(注2) DNA等を解析するため、鯨の表皮の一部を採取するもの。

<捕獲調査により明らかになったこと>

・クロミンククジラは雄62頭、雌108頭の計170頭を採集しました。採集した個体のうち雄が66.1%、雌が33.9%の割合で性成熟しており、成熟した雌の91.5%が妊娠していました。雌の高い妊娠率は例年と同様であり、南極流におけるクロミンククジラの繁殖状況が健全であることを示唆しています。クロミンククジラの性別や成熟率は、調査海域により大きく異なり、ロス海には成熟した雌が集中する一方、ロス海の外側では未成熟の雌雄及び成熟雄が多いという結果が得られました。

・ナガスクジラは採集対象2群から1頭ずつ計2頭を採集しました。それぞれ体長19.05mと18.99mの雄で、ともにナンキョクオキヤミを捕食していました。これらの生物学的データは、過去の南極海鯨類捕獲調査で採集された個体と併せて、南極海生態系解明のための貴重な資料となるものです。

・採集されたすべての鯨から、鯨の年齢査定に必要な耳垢検査、栄養状態・健康状態の判定に必要な脂皮厚、寄生虫の寄生状態など、数多くのデータや標本が得られました。これらの調査記録、データ及び採集標本は、今後、様々な分野の研究者により分析及び解析が行われ、鯨類資源に関する研究の進展に寄与することが期待されます。研究成果については、国際捕鯨委員会や各分野の学会などで公表される予定です。

<目視調査等の非致死的研究により明らかになったこと>

・ロス海で発見されたほとんどの鯨類がクロミンククジラでした。ロス海が完全に開氷するまでの時期は、ザトウクジラがロス海北部の水縁付近まで分布しており、特にロス海の北部の西側で高い密度で分布していました。ナガスクジラはロス海北部の水縁より沖合に分布しており、3種の分布域が明確に異なっていました。

・シロナガスクジラは、ロス海北部の水縁付近から沖合まで散見され(10群19頭)、ロス海でも1例の発見がありました。

・シャチは、ロス海で大きな群れを形成していました(5群136頭)。クロミンククジラに対して攻撃を加える個体が観察されたほか、バイオプシー標本の採取にも成功しました。

7. その他

反捕鯨団体シーシェパードは、今期の南極海鯨類捕獲調査においても、妨害活動を行いました。こうしたシーシェパードによる妨害活動は、調査捕鯨に従事する我が国の船員及び乗組員の生命・財産を脅かす危険な行為であり、断じて許されるものではありません。

我が国は、外交ルートを含むあらゆる機会を通じて、再三、関係国に対し働きかけを行いました。母船である日新丸はシーシェパード船(ボブ・バーカー号)の追航を続け、船団の安全を確保することが困難となりました。

さらに、もう一隻（スティーブ・アーウィン号）が現場にいつ到達してもおかしくない状況となったため、2月18日（金曜日）、乗組員の生命・財産及び調査船の安全を確保する観点から、やむを得ず今期の調査を切り上げることにしました。

第24次南極海鯨類捕獲調査に関する妨害活動について

日本鯨類研究所 HP <http://www.icrwhale.org/gpandsea/japan.html>

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水産庁

Special Survey Projects Business and Service Document

Chapter 1 General Provisions

Purpose

Article 1

The purpose of this Business and Service Document is to establish provisions concerning the implementation of special surveys to be carried out by the Institute of Cetacean Research (hereinafter “the Institute”) based on the provisions of Article 9 of the Institute’s Deed of Endowment and with regard to international conventions, and the management and disposition of the assets of the Special Foundation, and thereby contribute to the smooth implementation of the special surveys.

Chapter 2 Special Surveys

Section 1 General Provisions

Definitions

Article 2

The special surveys pursuant to Article 9, Paragraph 1 of the Deed of Endowment shall mean the following:

- i. Surveys based on the Cetacean Research Capture Project Implementation Guidelines (1987 Sea Fisheries, Japan Fisheries Agency No. 3775 dated 17 December 1987, Administrative Vice-Minister of Agriculture, Forestry and Fisheries – Directive) (hereinafter “cetacean capture survey”)
- ii. Sighting surveys and marking surveys in respect of whale stocks commissioned by the Japan Fisheries Agency (hereinafter “cetacean sighting surveys”)

Basic operational policy

Article 3

When implementing the special surveys, the Institute must take into account the research funding provided and endeavour to ensure that the survey purpose is achieved effectively.

Section 2 Cetacean Capture Surveys

Formulation of plans for cetacean capture surveys

Article 4

- i. The Institute shall consult an expert committee according to Article 35 of the Deed of Endowment when formulating the draft plan for cetacean capture survey plans.

ii. Pursuant to the preceding paragraph, the Institute shall consider comprehensively the following matters when formulating the draft plan for cetacean capture survey plans:

- (a) Trends in whale stocks as assessed by the Scientific Committee of the International Whaling Commission (hereinafter "IWC");
- (b) Trends in the IWC's comprehensive stock assessment;
- (c) Collaboration with international organisations and overseas researchers;
- (d) The international situation concerning whales; and
- (e) Other matters necessary in the formulation of the survey plan

Submission of cetacean capture survey plans

Article 5

The Institute shall submit to the Director-General, Japan Fisheries Agency, the cetacean capture survey plan it has formulated.

Cetacean capture project expenses

Article 6

In principle, the expenses required to implement the cetacean capture surveys shall be paid for from government subsidies or assets from the Special Foundation.

Implementation of cetacean capture survey

Article 7

The Institute shall charter vessels to be used for the cetacean capture surveys (hereinafter "survey vessels") according to the provisions of Article 8 through Article 10, and shall deploy Institute staff on such survey vessels to carry out the cetacean capture survey.

Selection of survey vessels

Article 8

The Institute shall contract a charter party for the chartering of survey vessels through a nominated competitive bidding process. However, the Institute shall not be constrained by this should there be other vessels considered as particularly appropriate for selection as a survey vessel, given their construction, propulsion system, equipment and other specifications.

Conclusion of charter parties

Article 9

After selecting a survey vessel according to the provisions of the preceding Article, the Institute shall conclude a charter party with the owner of the survey vessel by preparing an agreement that includes the following items:

- i. Charter purpose
- ii. Charter fee
- iii. Charter duration
- iv. Contract deposit
- v. Charter fee payment terms and date and method of receipt
- vi. Audit and inspection
- vii. Arrears interest, penalties and other damages due to delay in performance
- viii. Burden of risk
- ix. Liability for defect warranty
- x. Resolution of contractual disputes
- xi. Other necessary items

Charter fees

Article 10

The charter fee for survey vessels shall be calculated based on criteria determined by the Director-General of the Institute upon approval of the Board of Directors, which shall take into account personnel costs, costs of depreciation, repair costs, costs of consumable supplies, and interest rates.

Reporting of survey results

Article 11

After implementing a cetacean capture survey, the Institute shall submit a report to the Director-General, Japan Fisheries Agency, concerning the survey results no later than two months after completion of the voyage.

Processing of whales taken

Article 12

In accordance with the intent of Article 8, Paragraph 2 of the International Convention for the Regulation of Whaling, whales taken for the cetacean capture project shall be effectively utilised so far as is practicable.

Selling of whale products

Article 13

i. From the standpoint of effective utilisation, whale products derived from whales taken as part of cetacean capture research may be sold in Japan only and the income received from those sales may be considered as income. However, should the Institute attempt to sell whale products, for each survey, it must obtain advance approval to sell whale products from the Director-General, Japan Fisheries Agency.

ii. If the Institute wishes to obtain the approval stated in the preceding paragraph, it shall use the appended application form on which it shall state the production amount for each type of whale product, and, in the case that the Institute will be selling the product itself, details of the planned sales volume and sales method, and, in the case of selling on consignment, details of the name of the agent and the commission fee.

iii. Soon after completion of the sale of whale products, the Institute shall promptly report the sales results to the Director-General, Japan Fisheries Agency, using the appended form.

Payments to Government

Article 14

In the event that the cetacean capture survey records a profit as a result of the sale of whale products pursuant to Paragraph 1 of the preceding Article, a defined amount calculated by the method determined by the Director-General, Japan Fisheries Agency based on the provisions of Article 7 of the Japanese Cetacean Capture Project Implementation Guidelines, shall be paid to the Government.

Management of income

Article 15

The income remaining after the profit payment has been made according to the provisions of the preceding Article shall be spent on the expenses associated with the implementation of cetacean capture surveys. However, there may be exceptions as resolved by the Board of Directors and approved by the Director-General, Japan Fisheries Agency.

Section 3 Cetacean Sighting Surveys

Acceptance of commission for cetacean sighting surveys

Article 16

If the Institute accepts a commission to undertake a cetacean sighting survey and receives a commission fee from the Government, the Institute shall endeavour to implement the survey within the scope allowed by the commission fee.

Implementation of cetacean sighting surveys

Article 17

The Institute shall charter vessels to be used for cetacean sighting surveys (hereinafter “sighting survey vessels”), and shall deploy researchers on such sighting survey vessels to carry out the surveys.

Corresponding application of provisions concerning whale research

Article 18

If the Institute accepts a commission to implement a cetacean sighting survey in accordance with the provisions of Article 16, the provisions of Article 8 through Article 11 shall apply correspondingly to the implementation of cetacean sighting surveys with regard to the selection of the survey vessel, the conclusion of a charter party, the charter vessel fee and the reporting of the survey results.

Chapter 3 Special Foundation Assets

Management of Special Foundation Assets

Article 19

The assets of the Special Foundation shall be managed in the following ways:

- i. as deposits in a bank or other financial institution,
- ii. as money in trust in a bank offering trust services or a trust company,
- iii. as acquisitions of Government bonds, municipal bonds, bonds issued by a corporate entity established by a special law, beneficiary certificates in loan trusts, or other securities as specified by the Director-General, Japan Fisheries Agency,
- iv. as a trust for the securities specified in the preceding item with a trust company or bank offering trust services, or deposit with a securities company.

Disposition of Special Foundation assets

Article 20

- i. The assets of the Special Foundation shall only be used for special survey expenses or for the costs incurred for collections for the Special Foundation.
- ii. When payment using Special Foundation assets is to be made for the costs of special surveys, an expenditure plan must be formulated in advance, passed by the Board of Directors, and approved by the Director-General, Japan Fisheries Agency.
- iii. When a disposition of Special Foundation assets is necessary because it is not possible to carry out the special surveys as specified in Article 2, the disposition shall be

passed by the Board of Directors and approved by the Director-General, Japan Fisheries Agency.

Inclusion in ordinary assets of income arising from Special Foundation assets

Article 21

Income which has been created using the Special Foundation assets, passed by the Board of Directors and approved by the Director-General, Japan Fisheries Agency may be included in ordinary assets.

Chapter 4 Miscellaneous Provisions

Detailed regulations

Article 22

In addition to the matters provided in this Business and Service Document, the Institute may determine detailed regulations about items concerning the operation of business relating to the special surveys and the Special Foundation assets provided that such regulations are passed by the Board of Directors.

Supplementary Provisions

- i. This Business and Service Document shall take effect from the date of approval by the Minister of Agriculture, Forestry and Fisheries (24 November 1988).
- ii. The whale research implemented in the 1987 fiscal year based on the Cetacean Research Capture Project Implementation Guidelines (17 December 1987, 1987 Sea Fisheries, Japan Fisheries Agency No. 3775, Administrative Vice-Minister of Agriculture, Forestry and Fisheries – Directive) shall be deemed to have been implemented in accordance with this Business and Service Document.

特別調査事業業務方法書

第一章 総則

(目的)

第1条 この業務方法書は、財団法人日本鯨類研究所（以下「研究所」という。）が寄附行為第9条の規定に基づき国際条約に関連して実施する特別調査の実施並びに特別基金財産の運用及び処分に関する事項を定め、もって特別調査の円滑な実施に資することを目的とする。

第二章 特別調査

第1節 総則

(定義)

第2条 寄付行為第9条第1項における特別調査とは、次のものをいう。

- (1) 鯨類調査捕獲事業実施要領（昭和62年12月17日付け62水海第3775号農林水産事務次官依命通達）に基づく調査（以下「鯨類捕獲調査」という。）
- (2) 水産庁が委託した鯨類資源に関する目視調査及び標識調査（以下「鯨類目視調査」という。）

(業務運営の基本方針)

第3条 研究所は、特別調査の実施に当たって調査資金の手当を勘案するとともに、当該調査の目的が効果的に達成されるよう努めなければならない。

第2節 鯨類捕獲調査

(鯨類捕獲調査の計画策定)

第4条 研究所は、鯨類捕獲調査計画の原案を策定するに当たっては、寄附行為第35条の専門委員会に諮るものとする。

2 研究所は、前項の鯨類捕獲調査計画の原案を策定するに当たって次の事項を総合的に勘案するものとする。

- (1) 国際捕鯨委員会（以下「IWC」という。）の科学小委員会の鯨資源評価の動向
- (2) IWCの包括的資源評価の動向
- (3) 国際機関及び外国の研究者との協力
- (4) 鯨をめぐる国際情勢
- (5) その他調査計画の策定に必要な事項

(鯨類捕獲調査計画の提出)

第5条 研究所は、鯨類捕獲調査計画の原案を策定した場合は、水産庁長官に提出するものとする。

(鯨類捕獲調査の経費)

第6条 鯨類捕獲調査の実施に要する経費は、原則として、国庫補助金及び特別基金財産から支弁するものとする。

(鯨類捕獲調査の実施)

第7条 研究所は、鯨類捕獲調査に使用する船舶(以下「調査船」という。)を次条から第10条までの規定の定めるところにより用船し、その調査船に研究所の職員を乗船させて鯨類捕獲調査を実施するものとする。

(調査船の選定)

第8条 研究所は、調査船の用船契約を指名競争に付して行うものとする。ただし、船舶の構造、機関、設備等からみて調査船として選定することが特に適当であると認められる船舶が他にある場合は、この限りではない。

(用船契約の締結)

第9条 研究所は、前条の規定により調査船を選定したときは、当該調査船の所有者と、次に掲げる事項を内容とする契約書を作成して用船の契約を締結するものとする。

- (1) 用船の目的
- (2) 用船料
- (3) 用船期間
- (4) 契約保証金
- (5) 用船料の支払又は受領の時期及び方法
- (6) 監督及び検査
- (7) 履行の遅滞の場合における遅滞利息、違約金その他の損害金
- (8) 危険負担
- (9) かし担保責任
- (10) 契約に関する紛争の解決
- (11) その他必要な事項

(用船料)

第10条 調査船の用船料は当該調査船に係る人件費、減価償却費、修繕費、消耗品費、金利等を基礎として研究所の理事長が理事会の承認を受けて定める基準に基づいて算定するものとする。

(調査結果の報告)

第11条 研究所は、鯨類捕獲調査を実施したときは、その調査に係る航海終了後2箇月

以内に、調査実施結果についての報告書を水産庁長官に提出するものとする。

(捕獲した鯨の処理)

第12条 鯨類捕獲調査において捕獲した鯨は、国際捕鯨取締条約第8条第2項の趣旨に
沿い、実行可能な限り有効利用を図るものとする。

(鯨製品の販売)

第13条 鯨類捕獲調査において捕獲した鯨の処理に当たっては、その有効利用を図る観点
から、鯨製品を国内に限り販売し、その販売代金を取得金とすることができる。ただし、
鯨製品の販売を行おうとする場合は、あらかじめ調査ごとに水産庁長官の承認を受けな
ければならない。

2 研究所は、前項の承認を受けようとする場合は、別記様式により、鯨製品の種類ごと
の生産量とともに、自ら販売する場合にあっては販売予定量、販売の方法等を、委託販
売する場合にあっては委託先、委託手数料等を記載の上、申請するものとする。

3 研究所は、鯨製品の販売を完了した場合は、速やかに別記様式により販売実績を水産
庁長官に報告するものとする。

(国への納付)

第14条 前条第1項に基づき鯨製品を販売した結果、鯨類捕獲調査に係る国定において収
益を生じた場合は、鯨類調査捕獲事業実施要領第7条の規定に基づき、水産庁長官が定
めた方法によって算定される一定額を国に納付するものとする。

(取得金の管理)

第15条 前条の規定に基づく収益納付を完了した後の取得金は、鯨類捕獲調査の実施に関
する経費に支出するものとする。ただし、理事会の議決を経、かつ、水産庁長官の承認
を受けた場合はこの限りではない。

第三節 鯨類目視調査

(鯨類目視調査の受託)

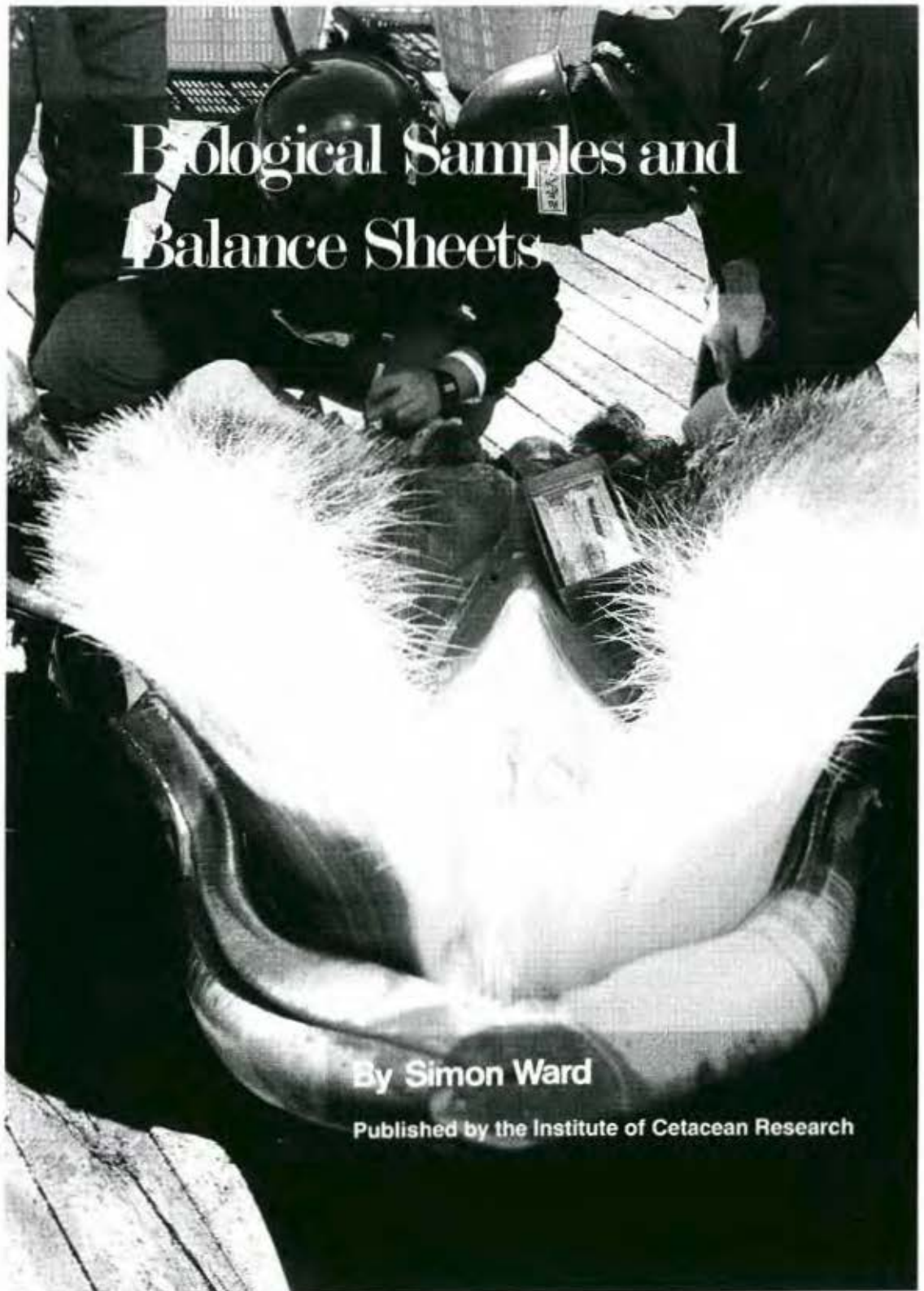
第16条 研究所は、国からの受託料を徴して鯨類目視調査の受託を受けた場合は、その受
託料の範囲内で調査の実施に努めるものとする。

(鯨類目視調査の実施)

第17条 研究所は、鯨類目視調査に使用する船舶（以下「目視調査船」という。）を用船
し、その用船した目視調査船に調査員を乗船させて鯨類目視調査を実施するものとする。

(鯨類捕獲調査に関する規定の準用)

Annex 112: S Ward, *Biological Samples and Balance Sheets*, (Institute of Cetacean Research, 1992) [excerpt]



Verdict

The object of this paper is to allow informed answers to be made to the following questions. Is the research commercial whaling in disguise? Is it a means of keeping men and/or hardware in a state of operational readiness? Is it a means of providing jobs to displaced whalers? Or is it a combination of, or none of, the above?

As I stated in my introduction, one cannot reach a firm conclusion without a study of the science involved. But some aspersions can at least be discounted. In other words, from the evidence presented we cannot conclude what the research is, but we can say what it is not, or is unlikely to be.

By definition, a commercial operation is designed to make a profit, either now or later. The research being conducted in the Antarctic is not profitable. It more or less pays for itself, while the ICR claims to incur a small loss. If one takes into account the other non-lethal projects being funded by the Fisheries Agency, and the administrative costs of running the ICR year-round, the institute is a black hole for money.

Kyodo Senpaku is a private enterprise which receives money for services rendered. But is it merely a revamped version of its predecessor, the commercial whaling company Kyodo Hogeï? On the face of it, yes. Yet it has experienced a 74% drop in income since 1987 while costs have declined negligibly. Hardly big business.

There is reason to suppose this state of affairs might not have been the intention of the drafters of the research plan. The original proposal in March 1987 called for the taking of 825 minke and up to 50 sperm whales annually. The sperm whales were subsequently dropped and the number of minke more than halved, but had this plan been enacted the profit-loss column would look very different today. If this were the case, one might argue convincingly that the by-products were indeed "products", that is, the *raison d'être* of the research.

Officially, the ICR is unperturbed by the cut in sample size; they claim to have compensated by refining methodology and extending the term of the program. The scientists, meanwhile, complain privately that their work has been made much harder, but their complaints have nothing to do with dollars and cents. But what of the Fisheries Agency, which now funds part of the research? Had it originally hoped the sale of by-products would cover the entire cost, hence dispensing with the need for a government subsidy? And what of the three fishing companies which established Kyodo Senpaku? Had they been counting on a profitable research operation?

One can only speculate when it comes to what might have been. Though privately no one is happy with the present sample size, the Fisheries Agency and Kyodo Senpaku have made a commitment to a long-term research program in its present form. It is this we must deal with, and the research as it stands is a loss-maker.

Arguments which merit more consideration are those concerned with mid-term business prospects. Japan makes no secret of its hope to resume commercial whaling, and it is conceivable that the research has been contrived to keep in place the infrastructure of the industry so that it may resume at some point in the future. The evidence is far from conclusive but it cannot be discounted.

There is, however, a third alternative, which is also the most realistic. That is that bona fide research is proceeding in harmony with a small-scale commercial operation. The *raison d'être* is science, but it is the commercial element which makes the research possible — by generating funds — and gives it meaning — by keeping intact the industry which it is intended to benefit.

The scientists employed at the ICR are genuinely interested in science for its own sake. They are not concerned with the politics of whaling. Neither would they tolerate a higher authority pressuring them to cook their results in favour of the whaling industry. This cannot be demonstrated but I know it to be true. Having said that, however, the scientists are ultimately pawns. It is not they who decide whether whales are caught or how many. They do their best with the tools they are given.

More important to consider are the practical realities of conducting the research, and the stances of the Fisheries Agency and of Kyodo Senpaku.

One reality which administrators must face is that, regardless of the scientific merit of catching samples, the research could not continue without the income from selling the by-products. Another is that personnel are needed to transport and assist the scientists in the Antarctic, and the best people for the job are whalers. The list goes on, and time and again we find the interests of science overlapping slightly with those of the whaling industry.

From the perspective of Kyodo Senpaku, meanwhile, there is a view that if whaling were to cease for, say, 10 years, it might be difficult to restart. Research whaling therefore has the benefit of sustaining a minimal infrastructure and flow of products. But the research means much more besides: it means finding scientific evidence that will convince the IWC to lift the moratorium. In two ways, therefore, the future of the whaling industry lies in science.

And it is because the future of the industry lies in science that the Fisheries Agency both contributes funds to the ICR and helps Kyodo Senpaku remain viable. The Fisheries Agency does not fund science for its own sake; it funds science which will benefit industry and the people of Japan. If the ICR's research were to bring about the end of the moratorium but there were no one left to catch whales, at the end of the day those funds would be considered ill-spent.

This could be interpreted as asking the scientists to serve two gods: science and the whaling industry. There is some truth in this; the ICR does not engage in what might be called "pure science". But does it mean the benefits to society are lessened? Perversely, the answer is actually the opposite. For members of the general public who have never faced the task of raising funds to stay in business, it is easy to cry foul when two seemingly incongruous parties join hands. Funds donated by special-interest groups to politi-

cal campaigns can be likened to bribes, but that doesn't mean every politician has sold his soul. What it means is that, for better or worse, you have politicians. If all politicians had to do paper rounds to make ends meet, no one would become a politician. Scientists the world over are faced with a constant dilemma of how to get funding, but if they accept a scholarship from a private enterprise, does it follow that the science must be biased towards the interests of his benefactor? If so, then good science can only result when shielded from all contact with business interests, but if all science was like that, there would be almost no science. The problem is money; science costs too much and if it is not funded by the government, the money must be raised by other means. Cetacean research is no exception.

If there is this commercial element in the research, it in no way tallies with the image created by critics, and in particular by Greenpeace. The thrust of this group's attack, stated openly or implied, is that we are being taken for fools:

"Although the Japanese claim the cull is for research purposes, Greenpeace is determined to stop the \$10 million harvest which sees whale steaks on sale in Tokyo for \$50 a kilo." (filed by Mark Scott from the M.V. Gondwana, Dec. 13, 1990)

"Research is the farce that Japan performs to keep the supermarkets stocked." (campaigner Vicki Getz quoted by Reuter, Wellington, Dec. 23, 1990)

This is a particularly effective approach as no one likes to be duped. Our intelligences are being insulted and we should therefore be angry, a totally understandable and human response.

But if the research is so obviously a sham, why have Greenpeace and others made no attempt to support the accusation with figures? Because the figures don't support the accusation. Talk of a "\$10 million harvest" is very compelling to a casual reader, but with no consideration given to costs it is meaningless.

Annex 113: H Hatanaka, Foreword to the Institute of Cetacean Research (ed), *The 3rd Summit of Japanese Traditional Whaling Communities: Muroto, Kochi: Report and Proceedings*, (Institute of Cetacean Research, 2004), 7



The 3rd Summit of
**Japanese
Traditional Whaling
Communities**

Muroto, Kochi

Report and Proceedings

City of Muroto
The Institute of Cetacean Research

Hiroshi Hatanaka
Director-General,
The Institute of Cetacean Research



I would like to give my heartfelt thanks to the city of Muroto and other municipalities as well as various organizations for the success of the 3rd Summit of Japanese Traditional Whaling Communities.

Muroto and other locations of Kochi prefecture have been one of the central whaling regions in early modern Japan. An organized whaling system was devised so that hunting methods, techniques of the flensers and lemmers, and ways of utilizing the whale developed to flourish as whaling culture. Modern whaling was founded on these techniques and systems, and after the World War II whaling grew to be a major industry that provided good quality animal protein to the people of Japan. Although, unfortunately, commercial whaling has been completely suspended, almost all skills involved has been handed down and is carried on in the scientific whaling projects conducted by the Institute of Cetacean Research. Western whaling which concentrated on obtaining whale oil resulted in the overexploitation of large whales. In contrast, Japanese whaling which utilizes the entire whale without wasting anything, in the spirit of gratitude for the animal nature has provided us, could be the prototype for sustainable whaling of the future.

I believe it was a meaningful occasion to take a look from various aspects at pre-modern whaling that made amazing progress and to discuss the matter with the people of Muroto, the city that occupies a sacred place in Japanese whaling. This is a report of the 3rd Summit held in Muroto. I hope it will be useful and attract a wide readership. I would also like to offer my sincere thanks to the authors and the editors for their contribution.

Annex 114: Institute of Cetacean Research, *Rules for the Processing and Sale of By-Products of the Cetacean Capture Research Program*, (ICR No. 570, 12 January 2001 and as amended to 31 May 2006)

**Rules for the Processing and Sale of By-Products of the
Cetacean Capture Research Program**

ICR No. 570
The Institute of Cetacean Research
Instituted 12 January 2001
Amended 10 September 2001
Amended 15 July 2002
Amended 7 July 2003
Amended 9 July 2004
Amended 31 May 2006

I. Core policy

Under a special permit granted by the Fisheries Agency in accordance with the International Convention for the Regulation of Whaling, the Institute of Cetacean Research (hereinafter ‘the ICR’) carries out capture surveys in the Antarctic Ocean and the Northwest Atlantic Ocean in order to obtain scientific information necessary for the preservation and management of cetaceans. The by-products of these surveys (hereinafter ‘by-products’) are sold within Japan for the purposes of ensuring effective use consistent with the spirit of paragraph 2, Article 8 of the International Convention for the Regulation of Whaling and procuring funds necessary for the conduct of capture surveys, etc.

Cetacean capture surveys are not a profit-making enterprise but a form of scientific research conducted under the direction and support of the national government. Bearing this in mind, when selling the by-products, the ICR is expected to accord priority to demand from public interest sectors, to ensure transparency and fairness, and to allocate the by-products among a large number of consumers.

To this end, the ICR hereby prescribes a set of *Rules for the Processing and Sale of By-Products of the Cetacean Capture Research Program* in accordance with the directions of the Fisheries Agency and the results of deliberation by a Sales Committee composed of experts. These rules shall provide a basis for ensuring transparency and effecting the proper distribution of by-products.

II. Definition and classification of by-products

(1) Definition

The ‘by-products’ referred to in these rules are the frozen products derived from whale carcasses in the course of cetacean capture surveys conducted by the ICR and offered for sale in accordance with paragraph 2, Article 8 of the International Convention for the Regulation of Whaling.

(2) Classification

[1] Classification by product type (see Table 1)

a. Red meat: Red meat, small cuts, breast meat, processed small cuts, processed breast meat, etc.

b. Offal: Belly ridge, hide, tail fins, internal organs, etc.

[2] Classification by allocation type

a. Public interest: For use in activities with a public character:

i) Distribution to local residents; ii) School meals allocation; iii) Medical services allocation; iv) Public education initiatives.

b. Commercial: For consumers through wholesale markets, fisheries cooperatives, food processing enterprises, restaurants and other distribution routes, in order to facilitate provision of opportunities for the general Japanese public to consume whale products:

i) Market use; ii) General use

III. Sale of by-products

(1) Sales operations

By-product sales operations shall be assigned to organisation(s) considered appropriate by the ICR (hereinafter 'sales agent'), chosen from among organisations which have a given degree of expertise in the handling of whale products and which have submitted a sales plan for the purpose of ensuring that sales are fair and transparent.

(2) By-product sales destinations

[1] Public interest

a. Distribution to local residents

Local government authorities which request purchase and which the ICR determines to have a strong connection to the culture of whale consumption and whaling

b. School meals allocation

Boards of education, schools and organisations for the processing and preparation of school meals

c. Medical services allocation

Medical institutions and organisations which request to purchase whale meat necessary for medical care purposes

d. Public education initiatives:

Organisations which conduct activities to popularise the culture of whale consumption and initiatives in public education such as promoting the resumption of whaling (includes antenna shops contracted by the ICR)

[2] Commercial

a. Market use:

Intermediate wholesalers, etc. purchasing through wholesalers (consignees) at central and regional wholesale markets designated by the ICR to receive shipments

b. General use:

Fisheries cooperatives, food processing enterprises, wholesale merchants, mass retailers, restaurants, etc.

(3) Point of Sale Prices

The prices of all by-products at the point of sale by the ICR shall be determined in advance under the direction of the Fisheries Agency. Further, the ICR shall conduct periodical market price surveys in order to ensure that the by-products are sold at appropriate prices on the market.

Prices for sale of by-products in the public interest shall be lower than prices for commercial sale. In principle, a discount of 10% (one third for the school meals allocation, one half for the medical services allocation) shall be applied to public interest sales.

For commercial sale of by-products, nationwide uniform prices shall be set for each product type and for each species of whale from each capture survey. For commercial purchasers making total annual purchases greater than a certain value (50 million yen), a discount of 10% shall be applied to the purchase amount in excess of that value. In principle, the volume of purchases by any single purchaser shall not exceed 10% of the total annual volume of supply.

(4) Conditions applying to sales

[1] Public interest

Sales plans and activity plans must be approved by the ICR in accordance with a format prescribed separately.

If there is a breach of the conditions of sale or other form of misuse, the organisation involved will be required to return the remaining by-products and will not be sold any further by-products until it is clear that the situation has been rectified.

a. Distribution to local residents

- i) This is limited to purchases made by local government authorities using public funds.
- ii) When paying for the by-products, the local government authority shall provide the sales agent with a written statement of payment particulars.

b. School meals allocation

- i) Applications for approval of sales plans shall be accompanied by an application letter from a board of education, school, or organisation corresponding thereto.
- ii) Purchase prices shall be paid to the sales agent in advance, in principle.

c. Medical services allocation

- i) Applications for approval of sales plans shall be accompanied by a certification letter from a medical institution or medical practitioner which requires whale meat for medical care.
- ii) Purchase prices shall be paid to the sales agent in advance, in principle.

d. Public education initiatives

- i) Applications for approval shall be lodged by the head of the organisation conducting the initiative and accompanied by a plan for the initiative.
- ii) Purchase prices shall be paid to the sales agent in advance, in principle.

[2] Commercial

a. Market use

Sale of by-products for market use shall be conducted in accordance with the Guidelines for Market Sale of Frozen By-Products of the Cetacean Capture Research Program prescribed separately.

b. General use

The sales agent shall prescribe the product types, sales volumes and other conditions following consultation with the prospective purchaser.

In order to ensure fairness, the results of 'general use' distributions (volumes distributed to and amounts paid by each recipient) shall be collated for each business year and made public.

(5) Reporting

All organisations which have purchased by-products for public interest purposes must within six months of purchase submit to the ICR a report on use or sale in accordance with a format prescribed separately.

If necessary, wholesalers (consignees) which have purchased by-products for market use may be required to report sales destinations, etc.

IV. Allocation of by-products

Allocations shall be made to each purpose of use in accordance with the proportions set out in Table I [TN: Table not attached]. These proportions shall be applied severally to each product type, but adjustments may be made in each product type in cases of over- or under-supply to a certain purpose of use.

V. Miscellaneous provisions

By-products which are not sold within the scheduled sales period may be processed and sold following advance consultation with the Fisheries Agency, notwithstanding the provisions of '3. Sale of by-products' and '4. Allocation of by-products' in these Rules.

This shall be allowed only if there is a recognised risk of impediment to the conduct of the Cetacean Capture Research Program in the following year, and conducted within the scope necessary to effect prompt completion of sale.

In the case of sale of sperm whale by-products, allocation recipients shall be identified specifically in light of the special characteristics of consumers, modes of processing, etc.



鯨類捕獲調査事業の副産物処理販売基準

日 鯨 研 第 5 7 0 号
財団法人日本鯨類研究所
平成13年1月12日制定
(改正) 平成13年9月10日
(改正) 平成14年7月15日
(改正) 平成15年7月7日
(改正) 平成16年7月9日
(改正) 平成18年5月31日

1. 基本方針

財団法人日本鯨類研究所（以下「本研究所」と言う）は、水産庁から国際捕鯨取締条約に基づく特別許可を受けて、鯨類の保存と管理に必要な科学的知見を得るため南極海及び北西太平洋において捕獲調査を実施している。その際得られる調査副産物（以下「副産物」と言う。）については、国際捕鯨取締条約第8条第2項の趣旨に沿って有効利用を図るとともに捕獲調査等を行うために必要な資金を確保する目的で国内において販売することとしている。

本研究所が副産物を販売するに当たっては、鯨類捕獲調査が政府の指導と支援の下で実施されている科学調査であって営利事業ではないことに鑑み、公益的需要を優先的に配慮するとともに、透明性を確保しながら公正に、そしてより多くの消費者に配分することが求められている。

このため、本研究所は水産庁の指導及び有識者による販売委員会の審議結果に基づき、「鯨類捕獲調査事業の副産物処理販売基準」を定め、これに基づき透明性を確保しつつ、副産物の適正な流通を図っていくこととする。

2. 副産物の定義と分類

(1) 定義

本基準における副産物とは本研究所が行う鯨類捕獲調査の過程で鯨体から得られる冷凍生産物であって、国際捕鯨取締条約第8条第2項に基づいて販売の用に供するものとする。

(2) 分類

① 製品別の分類（表1参照）

- ア、赤肉類：「赤肉」「小切」「胸肉」「加工小切」「加工胸肉」など
- イ、白手物類：「鯨須」「皮」「尾羽」「内臓」など

② 用途別配分枠の分類

ア、公益用…公共性のある事業での使用を目的とする。

- i) 地域住民配分用、ii) 学校給食枠、iii) 医療枠、iv) 啓発事業用

イ、市販用…不特定多数の国民に広く鯨食の機会の提供を可能ならしめるために



卸売市場、漁業協同組合、加工業者、料理店及びその他の流通経路を通じて消費者に販売する。

1) 市場用、ii) 一般用

3. 副産物の販売

(1) 販売業務

副産物の販売業務は、鯨製品の取り扱いに関する一定の知見を有し、公正かつ透明性のある販売を確保するための販売計画書を提出した団体の中から、本研究所が適当と認める団体（以下「販売代行者」と言う）に行わせる。

(2) 副産物の販売対象

① 公益用

ア. 地域住民配分用

本研究所が鯨食文化、捕鯨との係り合いが強いと判断した地方自治体で、購入を希望する地方自治体

イ. 学校給食枠

教育委員会、学校又は学校給食の加工・調理等を目的とする団体

ウ. 医療枠

医療機関又は医療目的のために必要な鯨肉の購入を希望する団体

エ. 啓発事業用

鯨食文化の普及、捕鯨再開促進活動等の啓発を目的とする活動（本研究所との契約に基づくアンテナショップでの販売を含む。）を行う団体

② 市販用

ア. 市場用

本研究所が出荷先として指定した中央卸売市場及び地方卸売市場の卸売業者（荷受）を通して購入する仲卸業者等

イ. 一般用

漁業協同組合、加工業者、問屋、量販店、料理店等

(3) 売渡価格

本研究所が売り渡す時点での全ての副産物の価格は、水産庁の指導の下で予め設定した価格とする。また、副産物が市場において適正価格で販売されることを確保するため、本研究所は定期的に市場価格調査を実施するものとする。

公益用の副産物売渡価格は市販用価格より廉価とし、原則、10%引き（学校給食枠については市販用価格の3分の1、医療枠については2分の1）の割引価格を適用する。

市販用の副産物売渡価格については、捕獲調査毎の鯨の種類及び製品毎に全国同一価格（市販用一般価格）を設定する。また、年間の購入が一定額（5千万円）



を超えて市販用副産物を購入する場合には、一定額を超えた購入分に対して割引価格（10%引き）を適用する。なお、この場合、一購入者の購入量が年間の全供給量の10%を超えないことを原則とする。

(4) 売渡に当たっての条件

① 公益用

販売計画又は事業計画について、別に定める様式により本研究所の承認を得なければならない。

また、販売の条件に反する等の虚偽の使用実態が判明した場合、残りの副産物の返還を求めるとともに、以後、状況の改善が明らかとなるまでの当分の間、当該団体への販売は行わないこととする。

ア. 地域住民配分用

- i) 地方自治体が公費を持って購入するものに限る。
- ii) 地方自治体は当該副産物の支払いに当たり、販売代行者に文書にて支払い明細を通知する。

イ. 学校給食枠

- i) 販売計画の承認申請にあたっては、教育委員会、学校又はこれに準じる団体の要請書を添付する。
- ii) 購入代金は販売代行者に対し、原則として、前納する。

ウ. 医療枠

- i) 販売計画の承認申請にあたっては、医療目的のために鯨肉を必要とする医療機関又は医師の証明書を添付する。
- ii) 購入代金は販売代行者に対し、原則として、前納する。

エ. 啓発事業用

- i) 事業計画を添付のうえ、実施団体の長より承認申請を行う。
- ii) 購入代金は販売代行者に対し、原則として、前納する。

②市販用

ア. 市場用

市場用副産物の売渡に当たっては、別に定める「鯨類捕獲調査事業の冷凍副産物の市場における売渡要領」に従うものとする。

イ. 一般用

販売代行者が、購入希望者と協議のうえ製品の種類、販売数量等の条件を定める。

なお、「一般用」の配分結果（配分先毎の配分量及び金額）については、公平性の確保の観点から、事業年度ごとにとりまとめのうえ公表することとする。



(5) 報告事項

公益用として副産物を購入した全ての団体は、本研究所に対して別に定める様式に従って、購入後6ヶ月以内に使用報告もしくは販売報告をしなければならない。

なお、市場用として販売した卸売業者（荷受）に対し、必要な場合、販売先等の報告を求めることがある。

4. 副産物の配分

各用途別の製品配分は別表Iに記載される配分比率を基準に行うものとし、各製品の種類別毎にこの比率を適用するものとするが、用途別に過不足が生じた場合は製品種類別毎に調整できるものとする。

5. 雑則

販売予定期間内に販売が完了しない副産物については、次年度の捕獲調査事業の実施に支障を来す恐れがあると認められる場合に限って、速やかに販売を完了させるために必要な範囲内において、事前に水産庁に相談のうえ、本基準の「3. 副産物の販売」及び「4. 副産物の配分」の規定に関わらず、処理販売を行うことが出来ることとする。

マッコウクジラの副産物の販売については、消費者及び加工形態等の特殊性を考慮し、配分対象者を特定して実施する。

以上

Annex 115: Kyodo Senpaku Kaisha Ltd, “Subject: Changes in the Shareholder Composition”, (Press Release, 24 March 2006) at Japan Whaling Association website, <<http://www.whaling.jp/english/articles/060324news.html>> on 9 March 2011

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Press Release

Kyodo Senpaku Kaisha, Ltd
March 24, 2006

Subject: Changes in the Shareholder Composition

Kyodo Senpaku Kaisha, Ltd, which operates the vessels used by the Institute of Cetacean Research (ICR) to carry out its whale research programs under the authority of the Government of Japan announced today that its shareholder structure is being changed.

Five private companies which had been shareholders of Nihon Kyodo Hogei remained shareholders in the same proportion when Nihon Kyodo Hogei became Kyodo Senpaku Kaisha.

However, in view of the scientific and public-interest nature of the activities now carried out by our company it has been decided, with the consent of our shareholders, that the shareholder composition of our company will be changed.

Specifically, the shares of our company will be transferred to several public-interest corporations including the ICR, so that the share ownership will better reflect our activities. Although some time is required to finalize the transfer of the company's shares to the new shareholder organizations, present shareholders will eventually be completely divested of their ownership.

Under the new regime, we are committed to redouble our efforts so that we can better contribute to the further development of the research and promoting sustainable utilization of whale resources.

For further information, Makoto ITO
P.R. & Planning Division
Tel. 03-5547-1940

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Annex 116: Institute of Cetacean Research and Geishoku Rabo, LLC, “New organisation for whale meat sales promotion”, (Press Release, May 2006) at Japan Whaling Association website, <http://whaling.jp/press/press06_05.html> on 9 March 2011

PRESS RELEASE

May 2006

**Institute of Cetacean Research
Geishoku Rabo, LLC**

‘New organisation for whale meat sales promotion’

1. Background

Following the increase of whale meat supplies as research whaling expands, on 1 May, a new organisation was incorporated to undertake on commission from the ICR the retailing of whale meat, to assist in the revival and expansion of Japan’s traditional whaling cuisine and to strengthen current whale meat sales systems.

2. Summary

1. The new organisation is a limited liability company (LLC) as recognised under the New Companies Act; it is called Geishoku Rabo [TN: lit: Whale Cuisine Laboratory] and it will have a limited five-year term pursuant to its Articles of Association.

2. The president of the new organisation will be an external sales promotion consultant appointed from the whale meat marketing industry. The number of staff will be approximately ten.

3. Initially, the new organisation will sell whale meat through channels that do not compete with Kyodo Senpaku, the organisation already commissioned to retail whale meat. Specifically, Geishoku Rabo will conduct direct sales to school lunch providers, prepared-meal providers and supermarket organisations, as well as conducting internet sales.

3. Other

To facilitate the retail sales of whale meat, in conjunction with the establishment of the new retailing framework, the ICR’s “Rules for the Processing and Sale of By-products” will be amended, including simplifying distribution ratios and relaxing distribution conditions.

Annex 117: “Japan Fisheries Agency and ICR Establish Whale Meat Retail Company, Develop New Sales Channels”, Isana 26 (Japan Whaling Association, June 2006)

‘Japan Fisheries Agency and ICR Establish Whale Meat Retail Company, Develop New Sales Channels’

Source: ISANA 26 (Japan Whaling Association), June 2006

On 9 May, the Institute of Cetacean Research and the Japan Fisheries Agency announced the incorporation of the whale meat retailing company, Geishoku Rabo [TN: lit: Whale Cuisine Laboratory], located in Minato Ward, Tokyo, to promote the sales of whale meat on the open market. The new company was established as a limited liability company (LLC).

With the increase in whale meat supplies due to the expansion of scientific whaling, Geishoku Rabo aims to open up new sales channels, and intends to approach industries not previously targeted for retail sales such as school lunch providers, prepared-meal providers and the chain restaurant sector. It is forecast that the supply of whale meat in 2006 will be 5,500 tonnes following the scientific whaling expansion, which is approximately 1.4 times the amount supplied during the previous year. Geishoku Rabo will aim to sell 1,000 tonnes of this amount.

Geishoku Rabo has a limited five-year term and plans to review its business methodology after three years. Initially, the company will employ 10 persons. Geishoku Rabo will fully commence operations on 20 June.



[I SANA] 勇魚通信

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新しい「食」の文化を創る北東北の漁業

勇魚通信第26号

横浜で実施し、今回が13回目となります。今回は、金沢市、船倉町などの自治体や商工会議所などで組織する「環境調査調査船富田丸」を動員する会が主催、水産庁が協賛しました。

会場では、船舶設備・機器やパネル・写真・器具類・氷山の塊などの展示と説明、船グッズ・書籍類などの販売、船バナー・フレット類の配布、調査の意義・必要性の説明などのほか、船員との交流、地元関係者によるイベント、郷土品や鯨肉の販売、くしらの贈答配布など盛りだくさんの内容で行われました。

また、昨年12月から約1ヶ月にわたり遠征の反捕鯨団体、グリーンピースとシーシェパードが行った調査の妨害活動についても写真とパネルを使って紹介、両団体への対応策への署名を募ったところ、来場者500名の賛同が得られました。

さらに、29日には午後5時から6時まで、ウェルシティ金沢で、海の幸に感謝する会主催の講演会も開かれ、医学博士・福部金孝明(門)字校長の福部章雄氏が「食育のすゝめ大切なものを失った日本人」と題し講演を行いました。

三陸沖で鯨類捕獲調査を実施

ミンク鯨の捕食が資源に与える影響を把握

(財)日本鯨類研究所は、2006年度第二紀北西太平洋鯨類捕獲調査(JAPFN II)の三陸沖鯨類捕獲調査を4月12日から5月24日まで実施し、その結果、ミンク鯨が恒年恒年北上する際、漁業資源を大量に捕食していることが確認されました。

調査は、宮城県石巻市鮎川町を中心とした半徑50マイル以内の海域で行われました。標準採集船4隻、調査船2隻、目視調査船1隻が参加。上陸のミンク鯨60頭のサンプルを採取。三陸沖の調査は平成15年、17年と比較して倍増しています。

ミンク鯨の発見数は、捕獲調査船によるもの169群171頭、目視専門船によるもの29群29頭、大型から小型の個体まで広く採集されました。平均体長6.06m(4.08-8.07)、平均体重2.65t(0.89-7.04)でした。

胃内容物は、4月後半以降が卓越して、ズリガ、5月に入るとカクチアヒを捕食する個体が増加していることが見られました。餌生体調査船による胃内容物調査では、調査期間中、仙台湾周辺の水深20-30mより深い部分ではズリガ、それより深い部分にはカクチアヒズリガが分布していることが明らかになりました。

水産庁と鯨研

鯨肉の販売会社設立

新たな販路開拓

(財)日本鯨類研究所と水産庁は一般市場での鯨肉販売を促進するため、東京港区に鯨肉の販売会社「鯨食ラボ」を設立したと5月9日発表しました。新会社は合同会社(株)として設立。

調査捕鯨の拡大で鯨肉の供給が増えることから、新たな販路開拓を促し、給食や中食、外食チェーンなどこれまで販売が行われていない業界に売り込む予定です。2008年は調査捕鯨の拡大により前年比約1.4倍の3500トンの鯨肉供給が見込まれています。

ます。新会社ではこのうち1000トンの販売を目指します。

新会社は5年間の短期組織とし、3年後に運営方法を見直す予定。社員は当選10人。6月20日にも営業を本格的に開始します。

国際シンポジウム 「日本捕鯨の黎明期と巻岐」



3月18日・19日の2日間、長崎県巻岐市の「巻岐歴史開発総合センター」で「国際シンポジウム日本捕鯨の黎明期と巻岐」が行われました。これは、巻岐の郷土史会「一支援研究会」が、巻岐と日本捕鯨を軸にクジラ文化を回顧する目的で企画したもので、捕鯨文化に関心をもつ人々を中心に、およそ200名が参加しました。

18日には、長崎国際大学の立平進教授による基調講演とパネル討論「考古学資料に観る鯨」が行われました。長崎県・生月町博物館の中野直生学芸員がコーディネーターを務めたディスカッションでは、立平教授を含む4名の研究者が地域での捕鯨について意見交換を行い、日本の捕鯨がどのように発展してきたかを振り返りました。

19日は、「日本人と鯨食文化」と題されたパネル討論。食材としてのクジラに着目し、日本人が食べてきたクジラ料理の伝統と、これからの鯨食文化のあり方について議論が交わされました。

シンポジウム終了後には、クジラ料理の試食会が催され、会場には、クジラのさまざまな部位を使った料理12品が振舞われました。

鹿児島で

「鯨と食文化を語る市民の集い」

3月18日、鹿児島市のサンエールかごしま講堂で「鯨と食文化を語る市民の集い」が500名の参加者を得て開催されました。

主催者の「クジラ食文化を守る会」(会長：小泉武夫東京農業大学教授)は、鯨食文化の伝承を、これからの「食」を考える上で鯨がもつ大切さを見出し、クジラ資源の持続的利用の重要性を市民シンポジウムを通して日本各地で訴えてきました。今回は、鯨食文化にもなじみがあり、近郊にはクジラやイルカが多く生息している鹿児島での開催。

Annex 118: Institute of Cetacean Research and Kyodo Senpaku Kaisha Ltd,
By-Product Consignment Sales Agreement, (5 June 2007)

By-Product Consignment Sales Agreement

The Institute of Cetacean Research (hereinafter referred to as “the Institute”) and Kyodo Senpaku Kaisha, Ltd. (hereinafter referred to as “Kyodo Senpaku”) hereby enter into the following agreement on consignment sale of by-products of the 2006 Fiscal Year Antarctic Ocean Cetacean Research Capture Program conducted by the Institute.

Consignment of Sales

Article 1

The Institute engages Kyodo Senpaku to sell the by-products, and Kyodo Senpaku accepts this engagement.

Handover of by-products

Article 2

- i. The by-products shall be handed over at a place, date and time determined upon discussion between the Institute and Kyodo Senpaku.
- ii. Inspection of by-product weights and contents shall be conducted at the point of handover, in the presence of the Institute and Kyodo Senpaku.
- iii. Kyodo Senpaku shall issue a notice of receipt of by-products to the Institute without delay after completion of the inspection of weights and contents prescribed in the preceding paragraph.

Method of sale

Article 3

Kyodo Senpaku shall conduct sales in accordance with the recommendations of the Sales Committee, an advisory committee of the Institute, and in accordance with the *Rules for the Processing and Sale of By-Products* as determined by the Institute.

Indemnity

Article 4

Kyodo Senpaku shall bear no responsibility whatsoever for damage resulting from loss, harm or other accident to by-products after handover except for reasons attributable to Kyodo Senpaku.

Sale conclusion date

Article 5

Kyodo Senpaku shall conclude sale on a date after handover of the by-products to be determined following discussion between the Institute and Kyodo Senpaku.

Liability for expenses

Article 6

The following expenses associated with storage and sale of the by-products written below (hereinafter referred to as 'sales expenses') shall be borne by the Institute, and paid on the Institute's behalf by Kyodo Senpaku.

- i. Inbound and outbound warehouse charges
- ii. Storage charges
- iii. Freight
- iv. Bookkeeping charges
- v. Loading and unloading charges
- vi. Market commission charges
- vii. Other miscellaneous charges
- viii. Expenses associated with sales promotion

Consignment fee

Article 7

When Kyodo Senpaku sells the by-products, the Institute shall in accordance with Kyodo Senpaku's request pay Kyodo Senpaku a consignment fee equal to 5.58% of the sales proceeds. Amounts shall be exclusive of consumption tax.

Settlement of sales proceeds

Article 8

- i. Kyodo Senpaku shall subtract the sales expenses prescribed in Article 6 and the consignment fee prescribed in Article 7 from the sales proceeds tallied at the end of each month and pay the remaining amount to the Institute by the 20th day of the following month.
- ii. For by-products for which the date of conclusion of sale prescribed in Article 5 has been reached, Kyodo Senpaku shall subtract the sales expenses and the consignment fee prescribed in the previous paragraph from the sales proceeds tallied at the end of the month in which the said date falls and pay the remaining amount to the Institute by the 20th day of the following month.
- iii. Payments by Kyodo Senpaku under the preceding paragraphs shall be accompanied by sales reporting documentation stipulated by the Institute.

Interest on overdue payments

Article 9

When payment of the sales proceeds stipulated in the preceding article is not performed by the due date, Kyodo Senpaku shall pay the Institute an overdue fee at the rate of 7.30% per

annum of the overdue amount, calculated in accordance with the number of days elapsed from the day following the due date in question.

Change in conditions

Article 10

When there is a significant change in economic conditions or in other conditions from those prevailing at the time that this agreement was entered into, the particulars of this agreement may be altered following consultation between the Institute and Kyodo Senpaku.

Cancellation

Article 11

i. The Institute may cancel this agreement if either one of the following applies. In such a case the Institute shall bear no responsibility for damage incurred by Kyodo Senpaku.

(a) Violation of this agreement by Kyodo Senpaku

(b) Improper conduct by Kyodo Senpaku in relation to the performance of this contract

ii. When the Institute notifies cancellation pursuant to the provisions of the preceding paragraph, the agreement shall terminate on a date nominated by the Institute at the time of such notification.

Separate consultation

Article 12

Uncertainties or disputes arising in relation to the provisions of this agreement or matters not prescribed in this agreement shall be resolved through consultation in good faith between The Institute and Kyodo Senpaku in accordance with applicable laws, regulations and commercial customs.

IN WITNESS WHEREOF two copies of this document shall be made and the parties shall retain one copy each.

5 June 2007

The Institute: The Institute of Cetacean Research
Hiroshi Hatanaka, Director-General
4-5 Toyomi-cho, Chuo-ku, Tokyo
[TN: Imprints of Institute seal and Director-General's seal]

Kyodo Senpaku: Kyodo Senpaku Kaisha, Ltd.
Kazuo Yamamura, Representative Director and President
4-5 Toyomi-cho, Chuo-ku, Tokyo
[TN: Imprints of company seal and President's seal]

副産物販売委託契約書

財団法人日本鯨類研究所（以下甲という）と「共同船舶株式会社」（以下乙という）は、甲が実施する平成18年度南極海鯨類調査捕獲事業に係る副産物の販売委託について次のとおり契約を締結する。

（販売の委託）

第1条 甲は副産物の販売を乙に委託し、乙はこれを受託する。

（副産物の引渡等）

第2条 副産物の引渡しは、甲乙協議の上、日時場所を指定し行うものとする。

2. 副産物の検量及び検品は、引渡しの際、甲乙立合の上行うものとする。

3. 乙は前項の検量及び検品が終了後遅滞なく甲に副産物受領書を発行するものとする。

（販売方法）

第3条 乙は、甲の諮問機関である販売委員会の答申、及び同答申にしたがって甲が定めた副産物処理販売基準に基づき、販売を行うものとする。

（免責）

第4条 乙は、引渡しを受けた後乙の責に帰すべからざる事由により生じた副産物の滅失、き損その他事故による損害については、一切責任を負わないものとする。

(販売の終期)

第5条 乙は、副産物の引渡しを受けた後、別途甲乙協議して定める日までに販売を終えるものとする。

(費用の負担)

第6条 副産物に係る保管及び販売に要する下記費用（以下販売経費という）は、甲の負担とし、乙が立替払するものとする。

1. 入出庫料
2. 保管料
3. 運賃
4. 仕訳料
5. 積卸料
6. 市場委託手数料
7. その他諸掛
8. 販売促進に関わる経費等

(委託販売手数料)

第7条 乙が副産物を販売したときは、甲は乙に対して販売金額に 5.58%の率を乗じて得た額を委託販売手数料として乙の請求に基づき、支払うものとする。
尚、消費税等は外税扱いとする。

(販売代金の決済)

第8条 乙は、毎月末集計した販売代金から第6条に定める販売経費及び前7条に定める委託販売手数料を控除して得た残額を翌月 20 日までに甲に支払うものとする。

2. 乙は第5条の規定による販売終期が到来した副産物については、その販売終期の属する月末に集計して得た販売代金から前項の販売経費及び委託販売手数料を控除して得た残額を翌月末日までに甲に支払うものとする。
3. 乙は、甲の定める販売報告関係書類を添えて前各項の支払を行うものとする。

(遅滞利息)

- 第9条 乙は、前条に定める販売代金を履行期限までに支払わないときは、当該期限満了日の翌日から支払の日までの日数に応じ、その未納額に対し年7.30%の割合で計算した延滞金を甲に支払うものとする。

(事情変更)

- 第10条 経済事情その他契約締結当時の事情に著しい変化が生じたときは、甲乙協議の上この契約の内容を変更することができる。

(解 約)

- 第11条 甲は、次の各号の1に該当するときは、この契約を解除することができる。この場合、乙が損害をこうむることがあっても甲はその責を負わないものとする。

- (1) 乙がこの契約に違反したとき
 - (2) この契約の履行について乙に不正の行為があったとき
2. 甲が前項の規定により解約の申し入れをしたときは、その解約の申し入れをした際甲が指定した日にこの契約は終了する。

(別途協議)

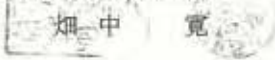
第12条 この契約の規定又はこの契約に規定のない事項について疑義もしくは争いを生じたときは、関係法令もしくは商慣習に基づき甲乙誠意をもって協議解決するものとする。

この契約締結の証として本書2通を作成し、甲、乙双方がそれぞれ1通を保有する。

平成19年6月5日



甲 東京都中央区豊海町4番5号
財団法人日本鯨類研究所
理事長 畑中 寛



乙 東京都中央区豊海町4番5号
共同船舶株式会社
代表取締役社長 山村 和夫



Annex 119: Institute of Cetacean Research, 2007 Fiscal Year Antarctic Ocean Cetacean Capture Research Program: Request for Authorisation of Sale and Processing of Whale Products, (ICR No. 1026, 22 May 2008)

[TN: Page 1]

[TN: STAMP]

Marine Administration No. 665
10 June 2008
Japan Fisheries Agency

**2007 Fiscal Year Antarctic Ocean Cetacean Capture Research Program:
Request for Authorisation of Sale and Processing of Whale Products**

ICR No. 1026
22 May, 2008

To: Mr Shuji Yamada, Director-General, Fisheries Agency

From: Minoru Morimoto, Director-General
The Institute of Cetacean Research
4-5 Toyomi-cho, Chuo-ku, Tokyo

Authorisation is hereby requested for the sale of whale products produced under the 2007 Fiscal Year Antarctic Ocean Cetacean Capture Research Program conducted pursuant to the special permit issued by the Minister of Agriculture, Forestry and Fisheries Order No. 19 Marine Administration No. 1911 dated 7 November 2007, in accordance with the processing methods stated below consistent with the Rules for Processing and Sale of By-Products of the Cetacean Capture Research Project (instituted on 12 January 2001; revised 31 May 2006).

1. Number of whales captured in the research program
 - (1) Whales captured
 - (a) Species: Antarctic minke whale
 - (b) Number: 551
 - (2) Capture period
From 15 December 2007 to 24 March 2008
2. Projected production and proceeds from sale of whale products

| Product name | Volume produced (A) (kg) | Projected sales volume (B) (kg) | B/A % |
|------------------|-----------------------------|---------------------------------|-------|
| (a) Frozen goods | 1,982,463.8 | 1,982,463.8 | 100.0 |
| Red meat | 1,296,138.0 | 1,296,138.0 | 100.0 |
| Offal | 686,325.8 | 686,325.8 | 100.0 |
| (b) Combs | 10.0 | 10.0 | 100.0 |
| Total | 1,982,473.8 | 1,982,473.8 | 100.0 |

[TN: STAMP]

Received

26 May 2008

Ministry of Agriculture, Forestry and Fisheries

[TN: Page 2]

3. Sales period: From 9 June 2008 to 15 August 2008
4. Processing method for frozen whale products (see Attachment 1)
 - (1) Means of sale: Consignment sale, etc.
 - (2) Consignees:
 - (a) Kyodo Senpaku Kaisha, Ltd.
President Kazuo Yamamura
4-5 Toyomi-cho, Chuo-ku, Tokyo
 - (b) Geishoku Rabo, LLC
President Hiroshi Tanaka
4-18 Toyomi-cho, Chuo-ku, Tokyo
 - (3) Consignment sale commissions: (a) Sales of [TN: REDACTED]
(b) Sales of [TN: REDACTED]
 - (4) Areas for sale of whale products: Nationwide
 - (5) Consignment sales agreement (draft): see Attachment 2

[TN: Page 3]

Attachment 1

Frozen Whale Product Processing Methods

I. Public interest

Public interest sales destinations are as follows:

1. Distribution to local residents
2. School meals allocation
3. Medical services allocation
4. Public education initiatives

Maximum sales volumes are as follows:

- (1) Antarctic minke whales
 - (a) 20% of red meat (259.3 tonnes)
 - (b) 10% of offal (68.6 tonnes)

Total: 327.9 tonnes

II. Commercial sales

Commercial sales destinations are as follows:

1. Markets
2. General use

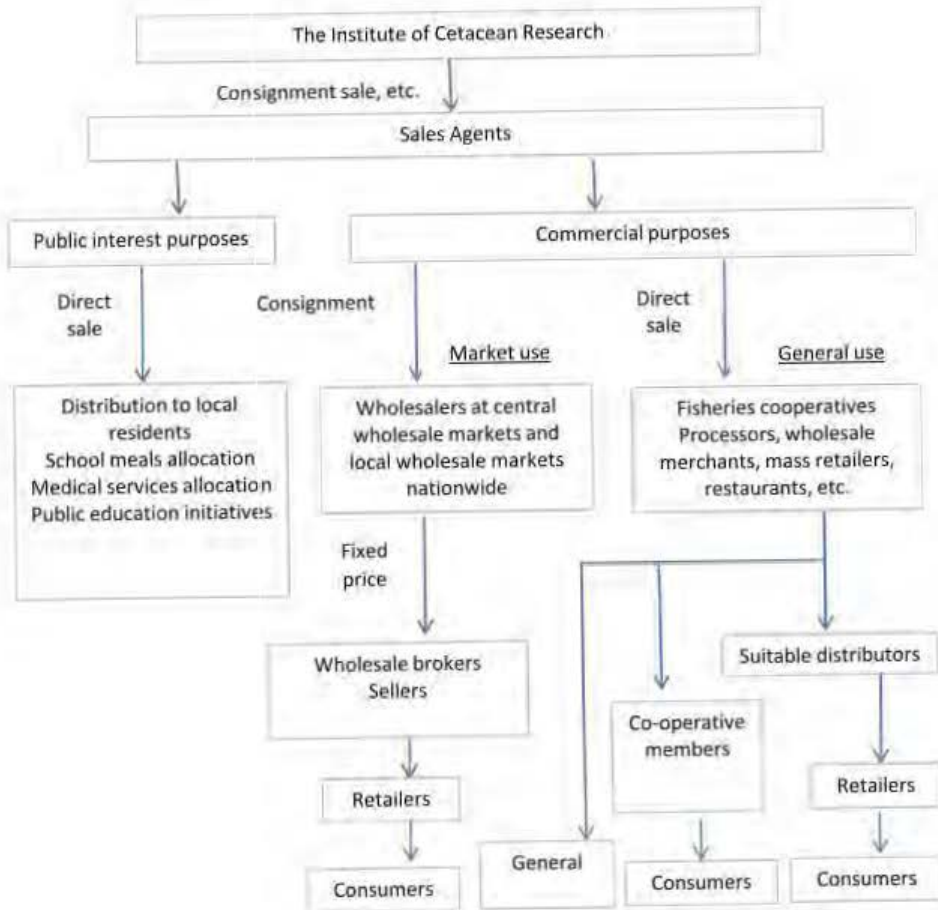
Maximum sales volumes are as follows:

- (1) Antarctic minke whales
 - (a) 80% of red meat (1036.9 tonnes)
 - (b) 90% of offal (617.7 tonnes)
 - (c) 100% of combs (10.0 kilograms)

Total: 1,654.6 tonnes

* The products will be sold to businesses which have requested dealings previously and have a track record in public education, sales promotion, etc.

By-Product Sales Distribution Routes



[TN: Page 5]

Fiscal Year 2007 (No. 21)

By-Products of Antarctic Ocean Antarctic Whale Survey Activities: Projected Sales by Product Type and Mode of Sale

Unit: tonnes

| Product Type | Mode of Sale | | Total |
|--------------|-----------------|------------|---------|
| | Public Interest | Commercial | |
| Frozen goods | 327.9 | 1,654.6 | 1,982.5 |
| Red meat | 259.3 | 1,036.9 | 1,296.2 |
| Offal | 68.6 | 617.7 | 686.3 |
| Total | 327.9 | 1,654.6 | 1,982.5 |
| Combs | 0.0 kg | 10.0 kg | 10.0 kg |

[TN: Page 6]

Attachment 2

By-Product Consignment Sales Agreement (Draft)

The Institute of Cetacean Research (hereinafter referred to as "Party A") and * Kyodo Senpaku, Ltd. (hereinafter "(a)") or Whale Labo, LLC (hereinafter "(b)") (hereinafter referred to as "Party B") hereby enter into the following agreement on consignment sale of by-products of the 2007 Fiscal Year Antarctic Ocean Cetacean Research Capture Program conducted by Party A.

[TN: Redacted]

[TN: Page 7]

[TN: Redacted]

[TN: Page 8]

[TN: Redacted]

[TN: Page 9]

IN WITNESS WHEREOF two copies of this document shall be made and the parties shall sign both copies and retain one copy each.

[day] [month] 2008

Party A: The Institute of Cetacean Research
Minoru Morimoto, Director-General
4-5 Toyomi-cho, Chuo-ku, Tokyo

Party B: Name of (a) or (b)
Representative of (a) or (b)
Address of (a) or (b)



平成19年度南極海鯨類捕獲調査事業に伴う鯨製品の販売処理承認申請

日鯨研 1026号
平成20年5月22日

水産庁長官 山田 修路 殿

東京都港区赤坂4番5号
財団法人鯨類研究所
理事長 本 様

平成19年11月7日付け農林水産省指令19水管第1911号の特別許可に基づく平成19年度南極海鯨類捕獲調査事業により生産された鯨製品を、「鯨類捕獲調査事業の副産物処理販売基準」(平成13年1月12日制定、平成18年5月31日改正)に基づき下記の処分方法により販売したく、承認方申請する。

記

1. 調査により捕獲した鯨頭数

(1) 捕獲した鯨

- ① 鯨種 クロミンク鯨
- ② 頭数 551頭

(2) 捕獲期間

平成19年12月15日 から 平成20年3月24日

2. 鯨製品の生産及び販売予定数量

| 品名 | 生産量(A) kg | 販売予定数量(B) kg | B/A % |
|-------|-------------|--------------|-------|
| ① 冷凍品 | 1,982,463.8 | 1,982,463.8 | 100.0 |
| 赤肉類 | 1,296,138.0 | 1,296,138.0 | 100.0 |
| 白手物類 | 686,325.8 | 686,325.8 | 100.0 |
| ② 丸オサ | 10.0 | 10.0 | 100.0 |
| 合計 | 1,982,473.8 | 1,982,473.8 | 100.0 |



3. 販売期間 平成20年6月9日 から 平成20年8月15日

4. 鯨冷凍製品の処分方法 (参考 別紙-1)

(1) 販売の方法 委託販売等

(2) 委託販売先

- ① 東京都中央区豊海町4番5号
共同船舶株式会社
代表取締役社長 山村 和夫
- ② 東京都中央区豊海町4番18号
合同会社 鯨食ラボ
代表 中田 博

(3) 委託販売手数料

- ① 売上高の [REDACTED]
- ② 売上高の [REDACTED]

(4) 鯨製品の販売地域 全国

(5) 販売委託契約書 (案) 別紙-2

以上

鯨冷凍製品の処分方法

I. 公益用

公益用の販売は次のとおりとする。

1. 地域住民配分用
2. 学校給食用
3. 医療用
4. 啓発事業用

販売数量の上限は、次のとおりとする。

(1) クロミンク鯨

- | | |
|-----------|----------|
| ① 赤肉の20% | (259.3ト) |
| ② 白手物の10% | (68.6ト) |
| 計 | (327.9ト) |

II. 市販用

市販用の販売は次のとおりとする。

1. 市場用
2. 一般用

販売数量の上限は、次のとおりとする。

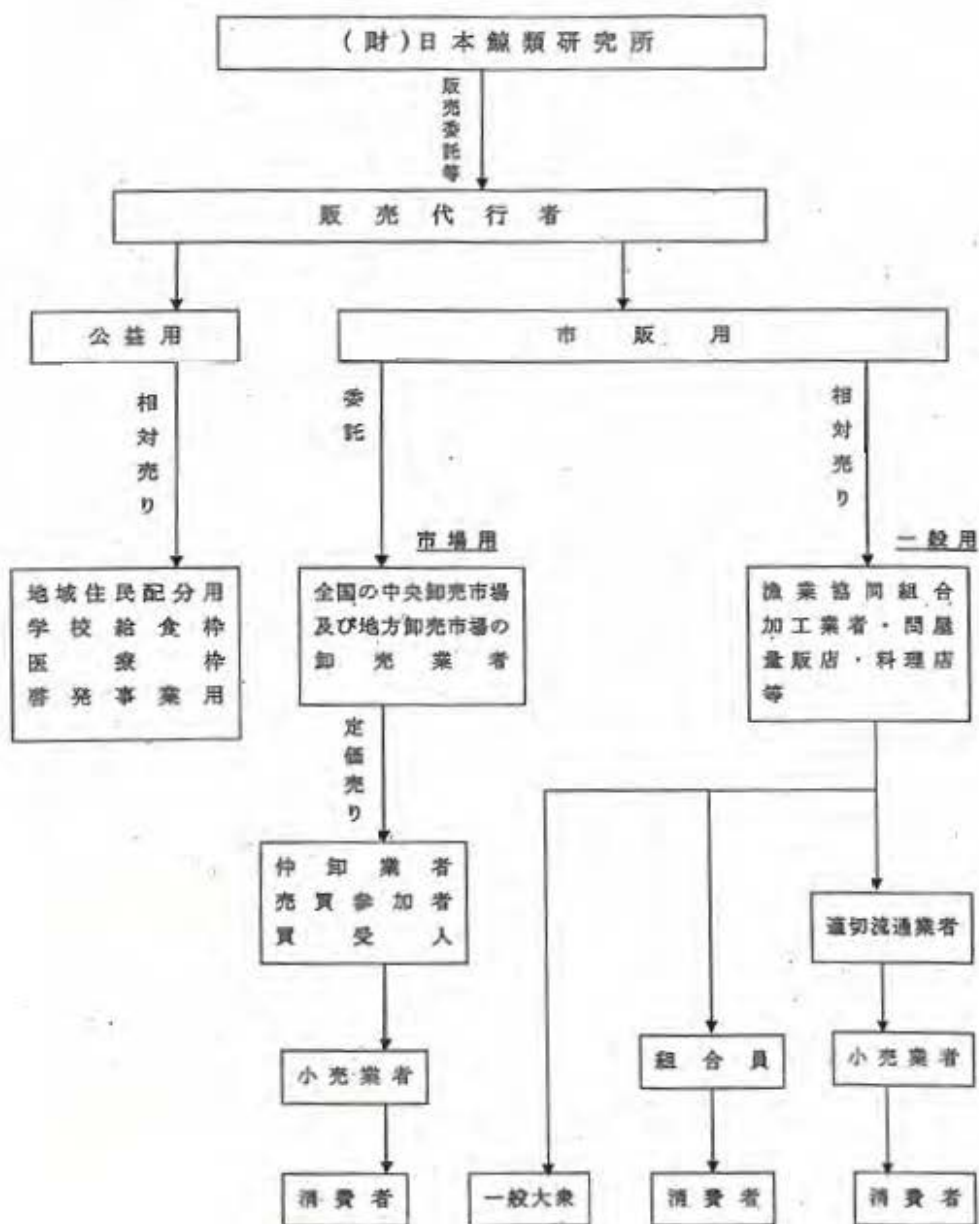
(1) クロミンク鯨

- | | |
|------------|------------|
| ① 赤肉の80% | (1,036.9ト) |
| ② 白手物の90% | (617.7ト) |
| ③ 丸オサ 100% | (10.0ト) |
| 計 | (1,654.6ト) |

※ 従前より取組希望を寄せていた業者で
啓発・販売促進などに実績のある者に販売。

以上

副産物販売流通経路



平成19年度(第21次)

南極海クロミンク鯨調査副産物品目別・販売形態別販売予定表

(単位:トン)

| 品 目 | 販 売 形 態 | | 合 計 |
|---------|-----------|------------|------------|
| | 公益用 | 市販用 | |
| 冷 凍 品 | 327.9 | 1,654.6 | 1,982.5 |
| 肉 類 | 259.3 | 1,036.9 | 1,296.2 |
| 白 手 物 類 | 68.6 | 617.7 | 686.3 |
| 合計 | 327.9 | 1,654.6 | 1,982.5 |
| 丸 才 サ | kg 0.0 | kg 10.0 | kg 10.0 |

副産物販売委託契約書（案）

財団法人日本鯨類研究所（以下甲という）と※（「共同船舶株式会社」（以下①）又は、「合同会社鯨食ラボ」（以下②））（以下乙という）は、甲が実施する平成 19 年度南極海鯨類調査捕獲事業に係る副産物の販売委託について次のとおり契約を締結する。

[Redacted text block containing multiple lines of blacked-out content]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]


[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



この契約締結の証として本書2通を作成し、甲、乙双方がそれぞれ1通を保有する。

平成20年 月 日

甲 東京都中央区豊海町4番5号
財団法人日本鯨類研究所
理事長 森本 稔

乙 ①又は②の住所
①又は②の名称
①又は②の代表者

Annex 120: Institute of Cetacean Research, *2007 Fiscal Year Antarctic Ocean Cetacean Capture Research Program: Report on Sale of Whale Products*, (ICR No. 1036, 1 September 2008) [excerpt translated]

[TN: Page 1]

[TN: STAMP]

Document code FRM No. 1361

3 September 2008

Fisheries Agency

**2007 Fiscal Year Antarctic Ocean Cetacean Research Capture Program:
Report on Sale of Whale Products**

ICR No. 1036

1 September 2008

To: Mr Shuji Yamada, Director-General, Fisheries Agency

From: Minoru Morimoto, Director-General
The Institute of Cetacean Research
4-5 Toyomi-cho, Chuo-ku, Tokyo

Sale of whale products from the 2007 Fiscal Year Antarctic Ocean Cetacean Capture Research Program, authorised in document 20 FRM No. 665 dated 13 June 2008, has been completed. Results are reported below pursuant to the provisions of paragraph 3, Article 13 of The Institute of Cetacean Research Special Research Program Statement of Operation Procedures.

1. Means of sale

(1) Consignment sale

(2) Consignee:

Kyodo Senpaku Kaisha, Ltd.
CEO Kazuo Yamamura
4-5 Toyomi-cho, Chuo-ku, Tokyo

(3) Consignment sale commission: [TN: redacted] of sales

(4) Areas for sale of whale products: Nationwide

2. Sales period

From 7 July, 2008 to 8 August, 2008

[TN: STAMP]

Received

3 September 2008

Ministry of Agriculture, Forestry and Fisheries

[...]



平成19年度南極海鯨類調査捕獲事業
に伴う鯨製品の販売処理実績報告

日鯨研第1036号
平成20年9月1日

水産庁長官 山田 修路 殿

東京都中央区豊海町4番5号
財団法人日本鯨類研究所
理事 [Redacted]

平成20年6月13日付け20水管第665号で承認のあった平成19年度南極海鯨類捕獲調査事業に伴う鯨製品の販売処理を完了したので、財団法人日本鯨類研究所特別調査事業業務方法書 第13条 第3項の規定に基づき、その実績を下記のとおり報告する。

記

1. 販売方法

- (1) 委託販売
- (2) 委託販売先 東京都中央区豊海町4番5号
共同船舶株式会社
代表取締役社長 山村 和夫
- (3) 販売手数料 売上高の [Redacted]
- (4) 鯨製品の販売地域 全国

2. 販売期間

平成20年7月7日から平成20年8月8日



3. 鯨製品の承認販売予定数量及び販売実績

(クロミンク鯨)

| 品名 | 承認販売 予定数量 (kg) | 実績 | | 備考 |
|---------|-------------------|-------------|---------------|---|
| | | 販売数量 (kg) | 販売金額 (円) | |
| (1) 冷凍品 | 1,982,463.8 | 1,982,391.3 | 2,951,059,081 | 承認数量と実績数量に 差異が生じた。 (77.5kg減) 別紙事由書による。 |
| 赤肉類 | 1,296,138.0 | 1,296,078.0 | 1,614,020,385 | |
| 白手物類 | 686,325.8 | 686,313.3 | 1,337,038,696 | |
| (2) オサ | 10.0 | 5.0 | 9,700 | |
| 合計 | 1,982,473.8 | 1,982,396.3 | 2,951,068,781 | |

4. 委託販売手数料等を差し引いた取得金額 (消費税を含まない)

| 鯨種 | 販売金額 | 委託販売手数料等 | 取得金額 |
|--------|---------------|-------------|---------------|
| クロミンク鯨 | 2,951,068,781 | 285,158,393 | 2,665,910,388 |
| 合計 | 2,951,068,781 | 285,158,393 | 2,665,910,388 |

5. 添付書類

- (1) 平成19年度南極海鯨類捕獲調査副産物販売実績表
- (2) 平成19年度南極海鯨類捕獲調査副産物品目別・販売形態別・販売実績表 (参考-1, 参考-2, 参考-3)
- (3) 平成19年度南極海鯨類捕獲調査副産物販売期別集計表 (別紙)

以上

平成19年度 南極海捕獲調査副産物の
承認販売予定数量と販売実績との差異について

1. 差異が生じた事由

【クロミンク鯨】

- ① 赤肉類：販売促進用として（45.0kg）の使用。試作用サンプルとして（15.0kg）使用。
- ② 白手物類：試作用サンプルとして（12.5kg）使用。
- ③ オサ：販売促進用として（5.0kg）の使用。

2. 差異

（クロミンク鯨）

| 品名 | 承認販売予定数量 (A) 重量 (kg) | 販売実績 (B) 重量 (kg) | 差異 (B-A) 重量 (kg) |
|------|-------------------------|---------------------|---------------------|
| 赤肉類 | 1,296,138.0 | 1,296,078.0 | ▲60.0 |
| 白手物類 | 686,325.8 | 686,313.3 | ▲12.5 |
| オサ | 10.0 | 5.0 | ▲5.0 |
| 合計 | 1,982,473.8 | 1,982,396.3 | ▲77.5 |

以上

平成19年度南極海嶺環境調査製造物品目別・販売形態別販売実績表(クロミニング錠)

| 品目名 | 販売形態別 (kg) | | | | | | | | | | 平均単価 | 売上高 | 販売経費 | 取得金額 | | | |
|------------|------------|------------|------------|-----------|-------------|---------------|-------------|-------|---------------|-------------|---------------|---------------|--------|------|---------|--|--|
| | 公益用 | | | | | 市販用 | | | | | | | | | | | |
| | 単独仕入れ費用 | 学校給食用 | 医療用 | 特別事業用 | 合計(A) | 市販用 | 一般用 | 合計(B) | (C=A×B) | (D) | | | | | (E=C-D) | | |
| 冷凍品 | | | | | | | | | | | | | | | | | |
| | 48,528.5 | 107,305.0 | 17,800.0 | 2,577.5 | 287,104.5 | 1,549,076.8 | 1,085,391.3 | 1,469 | 3,098,612,012 | 289,266,100 | 2,809,345,912 | 2,520,079,812 | | | | | |
| 錠剤 | | | | | | | | | | | | | | | | | |
| | 37,550.0 | 106,650.0 | 15,600.0 | 1,912.5 | 244,935.5 | 892,096.5 | 1,296,078.0 | 1,245 | 1,614,020,385 | - | 1,614,020,385 | - | | | | | |
| 菓子 | | | | | | | | | | | | | | | | | |
| | 2,754.0 | | 2,700.0 | 175.5 | 6,844.5 | 157,697.2 | 164,171.3 | 2,259 | 22,811,748 | - | 22,811,748 | - | | | | | |
| その他 | | | | | | | | | | | | | | | | | |
| | 7,914.5 | 625.0 | 2,500.0 | 489.5 | 5,325.0 | 485,771.0 | 502,825.0 | 1,551 | 779,394,742 | - | 779,394,742 | - | | | | | |
| 才木 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 5.0 | 5.0 | 1,940 | | 10,185 | | 10,185 | | |
| 合計 | 48,528.5 | 107,305.0 | 17,800.0 | 2,577.5 | 287,104.5 | 1,549,080.8 | 1,082,396.3 | 1,469 | 3,098,622,197 | 289,266,160 | 2,809,356,037 | 2,520,085,877 | | | | | |
| 平均単価(円/kg) | 1,808 | 449 | 851 | 1,677 | 1,793 | 1,504 | 合計 | 合計 | 3,098,622,197 | 289,266,160 | 2,809,356,037 | 2,520,085,877 | | | | | |
| 売上高計(円) | 96,699,411 | 50,544,496 | 15,902,775 | 4,537,825 | 484,105,700 | 2,446,830,090 | | | 3,098,622,197 | | 2,809,356,037 | 2,520,085,877 | | | | | |
| 消費税額 | 4,604,720 | 2,406,953 | 757,275 | 215,089 | 23,082,695 | 116,515,747 | | | 147,553,419 | | | | | | | | |
| 売上高 | 92,094,691 | 48,137,543 | 15,145,500 | 4,322,737 | 461,023,005 | 2,330,314,343 | | | 2,951,068,781 | | | | | | | | |
| 販売経費計(円) | 735 | | | 571 | 29,697,522 | 82,446 | | | 269,258,619 | | | | | | | | |
| 消費税額 | | | | 27 | 1,414,126 | 3,920 | | | 13,101,767 | | | | | | | | |
| 販売経費 | 700 | | | 544 | 28,283,396 | 78,526 | | | 286,156,852 | | | | | | | | |
| 取得金額(円) | 90,698,670 | 50,544,496 | 15,902,775 | 4,322,164 | 432,328,479 | 2,247,835,817 | | | 2,684,912,014 | | | | | | | | |
| 消費税額 | 4,604,695 | 2,406,881 | 757,275 | 215,061 | 21,678,569 | 116,511,927 | | | 134,451,649 | | | | | | | | |
| 取得金額 | 92,093,965 | 48,137,615 | 15,145,500 | 4,322,192 | 432,770,609 | 2,330,238,717 | | | 2,650,460,365 | | | | | | | | |

1、上記の販売高、販売経費及び取得金額に
おいて、上段は消費税を含んだ額、中段は
消費税額、下段は消費税を除いた額である。
但し、冷凍品内訳の赤字、菓子、菓類及び
その他の欄については、消費税を除いた
額である。

2、販売経費の明細は別紙のとおりです。

平成19年度南極海 船類捕獲調査副産物 販売期別実績集計表(クロミンク鯨)

| 販売品名(品) | 平成20年7月 | | 平成20年8月分 | | 計 | 平成20年実績以外の結果 | | | | | 合計 | 備考 | |
|---------|-------------|---------------|---------------|-----|-----|----------------|----------------|----------------|------|--|---------------|----|--|
| | 数量 | 単価 | 数量 | 単価 | | 平成20年 1月~3月 | 平成20年 4月~6月 | 平成20年 7月~9月 | (小計) | | | | |
| 売価(円) | 20,830 | 106,132 | 216,787 | 243 | 243 | | | | | | 128,787 | | |
| 売価(円) | 310,076.1 | 1,008,317.1 | 1,002,304.3 | | | | | | | | 1,002,304.3 | | |
| 売価(円) | 197,085,653 | 2,030,778,034 | 2,099,022,107 | | | | | | | | 2,099,022,107 | | |
| 売価(円) | 27,042,257 | 120,811,050 | 147,023,418 | | | | | | | | 147,023,418 | | |
| 売価(円) | 140,847,206 | 2,425,221,473 | 2,462,068,781 | | | | | | | | 2,462,068,781 | | |
| 売価(円) | 2,811,203 | 27,879,071 | 26,782,274 | | | | | | | | 266,478,206 | | |
| 売価(円) | 86,096 | 1,287,116 | 2,418,109 | | | | | | | | 11,073,009 | | |
| 売価(円) | 1,430,213 | 26,642,952 | 28,763,166 | | | | | | | | 266,778,227 | | |
| 売価(円) | 1,784,020 | 24,833,956 | 20,106,778 | | | | | | | | 6,133,079 | | |
| 売価(円) | 84,026 | 1,281,640 | 1,266,612 | | | | | | | | 244,462 | | |
| 売価(円) | 1,009,836 | 23,022,218 | 25,222,218 | | | | | | | | 4,188,218 | | |
| 売価(円) | 0 | 424,077 | 424,077 | | | | | | | | 424,077 | | |
| 売価(円) | 0 | 20,704 | 20,704 | | | | | | | | 21,022 | | |
| 売価(円) | 0 | 414,162 | 414,162 | | | | | | | | 420,427 | | |
| 売価(円) | 97,022 | 2,097,848 | 2,098,900 | | | | | | | | 22,027,817 | | |
| 売価(円) | 4,516 | 116,298 | 124,914 | | | | | | | | 1,127,029 | | |
| 売価(円) | 92,426 | 2,265,026 | 2,461,898 | | | | | | | | 22,783,054 | | |
| 売価(円) | 28,296 | 101,811 | 129,007 | | | | | | | | 16,043,781 | | |
| 売価(円) | 3,246 | 4,798 | 6,144 | | | | | | | | | | |
| 売価(円) | 27,080 | 86,412 | 122,492 | | | | | | | | | | |
| 売価(円) | 937 | 15,287 | 15,122 | | | | | | | | | | |
| 売価(円) | 42 | 878 | 921 | | | | | | | | | | |
| 売価(円) | 892 | 11,009 | 12,091 | | | | | | | | | | |
| 売価(円) | 646,875,460 | 2,462,822,463 | 2,066,846,933 | | | | | | | | | | |
| 売価(円) | 26,961,267 | 129,185,981 | 146,146,208 | | | | | | | | | | |
| 売価(円) | 826,021,042 | 2,262,078,222 | 2,622,705,413 | | | | | | | | | | |
| 備考 | | | | | | | | | | | | | |

[平成-2]

[平成-1]

[注1]
平均単価
①
②
③ 428 円/kg

[注2]
販売期別実績集計表
(円) 13,200
(円) 646
(円) 13,014
(円) 796,208
(円) 26,480
(円) 729,810
(円) 8,207,118
(円) 422,149
(円) 8,844,067

平成19年度南極海航線捕獲調査副産物販売実績表（クロミンク鯨）

| 区分 | 数量(A) (kg) | 平均単価(B) (円/kg) | 売上高(C) [(A)×(B)](円) | 販売経費(D) (円) | 取得金額 [(C)-(D)](円) | 備考 |
|-------------------------|---------------|-------------------|------------------------|----------------|----------------------|---------------|
| 公益用 | 176,211.0 | 906 | 167,684,807 | 1,306 | 167,683,201 | |
| | | | 7,964,974 | 62 | 7,964,912 | |
| | | | 159,699,833 | 1,244 | 159,698,289 | |
| MARKETING | 46,628.6 | 1,509 | 96,699,411 | 735 | 96,698,670 | (11社(団体)) |
| | | | 4,504,730 | 35 | 4,604,695 | |
| | | | 92,094,681 | 700 | 92,093,981 | |
| 学校給食料 | 107,306.0 | 449 | 50,544,496 | 0 | 50,544,496 | (4自治体、3団体、1社) |
| | | | 2,405,981 | 0 | 2,405,981 | |
| | | | 48,137,615 | 0 | 48,137,615 | |
| 医療仲 | 17,800.0 | 951 | 16,902,775 | 0 | 16,902,775 | (1団体) |
| | | | 767,275 | 0 | 767,275 | |
| | | | 15,145,500 | 0 | 15,145,500 | |
| 野鳥事業 用 | 2,877.6 | 1,677 | 4,827,825 | 671 | 4,637,264 | (3団体、2社) |
| | | | 216,088 | 27 | 216,061 | |
| | | | 4,321,737 | 644 | 4,321,193 | |
| 市販用 | 1,806,186.3 | 1,646 | 2,930,937,690 | 22,779,968 | 2,901,167,722 | |
| | | | 139,569,442 | 1,418,049 | 138,150,390 | |
| | | | 2,791,369,249 | 28,361,922 | 2,763,007,326 | |
| | | | 694,196,700 | 29,697,922 | 454,499,178 | (64社) |
| 市場用 | 267,104.6 | 1,793 | 23,062,696 | 1,414,126 | 21,638,569 | |
| | | | 401,084,905 | 28,283,396 | 432,770,609 | |
| | | | 2,446,830,990 | 82,446 | 2,446,748,544 | (164社) |
| 一般用 | 1,549,080.9 | 1,504 | 116,515,747 | 3,920 | 116,511,827 | |
| | | | 2,330,315,243 | 79,526 | 2,330,235,717 | |
| | | | — | 268,478,886 | ▲ 268,478,886 | |
| | | | — | 11,683,659 | ▲ 11,683,659 | |
| | | | — | 256,796,227 | ▲ 256,796,227 | |
| (処理業者 支払経費 以外の経費) | — | — | — | — | — | |
| 合計 | 1,662,396.3 | 1,499 | 3,098,622,197 | 398,260,160 | 2,800,362,037 | |
| | | | 147,583,416 | 13,101,767 | 134,451,649 | |
| | | | 2,951,068,781 | 265,168,393 | 2,685,910,388 | |

注) 売上高、販売経費及び取得金額欄中、上段は消費税を含んだ額、中段は消費税額、下段は消費税を引いた額である。

平成19年度南極海鯨類捕獲調査副産物（クロミンククジラ）形態別販売実績表（総計）

| | 公益用 | | | | | | 市販用 | | | 合計 | 備考 |
|---------------|------------|------------|------------|---|-----------|---|-------------|---------------|-----|---------------|----|
| | 無償仕向品 | | 学校給食用 | | 委託事業用 | | 市販用 | | 一配用 | | |
| | 11 | 8 | 7 | 1 | 5 | 1 | 54 | 154 | | | |
| 売戻金(社) | | | | | | | | | | | |
| (c/a) | 3,229 | 7,162 | 1,240 | | 178 | | 17,517 | 99,443 | | 128,787 | |
| 売戻金 | 48,828.5 | 107,305.0 | 17,800.0 | | 2,577.5 | | 287,104.5 | 1,549,050.8 | | 1,582,306.3 | |
| 売戻金総計[A](円) | 96,095,411 | 50,844,496 | 15,992,776 | | 4,537,825 | | 484,108,700 | 2,446,830,999 | | 3,098,622,197 | |
| 消費税(円) | 4,064,730 | 2,405,881 | 787,275 | | 215,088 | | 23,062,596 | 116,515,747 | | 147,552,410 | |
| 売戻金額(B)(円) | 92,034,681 | 48,137,616 | 15,145,000 | | 4,321,737 | | 481,054,098 | 2,330,315,252 | | 2,951,069,781 | |
| 除却経費計[B](円) | 735 | 0 | 0 | | 571 | | 29,097,522 | 82,446 | | 29,781,274 | |
| 消費税(円) | 36 | | | | 27 | | 1,414,126 | 3,920 | | 1,419,109 | |
| 経費金額(円) | 700 | | | | 544 | | 20,283,396 | 78,526 | | 20,363,166 | |
| 市場手数料(円) | 0 | 0 | 0 | | 0 | | 26,598,778 | 0 | | 26,598,778 | |
| 消費税(円) | | | | | | | 1,266,625 | | | 1,266,625 | |
| 手数料額(円) | | | | | | | 25,332,153 | | | 25,332,153 | |
| 運賃代計(円) | 0 | 0 | 0 | | 0 | | 434,807 | 0 | | 434,807 | |
| 消費税(円) | | | | | | | 20,704 | | | 20,704 | |
| 運賃代(円) | | | | | | | 414,103 | | | 414,163 | |
| 保管料計(円) | 0 | 0 | 0 | | 0 | | 2,004,909 | 0 | | 2,004,909 | |
| 消費税(円) | | | | | | | 124,014 | | | 124,014 | |
| 保管料(円) | | | | | | | 2,489,895 | | | 2,489,895 | |
| 送金料計(円) | 795 | 0 | 0 | | 571 | | 65,865 | 82,446 | | 129,007 | |
| 消費税(円) | 35 | | | | 27 | | 2,162 | 3,920 | | 6,144 | |
| 送金料(円) | 760 | | | | 544 | | 43,693 | 78,526 | | 123,463 | |
| その他計(円) | 0 | 0 | 0 | | 0 | | 13,122 | 0 | | 13,122 | |
| 消費税(円) | | | | | | | 621 | | | 621 | |
| 経費金額(円) | | | | | | | 12,101 | | | 12,561 | |
| 入金計[A]-[B](円) | 90,095,079 | 50,844,496 | 15,992,776 | | 4,037,204 | | 454,070,175 | 2,446,748,544 | | 3,098,840,923 | |
| 消費税(円) | 4,004,085 | 2,406,881 | 787,275 | | 216,081 | | 21,038,869 | 116,511,827 | | 140,156,303 | |
| 取得金額(円) | 92,093,983 | 48,137,615 | 15,145,000 | | 4,321,193 | | 433,770,609 | 2,330,236,717 | | 2,922,706,615 | |

平成19年度南極海鯨類捕獲調査副産物販売記録費実績一覧表(売渡業者支払経費以外の経費)(クロミンククジ)

| 経費名 | 支払相手 | 区分 | 平成19年 10月~12月 | 平成19年 1月~3月 | 平成19年 4月~6月 | 平成19年 7月~9月 | 合 計 | 備 考 |
|----------------|-------|-----|------------------|----------------|----------------|----------------|-------------|------------|
| 補送料 | 1社 | 支払計 | 0 | 0 | 5,133,079 | 0 | 5,133,079 | |
| | | 消費税 | 0 | 0 | 244,461 | 0 | 244,461 | |
| | | 支払額 | 0 | 0 | 4,888,618 | 0 | 4,888,618 | |
| 調査船 計量器具費 | | 支払計 | 0 | 0 | 0 | 0 | 0 | |
| | | 消費税 | 0 | 0 | 0 | 0 | 0 | |
| | | 支払額 | 0 | 0 | 0 | 0 | 0 | |
| 調査料 | 6社 | 支払計 | 0 | 0 | 23,889,054 | 5,273,451 | 29,162,505 | |
| | | 消費税 | 0 | 0 | 1,137,010 | 213,089 | 1,350,099 | |
| | | 支払額 | 0 | 0 | 22,752,044 | 5,060,362 | 27,812,406 | |
| 調査料 | 7社 | 支払計 | 0 | 0 | 1,740 | 9,457,249 | 9,458,989 | (高尾船舶株式会社) |
| | | 消費税 | 0 | 0 | 87 | 409,079 | 409,166 | |
| | | 支払額 | 0 | 0 | 1,653 | 9,866,328 | 9,867,985 | |
| 計 | | 支払計 | 0 | 0 | 23,891,142 | 15,335,750 | 39,226,892 | |
| | | 消費税 | 0 | 0 | 1,137,092 | 213,178 | 1,350,270 | |
| | | 支払額 | 0 | 0 | 22,754,050 | 15,122,572 | 37,876,622 | |
| 運賃 | 7社 | 支払計 | 0 | 0 | 451,992 | 48,485,130 | 48,937,122 | (高尾船舶株式会社) |
| | | 消費税 | 0 | 0 | 21,922 | 1,117,148 | 1,139,070 | |
| | | 支払額 | 0 | 0 | 430,070 | 49,602,278 | 50,032,192 | |
| 調査船 燃料費 | 高尾船舶 | 支払計 | 0 | 0 | 775,001 | 26,964,221 | 27,739,222 | (高尾船舶株式会社) |
| | | 消費税 | 0 | 0 | 36,964 | 2,964,864 | 3,001,828 | |
| | | 支払額 | 0 | 0 | 738,037 | 29,929,085 | 30,667,120 | |
| 船体立上げ費 | | 支払計 | 0 | 0 | 0 | 0 | 0 | |
| | | 消費税 | 0 | 0 | 0 | 0 | 0 | |
| | | 支払額 | 0 | 0 | 0 | 0 | 0 | |
| 燃料販売 手数料 | 高尾船舶 | 支払計 | 0 | 0 | 134,254,900 | 134,254,900 | 268,509,800 | (高尾船舶株式会社) |
| | | 消費税 | 0 | 0 | 6,292,093 | 6,292,093 | 12,584,186 | |
| | | 支払額 | 0 | 0 | 127,962,807 | 127,962,807 | 255,093,986 | |
| 船体管理費 | (株)結研 | 支払計 | 0 | 0 | 26,969,221 | 26,969,221 | 53,938,442 | |
| | | 消費税 | 0 | 0 | 1,473,134 | 1,473,134 | 2,946,268 | |
| | | 支払額 | 0 | 0 | 25,496,087 | 25,496,087 | 50,992,356 | |
| 船体管理費 (株)結研 | (株)結研 | 支払計 | 3,020,106 | 914,230 | 3,934,436 | 3,124,000 | 10,012,772 | |
| | | 消費税 | 90,023 | 43,072 | 130,260 | 149,000 | 312,355 | |
| | | 支払額 | 1,929,653 | 871,158 | 3,804,176 | 2,975,000 | 9,700,417 | |
| 合計 | | 支払計 | 2,020,106 | 914,230 | 23,472,639 | 22,102,722 | 50,510,697 | |
| | | 消費税 | 90,023 | 43,072 | 1,494,000 | 1,622,100 | 3,049,295 | |
| | | 支払額 | 1,930,083 | 871,158 | 21,978,639 | 20,480,622 | 47,461,402 | |

以上調査船関係は別紙を添付。

Annex 121: Institute of Cetacean Research, *Board Members* (16 September 2009),
 at Institute of Cetacean Research website,
 at <<http://www.icrwhale.org/YakuinList.pdf>> on 14 January 2011

As at 16 September 2009

Board Members

The Institute of Cetacean Research

| POSITION | NAME | Most Recent Official Position for Former Government Employees |
|------------------------------|--------------------|---|
| Director-General (full-time) | Minoru MORIMOTO | Deputy Director-General, Japan Fisheries Agency |
| Director (full-time) | Yoshihiro FUJISE | |
| Director (part-time) | Makoto ITŌ | |
| Director (part-time) | Yoshiyuki SHIGE | Head, Resources Propagation Department, Japan Fisheries Agency |
| Director (part-time) | Jun'ichi TAKAHASHI | |
| Director (part-time) | Yoshihiro HAYASHI | |
| Director (part-time) | Tatsuo MAMIZUKA | |
| Director (part-time) | Nagiko YASUNARI | |
| Director (part-time) | Kazuo YAMAMURA | |
| Auditor (part-time) | Masao SHIMOMURA | Director, Promotion Division, Japan Fisheries Agency, attached to Resources Production Department, Japan Fisheries Agency |

平成21年9月16日現在

役員名簿

財団法人 日本鯨類研究所

| 役職名 | 氏名 | 官庁出身者の最終官職 |
|---------|-------|------------------------|
| 理事長（常勤） | 森本 稔 | 水産庁次長 |
| 理事（常勤） | 藤瀬 良弘 | |
| 理事（非常勤） | 伊藤 誠 | |
| 理事（非常勤） | 重 義行 | 水産庁増殖推進部長 |
| 理事（非常勤） | 高橋 順一 | |
| 理事（非常勤） | 林 良博 | |
| 理事（非常勤） | 馬見塚達雄 | |
| 理事（非常勤） | 安成 椰子 | |
| 理事（非常勤） | 山村 和夫 | |
| 監事（非常勤） | 下村 政雄 | 水産庁資源生産推進部付 水産庁振興課長 |

Annex 122: Institute of Cetacean Research, “2009 – 10 Southern Ocean Research Whaling By-Product Sales”, (Press Release, 14 April 2010) at Institute of Cetacean Research website, <<http://www.icrwhale.org/100414ReleaseJp.htm>> on 18 April 2011

PRESS RELEASE

14 April 2010

Institute of Cetacean Research

‘2009 – 10 Southern Ocean Research Whaling By-Product Sales’

For the sale of by-product obtained from the 2009/10 Southern Ocean Research Whaling, we have instituted new sales methods from this year. At the same time, to have more people appreciate whale meat we have opened a specialised homepage, establishing more sales methods for the by-product, and established a system to make the purchase of whale meat ingredients easier.

The new sales methods include the following three methods:

1. Early buyer discount (Fukuoka – from 15 April; Tokyo – from 6 May).
2. Tender (auction) sales for fin whale.
3. Sales of smaller size product than the traditional 15 kg case.

We are currently considering using the Internet for sales to the general public.

For details about each respective sales method, please see the specialised homepage.

We will continue, as per normal, sales through the central wholesaler market across Japan.

1. Sales Amounts

The amount of by-product obtained through the 2009/10 Southern Ocean Research Whaling was 2045 tonnes (meat from 506 minke whales and one fin whale). We will sell these amounts according to the following categories in accordance with Section 2, Article 8 of the International Convention for the Regulation of Whaling:

| | Minke Whales | Fin Whales | Total |
|---|--------------|------------|--------|
| 1. Official Use (regional governments and school lunches) | 334.5 | | 334.5 |
| 2. Commercial Use | 1690.2 | 20.8 | 1711.1 |
| Total | 2024.7 | 20.8 | 2045.5 |

Sales for commercial use will commence from Thursday 15 April, and, of these, sales of whale meat for markets will be sold from 28 April and, again, from 20 May through wholesaler markets (central wholesaler markets in major cities and prefectures, and selected regional wholesaler markets).

2. Sales Prices

As current research activities have been targeted by excessive levels of obstruction to the surveys there has been a significant reduction in production compared to last year. However, we have endeavoured to reduce costs, and, as much as possible avoided passing this on to retail prices.

Furthermore, in addition to discounts for large amount purchases, we have, on an experimental basis, introduced limited-period and special discounts as well as auctions for selected products, and we look forward to strong demand.

3. Method of Use of Profits

The profits gained through the sale of by-product will be used to cover the expenses of implementing the following year's whaling research.

4. Securing appropriate distribution

The products which this Institute sells have a public aspect and are research by-product. This means there is a need to make these products available to all levels of society, and to distribute them fairly and, as much as possible, at a low cost. From this viewpoint, we request instructions to be given to distributors by the Distribution Section, General Foodstuff Bureau, Ministry of Agriculture, Forestry and Fisheries to secure fair distribution. We also receive instruction from the Japan Fisheries Agency, and, based on that, this research Institute also conducts Study Groups with regard to sales with distributors, and we are making endeavours to ensure that whale meat is distributed more widely and more fairly at an appropriate price.

Note: Second Southern Ocean Whaling Research (JARPA II)

Southern Ocean research whaling is conducted with the objective of obtaining academic data which is necessary for the resource supervision of Antarctic minke whales which inhabit that particular sea area. The results of that research are highly regarded by researchers in other countries and in international institutions, including the International Whaling Commission.

The research survey for 2009/10 was implemented between 14 December 2009 and 20 March 2010, and took 506 Southern Ocean minke whales, and one fin whale.

Please see the press release on the 2009-10 second Southern Ocean Research Whaling (JARPA II).

2009/10 年南極海鯨類捕獲調査で得られた調査副産物の販売について

平成 22 年 4 月 14 日
財団法人 日本鯨類研究所

2009/10 年南極海鯨類捕獲調査の副産物販売にあたり、今回より新たな販売方法を取り入れると同時に、[専用のホームページ](#)の公開を通じて、副産物販売の販売方法をより広く多くの人々に知っていただき、より手軽に鯨肉原料を購入して頂ける環境を整えました。

新たな販売方法とは、以下の 3 点です。

- 1- 早期割引販売（福岡分は 4 月 15 日から、東京分は 5 月 6 日から）
- 2- ナガス鯨を対象とした入札(競売) 販売
- 3- 従来の 1 ケース 15 k g サイズを小割りした製品の販売

インターネットでの一般販売も検討中です。
それぞれの販売方法の詳細は[専用のホームページ](#)をご覧ください。

全国の中央卸売市場を通じた販売も従来通り継続します。

1. 販売数量

2009/10 年南極海鯨類捕獲調査で得られた調査副産物 2, 0 4 5 トン（ミンク鯨 5 0 6 頭、ナガス鯨 1 頭分の鯨肉）を、国際捕鯨取締条約第 8 条第 2 項に則り、下記の区分毎の数量で販売します。

| | ミンク鯨 | ナガス鯨 | 計 |
|-----------------------|---------|------|---------|
| ①公益用 (地方自治体や学校給食等) | 334.5 | - | 334.5 |
| ②市販用 | 1,690.2 | 20.8 | 1,711.0 |
| 計 | 2,024.7 | 20.8 | 2,045.5 |

市販用は 4 月 1 5 日（木）から販売を開始し、うち市場向けについては、4 月 2 8 日（木）及び 5 月 2 0 日（木）から卸売市場（各都道府県の中央卸売市場及び一部の地方卸売市場）を通じて販売します。

2. 販売価格

今時調査活動については過激な調査妨害を受け、昨年に比べ大幅な生産量の減少となりました。しかし、コスト削減に努め、価格への転嫁を出来る限り避けました。

また、現在の大口購入者割引に加え、期間を限定した特別割引や一部製品の競売を試験導入するなど、取り扱い意欲の向上を期待しています。

3. 取得金の利用方法

調査副産物を販売して得られる取得金は、翌年度の鯨類捕獲調査の実施費用等に充当されます。

4. 適切な流通の確保

当研究所が販売する鯨製品は、公的な性格を持った調査副産物であり、国民各層に対して公平に、且つ可能な限り廉価で配分する必要があるとの観点に立って、公正な販売を確保すべく農林水産省総合食料局流通課に流通業者への指導を願うとともに、水産庁の助言を得て、当研究所も流通各位との販売に関する勉強会等を開催し、より幅広く鯨肉が適正な価格で公平に行き渡るよう努めています。

(参考) 第Ⅱ期南極海鯨類捕獲調査について

南極海における鯨類捕獲調査は、同海域に存在するクロミンククジラ等の資源管理に必要な科学的情報を得ることを目的に実施されており、その成果は国際捕鯨委員会 (IWC) 等の国際機関において、各国の研究者から高い評価を受けています。

なお、2009/10 年調査は平成 21 年 12 月 14 日から平成 22 年 3 月 20 日にかけて実施し、クロミンククジラ 506 頭とナガスクジラ 1 頭の標本を採集しました。

[2009/10 年第二期南極海鯨類捕獲調査\(JARPAII\)のプレスリリース参照](#)

Annex 123: Institute of Cetacean Research, *FY2009 Business Report*,
(30 September 2010) at Institute of Cetacean Research website,
<<http://www.icrwhale.org/H21jigyo.pdf>> on 16 April 2011
[excerpt translated]

FY2009 BUSINESS REPORT

From 1 October 2009

To 30 September 2010

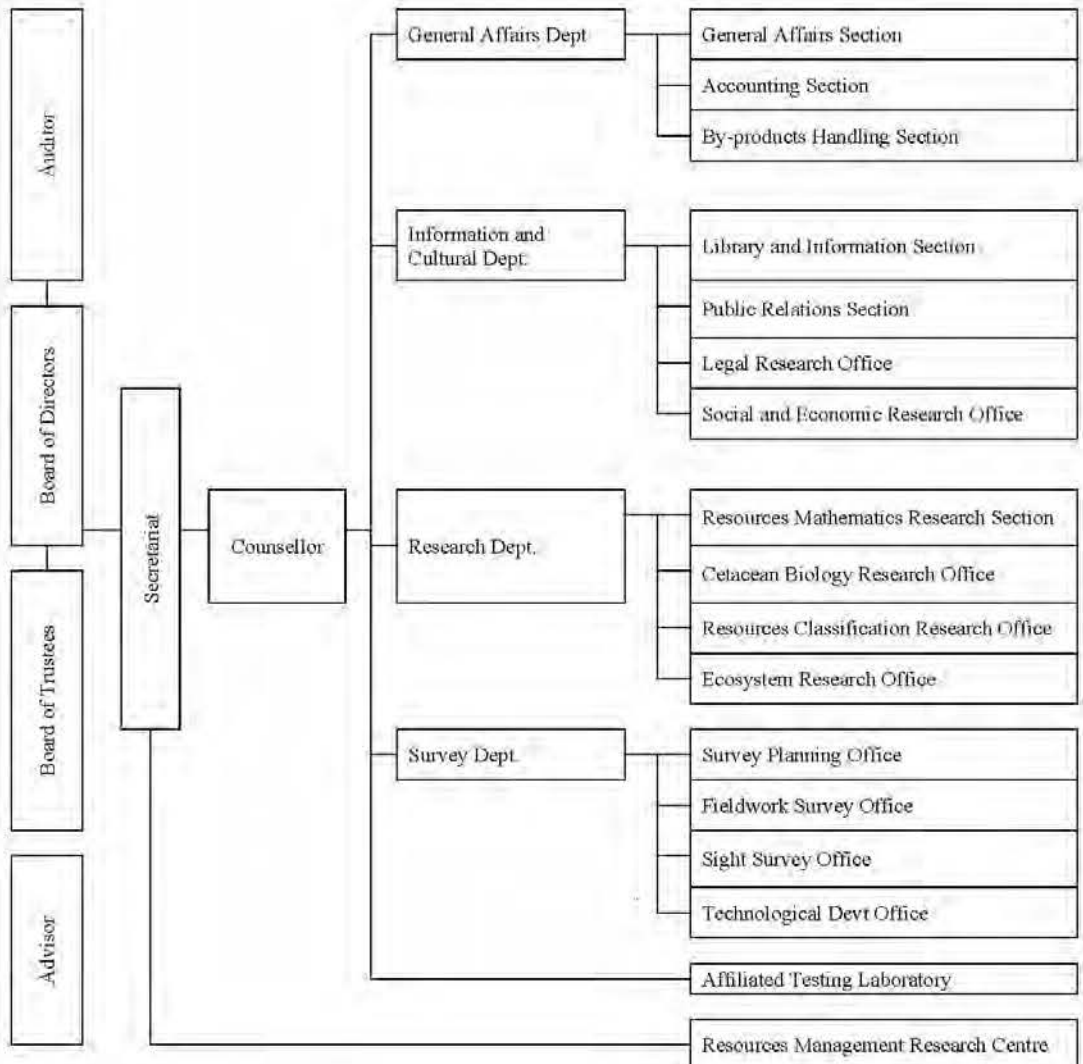
Institute of Cetacean Research

[...]

4. Overview of ICR

(1) Organisation

Organisation and Structure of Institute of Cetacean Research (As of 30 Sept, 2010)



(2) Directors and Council Members

Directors

(As of 30 September, 2010)

(Deed of Endowment, Article 19; Two-year terms for Directors)

| Title | Name | Past or Current Occupation |
|----------------------|-------------------|--|
| President | Minoru MORIMOTO | Former President, Marine Ecology Research Institute |
| (Full-time) Director | Yoshihiro FUJISE | Former Counsellor, Institute of Cetacean Research |
| (Part-time) Director | Makoto ITO | Director, Japan Whaling Association |
| (") Director | Yoshiyuki SHIGE | Senior Managing Director, Japan Fisheries Association |
| (") Director | Junichi TAKAHASHI | Professor of International Studies, Graduate School, J.F. Oberlin University |
| (") Director | Yoshihiro HAYASHI | Professor of Biotherapy, Faculty of Agriculture, Tokyo University of Agriculture |
| (") Director | Tatsuo MAMIZUKA | Guest Editorial Writer, Sankei Shimbun |
| (") Director | Kazuo YAMAMURA | Representative Director and President, Kyodo Senpaku Ltd. |
| (") Director | Kuniko YASUNARI | Representative Director and President, The Suisan-Keizai |
| (") Director | Masao SHIMOMURA | Senior Managing Director, Japan Fisheries Resource Conservation Association |

Board of Trustees

(As of 30 September, 2010)

(Deed of Endowment, Article 32; Two-year terms for Trustees)

| Name | Past or Current Occupation |
|-------------------|---|
| Takeo IINO | Advisor, Japan Whaling Association |
| Yoshio ISHIZUKA | Director, Fisheries Research Agency |
| Hidehiro KATO | Professor, Faculty of Marine Science, Tokyo University of Marine Science and Technology |
| Kyoichi KAWAGUCHI | Chairman and Director, Japan Fisheries Information Service Center |
| Kazutaka SANGEN | Chairman, Federation of Local Governments for the Protection of Whaling |
| Akira NAKAMAE | Japanese Government Delegate to International Whaling Commission |
| Hiroyuki NOGUCHI | Member (Security and Foreign Affairs), Editorial Committee, Politics Department, Editorial Bureau, Sankei Shimbun |
| Yuko YAMAMOTO | Professor, Faculty of Law, Daito Bunka University |
| Shiro YUGE | President, Marine Ecology Research Institute |

BALANCE SHEET

Institute of Cetacean Research

30 September 2010

(Yen)

| Item | FY2009 | FY2008 | Change |
|---|----------------|----------------|-----------------|
| I. Assets | | | |
| 1. Current Assets | | | |
| Cash and deposits | 312,886,286 | 949,442,650 | - 636,556,364 |
| Receivables | 3,626,763,702 | 3,335,995,440 | 290,768,262 |
| Advance payments | 9,937,817 | 8,038,163 | 1,899,654 |
| By-products | 9,461,789 | 31,409,280 | - 21,947,491 |
| Securities | - | 220,566 | - 220,566 |
| Suspense payments | 1,528,790,840 | 1,520,943,683 | 7,847,157 |
| Advances paid | 62,822 | - | 62,822 |
| Total Current Assets | 5,487,903,256 | 5,846,049,782 | - 358,146,526 |
| 2. Noncurrent Assets | | | |
| (1) Basic Assets | | | |
| Investment securities | 289,000,000 | 289,000,000 | 0 |
| Total Basic Assets | 289,000,000 | 289,000,000 | 0 |
| (2) Special Assets | | | |
| Housing loans | 41,687,000 | 31,159,000 | 10,528,000 |
| Deposits for reserve for retirement benefits | - | 168,871,000 | - 168,871,000 |
| Assets for reserve for directors' retirement benefits | 23,175,000 | - | 23,175,000 |
| Assets for reserve for employees' retirement benefits | 156,124,000 | - | 156,124,000 |
| Total Special Assets | 220,986,000 | 200,030,000 | 20,956,000 |
| (3) Other Noncurrent Assets | | | |
| Interiors | 8,007,730 | 4,234,251 | 3,773,479 |
| Fixtures and fittings | 8,381,009 | 4,835,232 | 3,545,777 |
| Telephone subscription rights | 526,100 | 526,100 | 0 |
| Guarantee and lease deposits | 36,754,600 | 59,150,600 | - 22,396,000 |
| Total Other Noncurrent Assets | 53,669,439 | 68,746,183 | - 15,076,744 |
| Total Noncurrent Assets | 563,655,439 | 557,776,183 | 5,879,256 |
| Total Assets | 6,051,558,695 | 6,403,825,965 | - 352,267,270 |
| II. Liabilities | | | |
| 1. Current Liabilities | | | |
| Accounts payable | 23,609,111 | 725,514,946 | - 701,905,835 |
| Short-term borrowings | 1,000,000,000 | 4,047,148,000 | - 3,047,148,000 |
| Current portion of long-term borrowings | 1,920,000,000 | - | 1,920,000,000 |
| Consumption tax payable | 17,510,600 | 21,741,600 | - 4,231,000 |
| Advances received | 366,176,471 | 626,104,649 | - 259,928,178 |
| Deposits received | 2,391,632 | 2,850,552 | - 458,920 |
| Suspense receipts | - | 27,154,794 | - 27,154,794 |
| Total Current Liabilities | 3,329,687,814 | 5,450,514,541 | - 2,120,826,727 |
| 2. Noncurrent Liabilities | | | |
| Long-term loans payable | 1,747,148,000 | - | 1,747,148,000 |
| Reserve for retirement benefits | - | 200,030,000 | - 200,030,000 |
| Reserve for directors' retirement benefits | 23,175,000 | - | 23,175,000 |
| Reserve for employees' retirement benefits | 197,811,000 | - | 197,811,000 |
| Total Noncurrent Liabilities | 1,968,134,000 | 200,030,000 | 1,768,104,000 |
| Total Liabilities | 5,297,821,814 | 5,650,544,541 | - 352,722,727 |
| III. Net Assets | | | |
| 1. Designated net assets | | | |
| Total designated net assets | 0 | 0 | 0 |
| 2. General net assets | | | |
| 753,736,881 | 753,736,881 | 753,281,424 | 455,457 |
| (of which, amount appropriated to basic assets) | (289,000,000) | (289,000,000) | (0) |
| (of which, amount appropriated to special assets) | (0) | (0) | (0) |
| Total designated net assets | 753,736,881 | 753,281,424 | 455,457 |
| Total liabilities and net assets | 6,051,558,695 | 6,403,825,965 | - 352,267,270 |

STATEMENT OF CHANGES IN NET ASSETS

Institute of Cotoacan Research

1 October 2009 - 30 September 2010

(Yen)

| Item | FY2009 | FY2008 | Change |
|--|----------------------|----------------------|------------------------|
| I. Changes in General Net Assets | | | |
| 1. Changes in Recurring Items | | | |
| (1) Ordinary Income | | | |
| Gain on investment of basic assets | 1,197,791 | 2,120,000 | - 922,209 |
| Gain on investment of special assets | 376,998 | 0 | 376,998 |
| Membership dues received | 93,529,510 | 105,810,000 | - 12,280,490 |
| Research commission income | 404,206,000 | 404,206,000 | 0 |
| By-products income | 5,470,634,856 | 6,463,249,210 | - 992,614,354 |
| Commission income | 857,000 | 877,250 | - 20,250 |
| DNA registration income | 24,100,000 | 13,900,000 | 10,200,000 |
| Subsidies, etc. received | 794,662,000 | 875,426,000 | - 80,764,000 |
| Miscellaneous income | 29,233,508 | 7,062,647 | 22,170,861 |
| Transfers from other accounts | - | 1,168,000,000 | - 1,168,000,000 |
| Transfers from reserves | - | 22,653,000 | 22,653,000 |
| Total Ordinary Income | 6,818,797,663 | 9,063,304,107 | - 2,244,506,444 |
| (2) Ordinary Expenses | | | |
| Program expenses | [6,487,821,939] | [7,780,384,424] | [- 1,292,562,485] |
| General program expenses | (409,844,558) | (694,576,872) | (- 284,732,314) |
| Research program expenses | 82,092,852 | 171,658,248 | - 89,565,396 |
| Information and cultural programs expenses | 146,165,385 | 184,699,819 | - 38,534,434 |
| International activities program expenses | 181,586,321 | 338,218,805 | - 156,632,484 |
| Special program expenses | (6,077,977,381) | (7,085,807,552) | (- 1,007,830,171) |
| Management expenses | [302,456,267] | [279,572,300] | 22,883,967 |
| Directors' remuneration | 21,333,800 | 35,613,603 | - 14,279,803 |
| Wages and allowances | 75,909,759 | 72,235,779 | 3,673,980 |
| Retirement benefits expenses | - | 52,114,580 | - 52,114,580 |
| Retirement payments | 1,611,900 | - | 1,611,900 |
| Welfare expenses | 17,047,076 | 17,399,415 | - 352,339 |
| Rent expenses | 56,133,110 | 70,206,651 | - 14,073,541 |
| Conference expenses | 76,920 | 168,696 | - 91,776 |
| Entertainment expenses | 161,000 | 652,091 | - 491,091 |
| Travel and transport expenses | 772,730 | 839,840 | - 67,110 |
| Communication and transportation expenses | 2,055,305 | 2,111,692 | - 56,387 |
| Supplies expenses | 801,089 | 629,402 | 171,687 |
| Depreciation expenses | 1,416,114 | 640,874 | 775,240 |
| Printing expenses | 480,303 | 837,933 | - 357,630 |
| Taxes and dues | 45,429,103 | 37,476,530 | 7,952,573 |
| Utilities expenses | 2,105,441 | 2,380,847 | - 275,406 |
| Membership dues | 2,256,000 | 549,500 | 1,706,500 |
| Donations paid | 30,000 | 40,000 | - 10,000 |
| Library expenses | 567,296 | 563,426 | 3,870 |
| Other expenses | 903,000 | 819,000 | 84,000 |
| Interest paid | 57,016,372 | 49,001,235 | 8,015,137 |
| Miscellaneous expenses | 16,349,949 | 4,385,690 | 11,964,259 |
| Management expenses allocated | - | - 69,094,484 | - 69,094,484 |
| Transfers to other accounts | [-] | [1,168,000,000] | [- 1,168,000,000] |
| Transfers to reserves | [28,064,000] | [-] | [28,064,000] |
| Transfers to reserve for directors' retirement benefits | 6,248,000 | - | 6,248,000 |
| Transfers to reserve for employees' retirement benefits | 21,816,000 | - | 21,816,000 |
| Loss on valuation of investment securities | - | 9,560 | - 9,590 |
| Total Ordinary Expenses | 6,818,342,206 | 9,227,966,314 | - 2,409,624,108 |
| Total Change in Recurring Items During Period | 455,457 | - 164,662,207 | 165,117,664 |
| 2. Changes in Nonrecurring Items | | | |
| (1) Nonrecurring Income | | | |
| Total Nonrecurring Income | 0 | 0 | 0 |
| (2) Nonrecurring Expenses | | | |
| Balance of transfer/reversal of reserves for retirement benefits | 0 | 2,817,000 | - 2,817,000 |
| Total Nonrecurring Income | 0 | 2,817,000 | - 2,817,000 |
| Total Change in Nonrecurring Items During Period | 0 | - 2,817,000 | 2,817,000 |

| | | | |
|--|-------------|---------------|---------------|
| Total Change in General Net Assets During Period | 455,457 | - 167,479,207 | 167,934,664 |
| Balance of General Net Assets at Beginning of Period | 753,281,424 | 920,760,631 | - 167,479,207 |
| Balance of General Net Assets at End of Period | 753,736,881 | 753,281,424 | -455,457 |

STATEMENT OF CHANGES IN NET ASSETS

Institute of Cetacean Research

1 October - 30 September 2010

| Item | (Yen) | | |
|--|-------------|-------------|---------|
| | FY2009 | FY2008 | Change |
| II. Changes in Specified Net Assets | | | |
| Total Change in Specified Net Assets During Period | 0 | 0 | 0 |
| Balance of Specified Net Assets at Beginning of Period | 0 | 0 | 0 |
| Balance of Specified Net Assets at End of Period | 0 | 0 | 0 |
| III. Balance of Net Assets at End of Period | 753,736,881 | 753,281,424 | 455,457 |

STATEMENT OF CASH FLOW

Institute of Cetacean Research

1 October 2009 - 30 September 2010

(Yen)

| Item | FY2009 |
|---|----------------|
| I. Cash Flow from Program Activities | |
| 1. Program Revenue | |
| (1) Revenue from gain on investment of basic assets | 1,197,791 |
| (2) Revenue from gain on investment of special assets | 376,998 |
| (3) Revenue from membership dues | 93,529,510 |
| (4) Revenue from research commissioning | 404,206,000 |
| (5) Revenue from by-products | 5,157,261,244 |
| (6) Revenue from commissions | 25,857,000 |
| (7) Revenue from DNA registrations | 24,100,000 |
| (8) Revenue from subsidies, etc. | 530,000,000 |
| (9) Miscellaneous revenue | 24,684,064 |
| Total Program Activity Revenue | 6,261,212,607 |
| 2. Program Expenses | |
| (1) Program Expenses | 7,119,086,655 |
| (2) Management Expenses | 391,386,946 |
| Total Program Expenses | 7,510,473,601 |
| Cash Flow from Program Activities | -1,249,260,994 |
| II. Cash Flow from Investment Activities | |
| 1. Investment Revenue | |
| (1) Revenue from reversal of basic assets | 100,000,000 |
| (2) Revenue from reversal of special assets | 7,108,000 |
| (3) Revenue from reversal of guarantees and deposits | 22,396,000 |
| (4) Revenue from reversal of housing fund loans | 3,532,000 |
| Total Investment Activity Revenue | 133,036,000 |
| 2. Investment Expenses | |
| (1) Basic Assets Acquisition Expenses | 100,000,000 |
| (2) Special Assets Acquisition Expenses | 17,536,000 |
| (3) Fixed Assets Acquisition Expenses | 8,735,370 |
| (4) Housing Fund Loan Expenses | 14,060,000 |
| Total Investment Expenses | 140,331,370 |
| Cash Flow from Investment Activities | -7,295,370 |
| III. Cash Flow from Financing | |
| 1. Financing Revenue | |
| (1) Revenue from borrowings | 3,400,000,000 |
| Total Financing Revenue | 3,400,000,000 |
| I. Financing Expenses | |
| (1) Loan repayment expenses | 2,780,000,000 |
| Total Financing Expenses | 2,780,000,000 |
| Cash Flow from Financing Activities | 620,000,000 |
| IV. Change in Cash and Cash Equivalents | -636,556,364 |
| V. Balance of Cash and Cash Equivalents at Beginning of Period | 949,442,650 |
| VI. Balance of Cash and Cash Equivalents at End of Period | 312,886,286 |

NB1: Scope of Funds: The scope of funds includes cash and cash equivalents.

As of 30 September 2010

| Item | | Amount | | |
|---|--|---------------|---------------|---------------|
| I. Assets | | | | |
| 1. Current Assets | | | | |
| Ordinary savings | Mizuho Corporate Bank, other | 304,557,107 | | |
| Postal savings | Yucho Bank | 8,329,179 | | |
| Receivables | By-product proceeds, other | 3,626,763,702 | | |
| Advance payments | Office rent, other | 9,937,817 | | |
| By-products | By-products | 9,461,789 | | |
| Suspense payments | FY2010 program expenses, other | 1,528,790,840 | | |
| Advances paid | Employee accommodation expenses, other | 62,822 | | |
| Total Current Assets | | | 5,487,903,256 | |
| 2. Noncurrent Assets | | | | |
| (1) Basic Assets | | | | |
| Investment securities | Government bonds | 289,000,000 | | |
| Total Basic Assets | | 289,000,000 | | |
| (2) Special Assets | | | | |
| Assets for Reserve for Directors' Retirement Benefits | Mitsubishi Tokyo UFJ Bank, other (fixed-term deposits) | 23,175,000 | | |
| Assets for Reserve for Employees' Retirement Benefits | Mitsubishi Tokyo UFJ Bank, other (fixed-term deposits) | 156,124,000 | | |
| Housing loans | 10 employees | 41,687,000 | | |
| Total Special Assets | | 220,986,000 | | |
| (3) Other Noncurrent Assets | | | | |
| Interiors | Partitions, other | 8,007,730 | | |
| Fixtures and fittings | Electric moving bookshelves, other | 8,381,009 | | |
| Telephone subscription rights | Office (6 lines) | 526,100 | | |
| Guarantee and lease deposits | Office and accommodation (15 cases) | 36,754,600 | | |
| Total Other Noncurrent Assets | | 53,669,439 | | |
| Total Assets | | | 563,655,439 | |
| I. Liabilities | | | | |
| 1. Current Liabilities | | | | |
| Accounts payable | Chuo Social Insurance Office, other | 23,609,111 | | |
| Short-term borrowings | | 1,000,000,000 | | |
| Current portion of long-term borrowings | | 1,920,000,000 | | |
| Accrued consumption taxes | FY2009 final consumption tax | 17,510,600 | | |
| Advances received | FY2010 Treasury subsidies and consignment fees | 366,176,471 | | |
| Deposits received | PAYE taxes, other | 2,391,632 | | |
| Total Current Liabilities | | | 3,329,687,814 | |
| 2. Noncurrent Assets | | | | |
| Long-term borrowings | | 1,747,148,000 | | |
| Reserve for Directors' Retirement Benefits | For directors | 23,175,000 | | |
| Reserve for Employees' Retirement Benefits | For employees | 197,811,000 | | |
| Total Noncurrent Assets | | | 1,968,134,000 | |
| Total Liabilities | | | | 5,297,821,811 |
| Net Assets | | | | 753,736,881 |

NOTES TO FINANCIAL STATEMENTS

Institute of Cetacean Research
30 September 2010

1. Significant Accounting Policies

(1) Valuation standard and method for securities

1. Securities to be held to maturity are stated at amortised cost (straight-line method).
2. Other securities (those without fair market value) are stated at cost as determined by the specific cost method.

(2) Valuation standard and method for inventories

The valuation standard and method for inventories are based on the predicted disposable price.

(3) Depreciation method of noncurrent assets

Noncurrent assets are depreciated by the straight-line method.

(4) Accounting for reserves

1. The reserve for directors' retirement benefits is stated at the amount which would become liable to be paid should all directors' contracts be voluntarily terminated at the balance sheet date.
2. The reserve for employees' retirement benefits is stated at the amount which would become liable to be paid should all employment contracts be voluntarily terminated at the balance sheet date.

(5) Accounting for Lease Transactions

Because financial lease transactions other than for those in which ownership is considered to be transferred are of little significance, they are accounted for using a method similar to that for ordinary operating lease contracts.

(6) Accounting for consumption taxes

Consumption taxes are accounted for under the "tax inclusive" method. The figure obtained after deducting interim tax payments from the tax burden for the year under review is recorded in accounts payable.

(7) Changes and Balances of Basic and Special Assets

The changes and balances of basic and special assets are as follows.

| Item | Balance at FY08 Balance Sheet Date | Increase During FY09 | Decrease During FY09 | Balance at FY09 Balance Sheet Date |
|---|--|-------------------------|-------------------------|--|
| Basic Assets | | | | |
| Investment securities | 289,000,000 | 100,000,000 | 100,000,000 | 289,000,000 |
| Sub-Total | 289,000,000 | 100,000,000 | 100,000,000 | 289,000,000 |
| Special Assets | | | | |
| Housing Loans | 31,159,000 | 14,060,000 | 3,532,000 | 41,687,000 |
| Assets for Reserve for Directors' Retirement Benefits | 0 | 23,175,000 | 0 | 23,175,000 |
| Assets for Reserve for Employees' Retirement Benefits | 168,871,000 | 91,816,000 | 104,563,000 | 156,124,000 |
| Sub-Total | 200,030,000 | 129,051,000 | 108,095,000 | 220,986,000 |
| Total | 489,030,000 | 229,051,000 | 208,095,000 | 509,986,000 |

(8) Breakdown of Funding Sources, etc. of Basic and Special Assets

The breakdown of funding sources, etc. of basic and special assets is as follows.

| Item | Balance at FY09 Balance Sheet Date | (of which, appropriated from specified net assets | (of which, appropriated from general net assets) | (of which, response to liabilities) |
|---|--|---|--|---|
| Basic Assets | | | | |
| Investment securities | 289,000,000 | 0 | 289,000,000 | - |
| Sub-Total | 289,000,000 | 0 | 289,000,000 | - |
| Special Assets | | | | |
| Housing Loans | 41,687,000 | 0 | 0 | 41,687,000 |
| Assets for Reserve for Directors' Retirement Benefits | 23,175,000 | 0 | 0 | 23,175,000 |
| Assets for Reserve for Employees' Retirement Benefits | 156,124,000 | 0 | 0 | 156,124,000 |
| Sub-Total | 220,986,000 | 0 | 0 | 220,986,000 |
| Total | 509,986,000 | 0 | 289,000,000 | 220,986,000 |

(9) Assets offered as collateral

| | |
|-----------------------|--------------|
| Investment securities | ¥240,000,000 |
| By-products | ¥9,461,789 |

(10) The acquisition cost, accumulated depreciation and balance on the balance sheet date of noncurrent assets is as follows:

(Yen)

| Item | Acquisition cost | Accumulated depreciation | Balance at FY09 balance sheet date |
|-------------------------|------------------|--------------------------|------------------------------------|
| Other noncurrent assets | | | |
| Interiors | 12,127,375 | 4,119,645 | 8,007,730 |
| Fixtures and fittings | 13,399,356 | 5,018,347 | 8,381,009 |
| Total | 25,526,731 | 9,137,992 | 16,388,739 |

(11) Breakdown, book value, fair market value and valuation profit/loss of securities held to maturity
The breakdown, book value, fair market value and valuation profit/loss of securities held to maturity are as follows:

(Yen)

| Item | Book value | Fair market value | Valuation profit/loss |
|---------------------------------------|-------------|-------------------|-----------------------|
| Interest-bearing Govt Bonds Issue 284 | 140,000,000 | 140,252,000 | 252,000 |
| Interest-bearing Govt Bonds Issue 296 | 100,000,000 | 99,940,000 | -60,000 |
| Total | 240,000,000 | 240,192,000 | 192,000 |

(12) Breakdown, provider, change in value during period under review and balance of subsidies, etc.
The breakdown, provider, change in value during period under review and balance of subsidies, etc. are as follows:

(Yen)

| Name of Subsidy | Provider | Balance at FY08 balance sheet date | Increase during FY09 | Decrease during FY09 | Balance at FY09 balance sheet date | Entry on balance sheet |
|---|------------------------|------------------------------------|----------------------|----------------------|------------------------------------|------------------------|
| Whaling Research Facilitation Program Subsidy | Japan Fisheries Agency | 875,426,000 | 0 | 80,764,000 | 794,662,000 | N/A |

(13) Breakdown of transfers from specified net assets to general net assets
No specified net assets

(14) The details of transactions with related parties are as follows:

(million yen)

| Affiliation | Name of Party | Address | Total Asset Value | Nature of Business or Occupation | % of Voting Rights | Relationship | | Nature of Transaction | Transaction Value | Account | Balance on FY09 Balance Sheet Date |
|-------------|------------------|---------|-------------------|----------------------------------|--------------------|---------------------------|-----------------------|-----------------------|-------------------|------------|------------------------------------|
| | | | | | | Concurrent Director, etc. | Business Relationship | | | | |
| Director | Minoru Morimoto | - | - | President, ICR | - | - | - | Loan Guarantee | - | Borrowings | 4,667 |
| Director | Yoshihiro Fujise | - | - | Director, ICR | - | - | - | - | - | - | - |

平成 21 年度 事業報告書

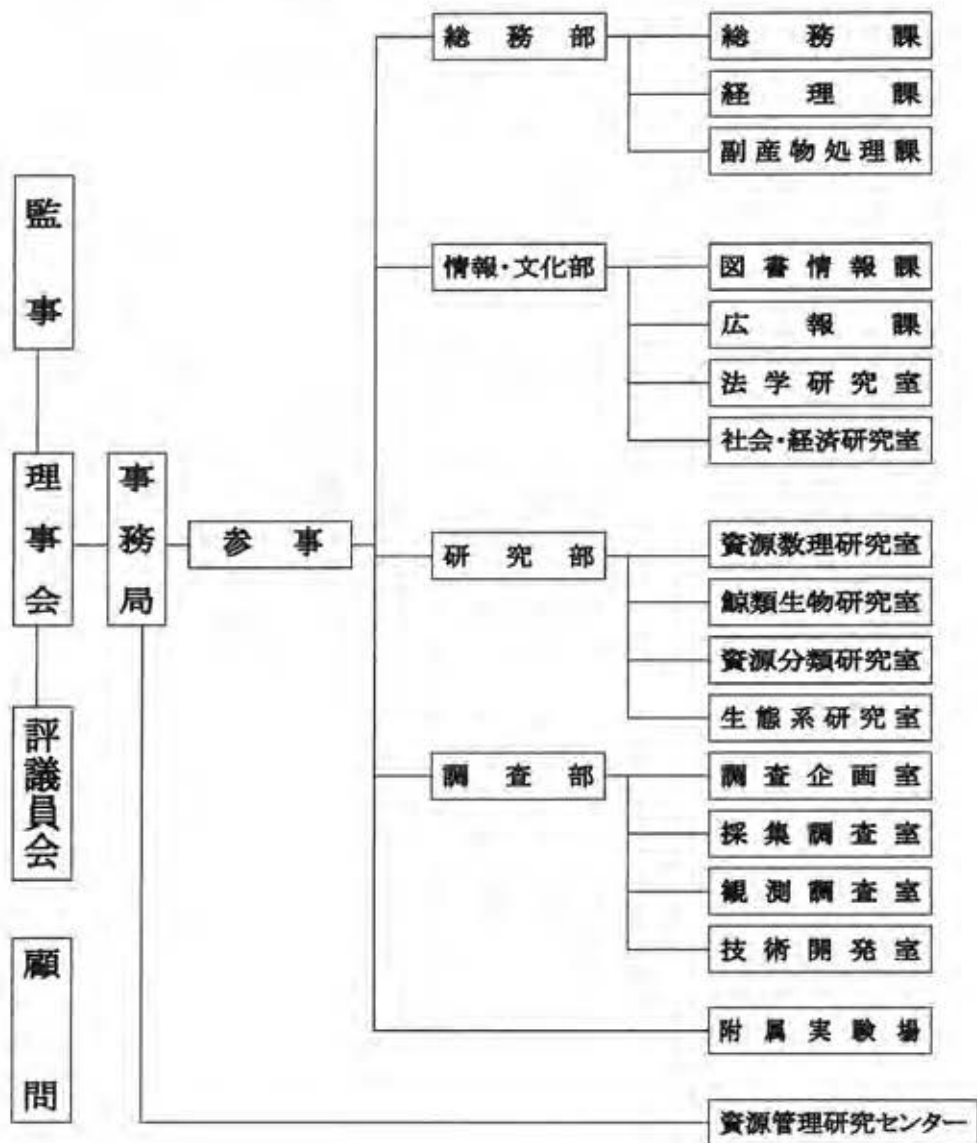
自 平成 21 年 10 月 1 日
至 平成 22 年 9 月 30 日

財団法人 日本鯨類研究所

4. 研究所概要

(1) 組織

財団法人 日本鯨類研究所の組織・機構(平成22. 9. 30. 現在)



(2) 役員・評議員

(平22.9.30現在)

役員

〔寄附行為第19条
役員任期2年〕

| 役職名 | 氏名 | 職歴又は現職 |
|---------|--------|----------------------|
| 理事長 | 森本 稔 | 前財団法人海洋生物環境研究所理事長 |
| (常勤)理事 | 藤瀬 良弘 | 前財団法人日本鯨類研究所参事 |
| (非常勤)理事 | 伊藤 誠 | 日本捕鯨協会常務理事 |
| ()理事 | 重 義行 | 社団法人大日本水産会専務理事 |
| ()理事 | 高橋 順一 | 桜美林大学大学院国際学研究科教授 |
| ()理事 | 林 良博 | 東京農業大学農学部バイオセラピー学科教授 |
| ()理事 | 馬見塚 達雄 | 産経新聞客員論説委員 |
| ()理事 | 山村 和夫 | 共同船舶株式会社代表取締役社長 |
| ()理事 | 安成 椰子 | 株式会社水産経済新聞社代表取締役社長 |
| ()監事 | 下村 政雄 | 社団法人日本水産資源保護協会専務理事 |

(平22.9.30現在)

評議員

〔寄附行為第32条
評議員任期2年〕

| 氏名 | 職歴又は現職 |
|-------|---------------------------|
| 飯野 建郎 | 日本捕鯨協会顧問 |
| 石塚 吉生 | 独立行政法人水産総合研究センター理事 |
| 加藤 秀弘 | 国立大学法人東京海洋大学海洋科学部教授 |
| 川口 恭一 | 社団法人漁業情報サービスセンター会長理事 |
| 三軒 一高 | 捕鯨を守る全国自治体連絡協議会会長 |
| 中前 明 | 国際捕鯨委員会日本政府代表 |
| 野口 裕之 | 産経新聞編集局政治部編集委員(安全保障・外交担当) |
| 山本 裕子 | 大東文化大学法学部教授 |
| 弓削 志郎 | 財団法人海洋生物環境研究所理事長 |

貸借対照表

平成22年9月30日現在

(単位 : 円)

| 科 目 | 当 年 度 | 前 年 度 | 増 減 |
|-------------------|-----------------|-----------------|-----------------|
| I 資産の部 | | | |
| 1. 流動資産 | | | |
| 現金預金 | 312,886,286 | 949,442,650 | △ 636,556,364 |
| 未収入金 | 3,626,763,702 | 3,335,995,440 | 290,768,262 |
| 前払金 | 9,937,817 | 8,038,163 | 1,899,654 |
| 副産物 | 9,461,789 | 31,409,280 | △ 21,947,491 |
| 有価証券 | - | 220,566 | △ 220,566 |
| 仮払金 | 1,528,790,840 | 1,620,943,683 | 7,847,157 |
| 立替金 | 62,822 | - | 62,822 |
| 流動資産合計 | 5,487,903,256 | 5,846,049,782 | △ 358,146,526 |
| 2. 固定資産 | | | |
| (1) 基本財産 | | | |
| 投資有価証券 | 289,000,000 | 289,000,000 | 0 |
| 基本財産合計 | 289,000,000 | 289,000,000 | 0 |
| (2) 特定資産 | | | |
| 住宅貸付金 | 41,687,000 | 31,159,000 | 10,528,000 |
| 退職給付引当預金 | - | 168,871,000 | △ 168,871,000 |
| 役員退職給付引当資産 | 23,175,000 | - | 23,175,000 |
| 職員退職給付引当資産 | 156,124,000 | - | 156,124,000 |
| 特定資産合計 | 220,986,000 | 200,030,000 | 20,956,000 |
| (3) その他固定資産 | | | |
| 造作 | 8,097,730 | 4,234,251 | 3,773,479 |
| 什器備品 | 8,381,009 | 4,835,232 | 3,545,777 |
| 電話加入権 | 526,100 | 526,100 | 0 |
| 保証金敷金 | 36,754,600 | 59,150,600 | △ 22,396,000 |
| その他固定資産合計 | 53,669,439 | 68,746,183 | △ 15,076,744 |
| 固定資産合計 | 663,455,439 | 557,276,183 | 5,879,256 |
| 資 産 合 計 | 6,051,558,695 | 6,403,825,965 | △ 352,267,270 |
| II 負債の部 | | | |
| 1. 流動負債 | | | |
| 未払金 | 23,609,111 | 725,514,946 | △ 701,905,835 |
| 短期借入金 | 1,000,000,000 | 4,047,148,000 | △ 3,047,148,000 |
| 一年以内返済長期借入金 | 1,920,000,000 | - | 1,920,000,000 |
| 未払消費税 | 17,510,600 | 21,741,600 | △ 4,231,000 |
| 前受金 | 366,176,471 | 626,104,649 | △ 259,928,178 |
| 預り金 | 2,391,632 | 2,850,552 | △ 458,920 |
| 仮受金 | - | 27,154,794 | △ 27,154,794 |
| 流動負債合計 | 3,329,687,814 | 5,450,514,541 | △ 2,120,826,727 |
| 2. 固定負債 | | | |
| 長期借入金 | 1,747,148,000 | - | 1,747,148,000 |
| 退職給付引当金 | - | 200,030,000 | △ 200,030,000 |
| 役員退職給付引当金 | 23,175,000 | - | 23,175,000 |
| 職員退職給付引当金 | 197,811,000 | - | 197,811,000 |
| 固定負債合計 | 1,968,134,000 | 200,030,000 | 1,768,104,000 |
| 負 債 合 計 | 5,297,821,814 | 5,650,544,541 | △ 352,722,727 |
| III 正味財産の部 | | | |
| 1. 指定正味財産 | | | |
| 指定正味財産合計 | 0 | 0 | 0 |
| 2. 一般正味財産 | | | |
| (うち基本財産への充当額) | 753,736,881 | 753,281,424 | 455,457 |
| (うち特定資産への充当額) | (289,000,000) | (289,000,000) | (0) |
| | (0) | (0) | (0) |
| 正味財産合計 | 753,736,881 | 753,281,424 | 455,457 |
| 負債及び正味財産合計 | 6,051,558,695 | 6,403,825,965 | △ 352,267,270 |

正味財産増減計算書

(財) 日本輪類研究所

平成 21年10月1日から 平成 22年9月30日まで

(単位 : 円)

| 科 目 | 当 年 度 | 前 年 度 | 増 減 |
|----------------|-------------------|-------------------|---------------------|
| 1 一般正味財産増減の部 | | | |
| 1. 経常増減の部 | | | |
| (1) 経常収益 | | | |
| 基本財産運用益 | 1,197,791 | 2,120,000 | △ 922,209 |
| 特定資産運用益 | 376,998 | 0 | 376,998 |
| 受取会費 | 93,329,510 | 105,810,000 | △ 12,280,490 |
| 調査受託収益 | 494,200,000 | 494,200,000 | 0 |
| 副産物収益 | 5,470,634,856 | 6,463,249,210 | △ 992,614,354 |
| 受託収益 | 857,000 | 877,250 | △ 20,250 |
| DNA登録収益 | 24,100,000 | 13,900,000 | 10,200,000 |
| 受取補助金等 | 794,002,000 | 875,420,000 | △ 80,764,000 |
| 雑収益 | 29,233,508 | 7,062,647 | 22,170,861 |
| 他会計からの繰入額 | - | 1,168,000,000 | △ 1,168,000,000 |
| 引当金取崩額 | - | 22,633,000 | △ 22,633,000 |
| 経常収益計 | 6,818,297,663 | 9,063,304,107 | △ 2,244,986,444 |
| (2) 経常費用 | | | |
| 事業費 | { 6,487,821,939 } | { 7,780,384,424 } | { △ 1,292,562,485 } |
| 一般事業費 | { 409,844,558 } | { 694,576,872 } | { △ 284,732,314 } |
| 調査研究事業費 | { 82,092,852 } | { 171,858,248 } | { △ 89,365,396 } |
| 情報文化事業費 | { 146,165,265 } | { 184,699,819 } | { △ 38,534,434 } |
| 国際活動事業費 | { 181,586,321 } | { 338,218,895 } | { △ 156,632,484 } |
| 特別事業費 | { 6,077,977,381 } | { 7,085,897,352 } | { △ 1,007,830,171 } |
| 管理費 | { 302,456,267 } | { 279,572,300 } | { 22,883,967 } |
| 役員報酬 | 21,333,890 | 35,613,603 | △ 14,279,803 |
| 給料手当 | 75,908,759 | 72,235,779 | 3,672,980 |
| 退職給付費用 | - | 52,114,580 | △ 52,114,580 |
| 退職金 | 1,811,900 | - | 1,811,900 |
| 福利厚生費 | 17,047,076 | 17,398,415 | △ 352,339 |
| 賃借料 | 56,133,110 | 70,206,651 | △ 14,073,541 |
| 会議費 | 76,920 | 168,096 | △ 91,176 |
| 交際費 | 161,000 | 632,091 | △ 491,091 |
| 旅費交通費 | 772,730 | 839,840 | △ 67,110 |
| 通信運搬費 | 2,055,305 | 2,111,692 | △ 56,387 |
| 消耗品費 | 601,089 | 629,402 | 171,687 |
| 減価償却費 | 1,410,114 | 640,874 | 775,240 |
| 印刷費 | 480,303 | 837,503 | △ 357,630 |
| 租税公課 | 65,429,103 | 37,478,530 | 7,952,573 |
| 光熱水道費 | 2,105,441 | 2,380,847 | △ 275,406 |
| 会費 | 2,258,000 | 549,500 | 1,208,500 |
| 支払寄付金 | 30,000 | 40,000 | △ 10,000 |
| 雑費 | 567,296 | 563,426 | 3,870 |
| 業務費 | 903,000 | 819,000 | 84,000 |
| 支払利息等 | 57,016,372 | 49,001,235 | 8,015,137 |
| 雑費 | 16,349,949 | 4,385,090 | 11,964,259 |
| 管理費配賦額 | - | △ 69,094,484 | △ 69,094,484 |
| 他会計への繰出額 | - | 1,168,000,000 | △ 1,168,000,000 |
| 引当金繰入額 | 28,064,000 | - | 28,064,000 |
| 役員退職給付引当金繰入額 | 6,248,000 | - | 6,248,000 |
| 職員退職給付引当金繰入額 | 21,816,000 | - | 21,816,000 |
| 投資有価証券評価損 | - | 9,590 | △ 9,590 |
| 経常費用計 | 6,818,342,206 | 9,227,966,314 | △ 2,409,624,108 |
| 当期経常増減額 | 455,457 | △ 164,662,207 | 165,117,664 |
| 2. 経常外増減の部 | | | |
| (1) 経常外収益 | | | |
| 経常外収益計 | 0 | 0 | 0 |
| (2) 経常外費用 | | | |
| 退職給付引当金繰入・取崩差額 | 0 | 2,817,000 | △ 2,817,000 |
| 経常外費用計 | 0 | 2,817,000 | △ 2,817,000 |
| 当期経常外増減額 | 0 | △ 2,817,000 | 2,817,000 |
| 当期一般正味財産増減額 | 455,457 | △ 167,479,207 | 167,934,664 |
| 一般正味財産期首残高 | 753,281,424 | 950,760,631 | △ 197,479,207 |
| 一般正味財産期末残高 | 753,736,881 | 783,281,424 | 455,457 |

正味財産増減計算書

(財) 日本鯨類研究所

平成 21年10月1日から 平成 22年9月30日まで

(単位：円)

| 科 目 | 当 年 度 | 前 年 度 | 増 減 |
|--------------|-------------|-------------|---------|
| Ⅱ 指定正味財産増減の部 | | | |
| 当期指定正味財産増減額 | 0 | 0 | 0 |
| 指定正味財産期首残高 | 0 | 0 | 0 |
| 指定正味財産期末残高 | 0 | 0 | 0 |
| Ⅲ 正味財産期末残高 | 753,736,881 | 753,281,424 | 455,457 |

キャッシュ・フロー計算書(直接法)

(財)日本鯨類研究所

平成 21年10月1日から平成 22年9月30日まで

(単位:円)

| 科 目 | 当年度 |
|----------------------|-----------------|
| I 事業活動によるキャッシュ・フロー | |
| 1. 事業活動収入 | |
| ①基本財産運用収入 | 1,197,791 |
| ②特定資産運用収入 | 376,998 |
| ③会費収入 | 93,529,510 |
| ④調査受託収入 | 404,206,000 |
| ⑤副産物収入 | 5,157,261,244 |
| ⑥受託収入 | 25,857,000 |
| ⑦DNA登録収入 | 24,100,000 |
| ⑧補助金等収入 | 530,000,000 |
| ⑨雑収入 | 24,684,064 |
| 事業活動収入計 | 6,261,212,607 |
| 2. 事業活動支出 | |
| ①事業費支出 | 7,119,086,655 |
| ②管理費支出 | 391,386,946 |
| 事業活動支出計 | 7,510,473,601 |
| 事業活動によるキャッシュ・フロー | ▲ 1,249,260,994 |
| II 投資活動によるキャッシュ・フロー | |
| 1. 投資活動収入 | |
| ①基本財産取崩収入 | 100,000,000 |
| ②特定資産取崩収入 | 7,108,000 |
| ③敷金・保証金戻り収入 | 22,396,000 |
| ④住宅資金貸付金戻り収入 | 3,532,000 |
| 投資活動収入計 | 133,036,000 |
| 2. 投資活動支出 | |
| ①基本財産取得支出 | 100,000,000 |
| ②特定資産取得支出 | 17,536,000 |
| ③固定資産取得支出 | 8,735,370 |
| ④住宅資金貸付金支出 | 14,060,000 |
| 投資活動支出計 | 140,331,370 |
| 投資活動によるキャッシュ・フロー | ▲ 7,295,370 |
| III 財務活動によるキャッシュ・フロー | |
| 1. 財務活動収入 | |
| ①借入金収入 | 3,400,000,000 |
| 財務活動収入計 | 3,400,000,000 |
| 2. 財務活動支出 | |
| ①借入金返済支出 | 2,780,000,000 |
| 財務活動支出計 | 2,780,000,000 |
| 財務活動によるキャッシュ・フロー | 620,000,000 |
| IV 現金及び現金同等物の増減額 | ▲ 636,556,364 |
| V 現金及び現金同等物の期首残高 | 949,442,650 |
| VI 現金及び現金同等物の期末残高 | 312,886,286 |

(注) 1 資金の範囲 資金の範囲には、現金及び現金同等物を含めている。

財産目録

平成22年9月30日現在

(単位：円)

| 科 | 目 | 金額 | 金額 | 金額 |
|-----|-------------|------------------|---------------|---------------|
| 1 | 資産の部 | | | |
| 1 | 流動資産 | | | |
| | 普通預金 | みずほコーポレート銀行組 | 304,557,107 | |
| | 郵便貯金 | ゆうちょ銀行 | 8,328,179 | |
| | 未収入金 | 副産物代金他 | 3,626,783,792 | |
| | 前払金 | 事務所家賃他 | 9,937,817 | |
| | 副産物 | 副産物 | 9,461,789 | |
| | 仮払金 | 平成22年度事業費他 | 1,528,790,840 | |
| | 立替金 | 職員宿舍費用他 | 62,822 | |
| | 流動資産合計 | | | 5,487,903,256 |
| 2 | 固定資産 | | | |
| (1) | 基本財産 | | | |
| | 投資有価証券 | 国債 | 289,000,000 | |
| | 基本財産合計 | | 289,000,000 | |
| (2) | 特定資産 | | | |
| | 役員退職給付引当資産 | 三菱東京UFJ銀行他(定期預金) | 23,175,000 | |
| | 職員退職給付引当資産 | 三菱東京UFJ銀行他(定期預金) | 156,124,000 | |
| | 住宅貸付金 | 職員全10名 | 41,682,000 | |
| | 特定資産合計 | | 220,981,000 | |
| (3) | その他固定資産 | | | |
| | 造作 | 間仕切り他 | 8,007,730 | |
| | 什器備品 | 電動移動車庫他 | 8,381,009 | |
| | 電話加入権 | 事務所(6本) | 526,100 | |
| | 保証金敷金 | 事務所及び宿舍全15件 | 35,754,600 | |
| | その他固定資産合計 | | 53,669,439 | |
| | 固定資産合計 | | | 563,655,439 |
| | 資産合計 | | | 6,051,558,695 |
| II | 負債の部 | | | |
| 1 | 流動負債 | | | |
| | 未払金 | 中央社会保険事務所他 | 23,609,111 | |
| | 短期借入金 | | 1,000,000,000 | |
| | 一年以内返済長期借入金 | | 1,920,000,000 | |
| | 未払消費税 | 平成21年度確定消費税 | 17,510,600 | |
| | 前受金 | 平成22年度国庫補助金及び受託費 | 366,176,471 | |
| | 預り金 | 源泉所得税他 | 2,391,632 | |
| | 流動負債合計 | | | 3,329,687,814 |
| 2 | 固定負債 | | | |
| | 長期借入金 | | 1,747,145,000 | |
| | 役員退職給付引当金 | 役員に対するもの | 23,175,000 | |
| | 職員退職給付引当金 | 職員に対するもの | 197,811,000 | |
| | 固定負債合計 | | | 1,968,131,000 |
| | 負債合計 | | | 5,297,818,814 |
| | 正味財産 | | | 753,736,881 |

財務諸表に対する注記

(財) 日本館類研究所
平成22年9月30日

1 重要な会計方針

- (1) 有価証券の評価基準及び評価方法
 - ①満期保有目的の債券は、償却原価法（定額法）によっている。
 - ②その他有価証券（時価のないもの）は、個別法による原価法によっている。
- (2) 棚卸資産の評価基準及び評価方法
棚卸資産の評価基準及び評価方法は、予想処分可能価格によっている。
- (3) 固定資産の減価償却の方法
固定資産の減価償却方法は、定額法で行っている。
- (4) 引当金の計上基準
 - ①役員退職給付引当金は、期末退職給付の自己都合要支給額に相当する金額を計上している。
 - ②職員退職給付引当金は、期末退職給付の自己都合要支給額に相当する金額を計上している。
- (5) リース取引の処理方法
所有権移転外ファイナンスリース取引は、重要性が乏しいため、通常の賃貸借取引にかかる方法に準じた会計処理によっている。
- (6) 消費税等の会計処理
消費税の会計処理は税込み方式によっており、当期負担の税額から中間納付した税額を差し引いた金額を未払金に計上している。
- (7) 基本財産及び特定資産の増減額及びその残高
基本財産及び特定資産の増減額及びその残高は、次のとおりである。

(単位：円)

| 科目 | 前期末残高 | 当期増加額 | 当期減少額 | 当期末残高 |
|------------|-------------|-------------|-------------|-------------|
| 基本財産 | | | | |
| 投資有価証券 | 289,000,000 | 100,000,000 | 100,000,000 | 289,000,000 |
| 小計 | 289,000,000 | 100,000,000 | 100,000,000 | 289,000,000 |
| 特定資産 | | | | |
| 住宅貸付金 | 31,159,000 | 14,060,000 | 3,532,000 | 41,687,000 |
| 役員退職給付引当資産 | 0 | 23,175,000 | 0 | 23,175,000 |
| 職員退職給付引当資産 | 168,871,000 | 91,816,000 | 104,563,000 | 156,124,000 |
| 小計 | 200,030,000 | 129,051,000 | 108,095,000 | 220,986,000 |
| 合計 | 489,030,000 | 229,051,000 | 208,095,000 | 509,986,000 |

(8) 基本財産及び特定資産の財源等の内訳

基本財産及び特定資産の財源等の内訳は、次のとおりである。

(単位：円)

| 科目 | 当期末残高 | (うち指定正味 財産からの 充当額) | (うち一般正味 財産からの 充当額) | (うち負債に 対応する額) |
|------------|-------------|--------------------------|--------------------------|------------------|
| 基本財産 | | | | |
| 投資有価証券 | 289,000,000 | 0 | 289,000,000 | — |
| 小計 | 289,000,000 | 0 | 289,000,000 | — |
| 特定資産 | | | | |
| 住宅貸付金 | 41,687,000 | 0 | 0 | 41,687,000 |
| 役員退職給付引当資産 | 23,175,000 | 0 | 0 | 23,175,000 |
| 職員退職給付引当資産 | 156,124,000 | 0 | 0 | 156,124,000 |
| 小計 | 220,986,000 | 0 | 0 | 220,986,000 |
| 合計 | 509,986,000 | 0 | 289,000,000 | 220,986,000 |

(9) 担保に供している資産

投資有価証券 240,000,000 円
副産物 9,461,789 円

- (10) 固定資産の取得価額、減価償却累計額及び当期末残高は、次のとおりである。

(単位：円)

| 科目 | 取得価額 | 減価償却累計額 | 当期末残高 |
|----------|------------|-----------|------------|
| その他の固定資産 | | | |
| 造作 | 12,127,375 | 4,119,645 | 8,007,730 |
| 什器備品 | 13,399,356 | 5,018,347 | 8,381,009 |
| 合 計 | 25,526,731 | 9,137,992 | 16,388,739 |

- (11) 満期保有目的の債券の内訳、帳簿価額、時価、評価損益

満期保有目的の債券の内訳、帳簿価額、時価、評価損益は、次のとおりである。

(単位：円)

| 科目 | 帳簿価額 | 時価 | 評価損益 |
|-----------|-------------|-------------|---------|
| 第284回利付国債 | 140,000,000 | 140,252,000 | 252,000 |
| 第296回利付国債 | 100,000,000 | 99,940,000 | △60,000 |
| 合 計 | 240,000,000 | 240,192,000 | 192,000 |

- (12) 補助金等の内訳並びに交付者、当期の増減額及び残高

補助金等の内訳並びに交付者、当期の増減額及び残高は、次の通りである。

(単位：円)

| 補助金等の名称 | 交付者 | 前期末残高 | 当期増加額 | 当期減少額 | 当期末残高 | 貸借対照表上の記載 |
|-----------------|-----|-------------|-------|------------|-------------|-----------|
| 販類補獲調査円滑化事業費補助金 | 水産庁 | 875,426,000 | 0 | 80,764,000 | 794,662,000 | 該当なし |

- (13) 指定正味財産から一般正味財産への振替額の内訳
指定正味財産なし

- (14) 関連当事者との取引内容は、次のとおりである。

(単位：百万円)

| 属性 | 法人等の名称 | 住所 | 資産総額 | 事業の内容又は職業 | 議決権の所有割合 | 関係内容 | | 取引の内容 | 取引金額 | 科目 | 期末残高 |
|----|----------|----|------|------------|----------|------------|------------|-----------|------|-----|-------|
| | | | | | | 役員 の兼務等 | 事業上 の関係 | | | | |
| 役員 | 森本 稔 | - | - | 当財団 理事長 | - | - | - | 債務 被保証 | - | 借入金 | 4,667 |
| 役員 | 藤瀬 良弘 | - | - | 当財団 理事 | - | - | - | | | | |

Annex 124: Kyodo Senpaku, “Production and handling of gifts and dispensations of meat from the 23rd Antarctic Ocean Cetacean Capture Program”, (Press Release, 11 May 2010) at Japan Whaling Association website, <<http://whaling.jp/press/press100511.html>> on 9 March 2011

PRESS RELEASE

11 May 2010
Kyodo Senpaku

‘Production and handling of gifts and dispensations of meat following the 23rd Antarctic Ocean Cetacean Capture Program’

The requests of all 196 crew members were collected with regard to gifts of meat and dispensations of meat for Kyodo Senpaku crew members, and gifts of meat produced from Antarctic minke whales were distributed as follows.

- (1) Gift meat preferences were collected from crew members, and to each person was distributed a maximum of two strips (of approximately 4 kg each) of salted *unesu* whale meat; or two pieces (of approximately 0.8 to 0.9 kg each) of red whale meat per person. Crew members who did not want *unesu* were able to exchange one strip of *unesu* for two pieces of red meat.

As a result, the amounts distributed to crewmembers were a total of approximately 1,324 kg of salted *unesu* to 175 crew members; and a total of approximately 412 kg of red meat to 192 crew members.

- (2) Meat dispensation preferences were collected, with a maximum of four pieces of red meat per person, and a total of approximately 615 kg was sold to 183 crew members.
- (3) To ensure the transparency of the implementation and management, Kyodo Senpaku managed all the processes on board, and after disembarkation, coordinated all the meat gifts and dispensations of meat and dispatched them to each crew member individually.
- (4) Settlement of payment for the relevant whale meat to the Institute of Cetacean Research will be made by Kyodo Senpaku pursuant to the retail price determined in April.

Enquiries: Mr Ito
Kyodo Senpaku
03-5547-1930

プレスリリース

2010年（平成22年）5月11日 共同船舶

第23次南極海鯨類捕獲調査の土産・分譲品の 生産と取り扱いについて

共同船舶乗組員に対する土産・分譲品については、乗組員（全196名）の要望を取りまとめ、クロミンククジラで生産を行い、次のとおり配布しました。

- (1) 土産については、乗組員から希望を募り、塩蔵鰹須であれば、一人当たり2本（1本約4kg）、赤肉であれば2個（1個約0.8～0.9kg）を上限として配布した。ただし、鰹須を希望しない者においては、鰹須1本に対し赤肉2個と交換できることとした。
この結果、配布量は、塩蔵鰹須については175名に合計約1,324kg、赤肉については192名に合計約412kgとなった。
- (2) 分譲品については、赤肉一人当たり4個を上限として希望を募り、183名に合計約615kgを販売した。
- (3) 実施・管理の透明性を確保するため、共同船舶が船内で一括管理し、下船後、全てとりまとめ、乗組員個人宛に送付した。
- (4) 当該鯨肉代金の精算は、共同船舶が日本鯨類研究所に対し、4月に決定された販売価格に基づいて行うこととしている。

問い合わせ先：

共同船舶株式会社

伊藤（電話：03-5547-1930）

Annex 125: Z Doi, “Don’t put out the light of whaling. My view: Takehiko Takayama”, *Asahi Shimbun*, 1 June 1986 (morning edition), 4 [excerpt translated]

‘Don’t Put Out the Light of Whaling. My View: Takehiko Takayama’

By Zenjiro Doi

Source: *Asahi Shimbun*, 1 June 1986 (morning edition), page 4 [excerpt]

Interviewer: Japan will definitely withdraw from whaling in the Antarctic Ocean next spring and from coastal whaling in two years’ time. We could say that Japanese whaling is now hovering on the brink. The annual meeting of the International Whaling Convention will be held on 9 June, but, at this late stage, what arguments could Japan make?

Takayama: Japan’s decision to withdraw from whaling came after the resolution of the 1982 IWC annual meeting to invoke the moratorium on commercial whaling, followed by pressure from the United States. The background is that after the Americans threatened to cut back Japan’s fishing allocation in its 200-nautical mile zone if Japan continued to hunt whales, Japan swallowed its tears and made the decision to withdraw its whaling fleet. However, Japanese whaling is an industry with a long history and tradition and it has a firm place in our diet. When I think of the livelihoods of the 50,000 people affected, those who work in whaling-related industries and their families, as someone involved in the industry it is only natural that I would want to find some way of enabling the industry to stay alive.

[...]

Interviewer: Zenjiro Doi, Editorial Committee Member

Mr Takehiro Takayama, 55, Secretary-General, Japan Whaling Association. Born in Kagoshima Prefecture, Mr Takayama graduated from the Fisheries Department, Faculty of Fisheries at Kagoshima University. He entered Nippon Suisan in 1954, transferring to Nippon Kyodo Hogei Kaisha in 1976, when the whaling divisions of Nippon Suisan, Taiyo Gyogyo, Kyokuyo and other fisheries companies merged to form the new company. He has worked exclusively in the whaling sector for his entire career, participating in 25 Antarctic whaling fleets, three times as Fleet Commander. He has also worked in northern Pacific Ocean whaling and coastal whaling. Mr Takayama took up his current position in 1978.

捕鯨の灯を消すな 高山武弘さん(わたしの言い分)

1986/06/01 朝日新聞 朝刊 4 ページ 2847 文字

その他の書誌情報を表示

——日本の南極海捕鯨は来年春まで、沿岸捕鯨も2年後の全面撤退が決まっています。いまや日本の捕鯨はぎりぎりの瀬戸際にあると聞いていいでしょう。今月9日からスウェーデンで国際捕鯨委員会(IWC)総会が開かれますが、ここまできて日本はなお主張することがあるのでしょうか。

「全面撤退が決定するまでには、1982年のIWC総会での商業捕鯨全面禁止(モラトリアム)決議があり、それに続く米国の圧力がありました。捕鯨を継続するなら、200カイリ内での漁獲割当を削減するというのでした。そこで日本は涙をのんで撤退を決めたといういきさつがあります。しかし、日本の捕鯨は長い歴史を持つ伝統産業であり、わたしたちの食生活になじんだものであること。現在の捕鯨関連産業従事者とその家族5万人の生活のことを思うとき、捕鯨関係者として、なんとか生き残りの道はないものかと考えるのは当然の成り行きです」

○「生存捕鯨」認めて

「そこで今回の総会では、まず従来の商業捕鯨に代わるものとして、生存捕鯨を主張することにしています。現在、IWCはアラスカやグリーンランドのエスキモーなどの捕鯨については、地域に密着した伝統的かつ生存的捕鯨だとして認めている。日本での宮城・鮎川、千葉・和田浦、和歌山・太地などの沿岸捕鯨も、地域ぐるみのものであり、生活に密着している点で同様のことがいえるのではないかと。規模も小さい。ぜひ認めてほしいといった主張です」

「一方の南極海捕鯨については、調査捕鯨というかたちで残せないものか、と考えています。さきのモラトリアム決議のさい、1990年までに鯨資源の包括的評価をして捕鯨再開の是非を検討する、といった趣旨の決議も同時に行われている。調査捕鯨構想はこれを受けたものです。鯨の分布、大きさなどを毎年調査して実態を明らかにし、新しい管理体制、有効利用体制づくりに貢献しようという考えが基本にあります」

「この調査捕鯨は独自の国家主権の下で行えるものですが、調査方法、捕獲頭数などについては、IWCに報告の義務がある。また従来の商業捕鯨とどう違うのかといった点の明確化などややこしい面がありますので、出来るかぎり加盟国の了解を得る方が望ましい。そこで今度の総会で討議してもらい、来年総会には持ち出したいと考えています。韓国、アイスランドなどもこの調査捕鯨実施の意向を持っているようですね」

——しかし、いまの時代に果たして捕鯨が必要なものか。

「さきにも申しましたように、日本の捕鯨は400年以上の歴史がある。鯨捕りたちは先祖伝来の天職と心得、鯨とともに生きてきた。日本人全体の食生活の中でも伝統的食料として位置づけられ、いまも食べ続けたいという希望が多いことは世論調査などでもはっきりしている。現代の飽食の時代にもかかわらず、なおかつ鯨志向が根強いということの意味は大きいのではないのでしょうか」

「そうはいつでも、ほんとうに鯨資源が枯渇しているのなら、こんなことは申しません。いさぎよく身を引く覚悟はあります。ところが、実情はそうではないのです。沿岸捕鯨のマッコウ鯨を例にとりますと、北太平洋西半分の海域に20万頭がいることはIWCでも認めている。それなのに捕鯨が許されているのは、200頭だけ。これすらダメだという。どうてい納得できるものではありません。さきのモラトリアム決議は、しっかりした資源評価もなく、科学的根拠に乏しいもの、といわざるを得ないのです。ましてIWCの規範である国際捕鯨取締条約には、鯨資源の保護を適正に行うことによってその有効利用、捕鯨産業の秩序ある発展を可能にするとうたわれているのですから、なおさらの思いがするではありませんか」

○ソ連など強く反論

—ほかの捕鯨国はどんな考えをしているのでしょうか。

「決議に異議申し立てをして独自の捕鯨を続けたいと表明したのは、日本のほかにソ連、ノルウェー、ベルギー（のち撤回）の3カ国があります」

「ソ連は、決議そのものが国際捕鯨取締条約に照らして違法性があり、かつ科学的根拠に欠けると繰り返し主張しております。ノルウェーはさらに強硬で、今年も独自の捕鯨計画を発表しました。フィリピン、韓国などもモラトリアムに対して疑問を呈しておりますね。いずれも人類の食糧資源として鯨を有効活用すべきだという考えからです」

—IWCのあり方そのものにも疑問があるようですが、現状はどのようなのですか。

「現在IWC加盟国の41カ国のうち、捕鯨国は9カ国だけ。大多数を占める反捕鯨国の中には果たして捕鯨問題を真剣に考えているのか疑わしい国もある。いまだに分担金すら払っていない国が12カ国もあるのが現状です。いまやIWCは反捕鯨側にハイジャックされた感があり、まともに討議すら出来ないことがこれまでもありました」

「そうした中で、日本はこれまでずいぶん努力をしてきたと思いますよ。懸命になって資料を集めたり、モリの改造に努めたり。国際鯨類調査10カ年計画というのが78年から始まったのですが、費用6億円のうち5億円をずっと負担してきたというのも、その一例です」

○IWC正常化が急務

「ソ連もIWCの現状について不満を述べており、国際捕鯨取締条約を見直し、強化したいといっています。イヤ気がさして脱退した国もあり、いまではかなりの国が現状をにがにがしく思っているのではないのでしょうか。IWCの正常化、これが急務だと思います」

—そうしたIWCで、今回の日本の主張がどれほど通るものなのでしょうか。

「総会を前にして、これまでいくつかの小委員会が行われておりますが、その中では、鯨資源の動向をつかむための継続的な調査が必要であることで、意見の一致がみられています。また資源状態が不明なものについても、捕獲を継続しながら調査を続け、実態を明らかにしたい、という日本の考え方も支持されたと聞いております」

「しかし、総会で承認を得るには加盟国の4分の3の支持が必要ですから、見通しは依然として厳しいものがあることに変わりありません。このため、議員外交などを通じて、主要加盟国の理解を得る努力を続けているところです」

「いま鯨捕りたちの生活が不当にも破壊されようとしている。個々の食文化が正当な理由なくねじ曲げられようとしている。それをじっと耐えて新しい管理体制下の捕鯨再開の時期を迎えたい。それまで捕鯨の灯を消すな、日本の伝統産業を守れ、というのが、わたしたち捕鯨関係者の切なる願いなのです」

（聞き手・土井全二郎編集委員）

たかやま・たけひろ(55) 財団法人日本捕鯨協会事務局長。鹿児島県出身。鹿児島大学水産学部漁業科卒。昭和29年、日本水産入社。51年、日本水産、大洋漁業、極洋などの捕鯨部門が合併発足した日本共同捕鯨会社へ移籍。一貫して捕鯨畑を歩く。南極海捕鯨25回、うち3回は船団長として。このほか、北洋捕鯨、沿岸捕鯨も。53年から現職。

Annex 126: T Ito, “Imminent Lock-out from the Sea: Report on Location from the Antarctic Ocean Whaling Grounds (Part 10)—Scientific Whaling Budget Reinstated (serial article)”, *Yomiuri Shimbum*, 24 February 1987 (evening edition), 14

‘Imminent Lock-out from the Sea: Report on Location from the Antarctic Ocean Whaling Grounds (Part 10)—Scientific Whaling Budget Reinstated (serial article)’

By Tetsuo Ito

Source: *Yomiuri Shimbum*, 24 February 1987 (evening edition), page 14

Transmitted all the way from the Japanese mainland by short-wave, the text was a little blurred when it arrived. But the ship’s chief newspaper editor, Seiichi Sasaki, 49, could read it precisely just the same.

“Almost Total Reinstatement of Cetacean Research Budget Sees Continuation in Antarctic from This Autumn”

To Sasaki, the headline on this news item which arrived on the ship’s fax machine on 7 January seemed to be literally dancing on the page.

The paper churning out of the fax machine reported that “Following negotiations to reinstate the whaling project budget for cetacean research as requested by the Japan Fisheries Agency for the 1987 budget, almost the full amount of ¥350 million has been approved, a complete reversal from the nil figure which had been the indicated response at the unofficial stage.” The ship was exuberant at this rare piece of good news.

Due to the moratorium invoked by the International Whaling Commission, the curtain will fall on Japan’s commercial whaling activities from this whaling season. But, under the International Convention for the Regulation of Whaling, the governments of signatory countries may catch and process whales, to the extent necessary for ‘scientific research’ including research into population numbers and distribution. This is what is meant by the term ‘scientific whaling’.

In addition to its decision to invoke the moratorium, the IWC also has a plan to conduct a comprehensive review of whale resources by 1990. And so it is not simply wishful thinking that the path to commercial whaling will be reopened depending on the results for minke whales and other species whose resources are abundant.

Although the purpose is defined as scientific whaling, the Convention provides that any whales caught “shall so far as practicable be processed”. Given that the whaling industry is standing at the edge of the precipice, if scientific whaling can be continued there will be no interruption to whaling, and to the dissection and processing techniques the industry has developed over the past half-century. It means too that the whaling vessels and factory ships will not rendered obsolete.

This is precisely why the Nippon Kyodo Hoge Company had repeatedly petitioned the Japan Fisheries Agency to implement scientific whaling. Fleet chief, Captain Yasushi Iso, 55, was also passionate in his entreaty that “by using scientific whaling we want to somehow manage to stay alive until the day that commercial whaling is resumed”.

Of course, since the purpose is research, “unless we keep the catch to the necessary minimum we won’t be able to avoid being targeted by international criticism”, said an official from the Whaling Unit, Far Seas Fisheries Division at the Japan Fisheries Agency.

Even today, [whaling] operations barely turn a profit. Should catch quotas be severely reduced, further employee layoffs and other rationalisation measures would be unavoidable. As chief deckhand Minoru Kurino, 52, from the factory ship said “At this point of the downturn in the seafood industry it’s too late now to tell us to get work on another ship”, and expressed the deep fear held by every crew member.

Upon seeing the lead article in the ship’s newspaper distributed that afternoon “Scientific Whaling Budget Reinstated”, for the moment at least, the fleet’s crew members heaved a collective sigh of relief.

Many issues remain, including how the anti-whaling countries will react, and how many whales can be caught. That said, it is also true that they do have a slender life-line attached to an albeit uncertain future.

(Text and photos by Tetsuo Ito, special correspondent on Nisshin Maru No. 3; headline design by graphic designer Eita Shinohara. This article concludes the series.)

閉ざされる海・南水洋捕鯨の現場から】(10)調査捕鯨の予算が復活(連載)

1987/02/24 東京読売新聞 夕刊 14ページ 1091文字

その他の書誌情報を表示

日本本土から、短波で送られてきた文字は、少しばかりにじんでいた。それでも、船内新聞の編集長をつとめる佐々木清一さん(49)には、はっきりと読めた。

〈鯨類調査費 ほぼ全面復活 この秋以降も 南水洋で続行〉。先月七日、船舶ファックスで届いたニュースの見出しが、佐々木さんには躍って見えた。

ファックスが吐き出した紙には、「六十二年度予算に要求していた水産庁の鯨類調査捕獲事業費が、復活折衝の結果、内示段階のゼロ回答から、一転して、ほぼ全額の三億五千万円認められた」と、報じられていた。久しぶりの朗報に、船内はわいた。

国際捕鯨委員会(IWC)が決めたモラトリアム(全面禁漁)で、わが国の商業捕鯨は、今漁期で幕を閉じる。しかし、国際捕鯨取締条約は、締約国政府が、生息数や分布状態の調査など「科学的研究」のために、必要な範囲内で鯨を捕獲、処理することはできる、としている。「調査捕鯨」と呼ばれるのが、それだ。

禁漁決定の一方で、IWCには、六十五年までに、鯨資源の包括的見直しをする予定もある。ミンククジラなど、資源の豊かな種類については、結果次第では、再び、商業捕鯨の道が開かれることも夢ではないのだ。

しかも、科学的調査のためとはいえ、捕獲した鯨は、同条約で「可能な限り加工しなければならない」とされている。がけつぶちに立つ捕鯨業界だが、調査捕鯨が続けられれば、半世紀にわたって培ってきた捕鯨・解剖処理の技術が中断することも、捕鯨船や母船などが“無用の長物”となることもない。

それだけに、日本共同捕鯨会社は、調査捕鯨の実施を水産庁に陳情し続けてきた。磯泰船団長(55)も「商業捕鯨復活の日まで、調査捕鯨でなんとか生きのびたい」と、切実な思いを訴えた。

もちろん、調査が目的である以上、「捕獲枠は必要最小限に抑えないと、国際的な非難を浴びかねない」(水産庁遠洋課捕鯨班)。

いまでさえ、採算ラインぎりぎりの操業。捕獲枠が激減すれば、一層の人員削減など合理化は避けられない。「水産業界が不況のこの時期、いまさら、他の船に乗り換えろといわれても……」。母船の栗野実甲板長(52)が口にした不安は、船団員のだれの胸にも強い。

それでも、その日の午後配られた船内新聞のトップ記事「調査捕鯨の予算復活」に、船団員たちはひとまず、胸をなでおろした。

これから、反捕鯨国は、どう動くのか。捕獲できる鯨の頭数は――。さまざまな問題は残る。が、細い「命綱」が、不透明な未来に向かってはられたことも事実なのだ。

(第三日新丸で伊藤哲朗特派員、写真も。題字は、グラフィックデザイナー篠原栄太氏)(おわり)

Annex 127: “Fisheries Agency Director-General Told by Prime Minister: Do Scientific Whaling that Won’t be Criticised”, *Asahi Shimbun*, 26 April 1987 (morning edition), 2

‘Fisheries Agency Director-General Told by Prime Minister: Do Scientific Whaling that Won’t be Criticised’

Source: *Asahi Shimbun*, 26 April 1987 (morning edition), page 2

Prime Minister Yasuhiro Nakasone instructed Fisheries Agency Director-General Goroku Satake yesterday, 25 April, to ensure that the scientific whaling scheduled to take place from December this year through to March next year in the Antarctic Ocean “does not give the impression of being unfair”, and told the Director-General to examine methods of scientific whaling that will not be criticised as being “the *de facto* continuation of commercial whaling” by the United States, which is opposed to whaling. It is believed that the Prime Minister’s remarks were prompted by his appreciation of developments by environmentalist groups in the United States in the lead-up to his visit to that country.

The Prime Minister, mentioning that the 825 whales which will be taken for the research are just over 40 percent of the total caught by commercial operations in the previous season, said that “My gut feel is that this seems like too large a number.” In response, Director-General Satake replied that “this number can be confidently explained to the International Whaling Commission by our scientists.”

批判されぬ調査捕鯨を 水産庁長官に首相が指示
1987/04/26 朝日新聞 朝刊 2ページ

中曽根首相は25日、佐竹五六・水産庁長官に対し、日本が今年12月から来年3月まで計画している南極海での調査捕鯨について、「アンフェアな印象を与えないように」と述べ、捕鯨反対の米国に「事実上の商業捕鯨の続行」と批判されない方法を検討するよう指示した。訪米を前にして、米国内の環境保護団体の動きなどを意識したため、とみられる。

首相は、調査で捕らえるミンククジラが825頭と、商業捕鯨していた前年の4割余にあたることに触れ、「素朴な感じとして、頭数が多いのではないか」と指摘。これに対して佐竹長官は「科学者が国際捕鯨委員会（IWC）で自信を持って説明できる頭数」などと答えた。

Annex 128: “A Message to the World: Sustainable Whaling. Three Whaling Groups’ New Year’s Press Conference”, *The Fishing & Food Industry Weekly*, 1559 (25 February 2003), 19

‘A Message to the World: Sustainable Whaling. Three Whaling Groups’ New Year’s Press Conference’

Source: *The Fishing & Food Industry Weekly* 1599 (25 February 2003), page 19

On 24 January, the leaders of the three main whaling-related organisations, Seiji Ohsumi, Director-General of the Institute of Cetacean Research; Hiroshi Ogawa, President of Kyodo Senpaku; and Keiichi Nakajima, President of the Japan Whaling Association, held a New Year’s press conference at which they identified the 55th Annual Meeting of the International Whaling Commission, to be held in Berlin in June, and the success of scientific whaling as the key issues for the coming year. A summary of their comments is as follows.

Increase supportive countries, normalise the IWC

Director-General Ohsumi:

Last year we undertook some very busy work, with the two high points of the year being the IWC Shimonseki Annual Meeting and the commencement of the full-scale survey JARPN II in the northern Pacific Ocean. This year, the major jobs waiting for us are, obviously, JARPN II, Stage II of JARPA, our response to the IWC Annual Meeting in Berlin, and JARPA II following the review of JARPA. At present, the 16th JARPA survey is progressing steadily, and we plan to hold an open day for the whaling fleet at Kochi City in April. The second major survey, JARPA II, will commence from April. We intend to make a success of the 2nd Traditional Whale Region Summit to be held in Itsuki City in May.

The 55th Annual Meeting of the International Whaling Commission will be held in Berlin beginning in May. We intend to cooperate with the government and strive to increase the number of votes which are supportive of whaling. With the proportion of moderates decreasing, the IWC is increasingly falling into non-functionality. We have to increase the number of supportive states and normalise the IWC.

We should quickly present internationally a vision for the kind of whaling that ought to be resumed, and obtain the understanding and support of people worldwide. Whaling in the future must be sustainable on the Japanese model, which uses every part of the whale for food. Further, we should promptly obtain domestic agreement that profits obtained from whaling will be returned to the international community, and also lobby firmly the international community.

President Ogawa:

Kyodo Senpaku is engaged in scientific whaling through the charter of research vessels to the Institute of Cetacean Research. At present, seven of our eight vessels are engaged in scientific whaling. We currently have 250 crew members and 32 land staff. Since 1990, these staff have been accepted from the three companies Maruha, Nippon Suisan and Kyokuyō. Our greatest mission is the passing on of the whaling technologies and techniques to the future. We are also continuing technological improvements in order to create quality products. The sales of by-products of research have been affected by deflation, calling for greater sales efforts.

President Nakajima:

Last year we were very active at the IWC meeting in Shimonoseki and enlivened the event. We must not allow the results of this to fall away. The anti-whaling forces appear to be increasing the number of new member countries, and so it is important that we counter this by quickly obtaining a majority support of members, and working towards the normalisation of the IWC. Last year, an affiliated group of like-minded Diet Members was formed within the Clean Government Party (Kōmeitō), and the group SUPU (Sustainable Use Parliamentarians Union) Japan was also launched. We intend to further reinforce the domestic support framework and maintain our close relations with the Diet. We will also reinforce our cooperation with the local governments concerned. We intend to achieve successful outcomes for the research fleet open day to be held in April in Kōchi City and the 2nd Summit of Traditional Whaling Regional Communities to be held in May in Ikitsuki Town, Nagasaki Prefecture.

THE FISHING & FOOD INDUSTRY WEEKLY

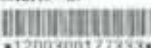
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水産庁漁業調査船「開洋丸」による
越冬期マイワシ・マサバ等浮魚類
現存量推定調査の実施について
水産庁漁場資源課国際資源班長 石塚浩一

—15—19—

水産社

持続捕鯨を世界へ発信

捕鯨3団体が年頭会見

大須清治日本鯨類研究所理事
長、小川洋共同船舶社長、中島圭
一日本捕鯨協会会長の顔見聞係3
団体トップは1月24日、年頭会見



中島会長

小川社長

大須理事長

し、今年の課題として、5月にベ
ルリンで開かれる第55回IWC
「国際捕鯨委員会」年次大会、輪
捕調査の成功などをあげた。
以下、3氏の発言要旨。

支持国を増やし

IWCの正常化を

大須理事長「昨年はIWC下関
会議と北西太平洋(JARPNII)
の本格調査の間断を一つの頂点と
して、多忙な仕事をこなした。今
年もJARPNII、第1期南太平洋
輪捕調査(JARPA)の調
査は言うまでもなく、ベルリンで
のIWC年次会議への対応とJAR
RPAのレビニューによる第2期J
ARPAの調査計画の準備の大任
事が控えており、緊張を強いられ
る。現在進行中の第16次JARP
Aは順調で、4月に新潟県で調査

始団の一般会議を予定。JARPA
ANNIの第3回の本格調査も1月
から開始される。5月の生月町で
第2回は輪捕地域センターも成
功させたい。

第55回IWC年次会議が5月か
るベルリンで開かれる。政府に協
力して、捕鯨支持国を増やすこと
に努力したい。中間派の割合が減
少し、IWCはますます機能不全
に陥っている。支持国を増やし、
正常化しなければならぬ。
再開されるべき捕鯨を早く世
界に提示して、世界の人の理解
と支持を得るよう努めたい。こ
れからの捕鯨は、日本型のケジラ
を徹底的に食料として利用する、
持続捕鯨でなければならぬ。ま
た捕鯨から得る利益を国際還元す
べきで、その合意を国内で早く解
決し、強く世界に働きかけるべき。

小川社長「共同船舶は自然研究に
調査船を用いて、輪捕調査に
従事している。現在は8隻所有の
うち7隻が輪捕調査に従事してい
る。現在20名の乗務員と2名の陸
上勤務がいる。1999年からマ

ル、日本も、捕鯨の3はか
受け継いできた。捕鯨の技術を持
続につなげるのが最大の使命で
ある。自ら船舶をつくるための技
術の改良も続けている。調査副産
物の販売については、デフレの影
響を受けており、一層の販売努力
が求められる。

中島会長「昨年はIWC下関会
議で多くの活動を行い、盛り上げ
ることができた。この成果を補強
させてほしい。反捕鯨の勢力
は新規加盟国を増やすとみてお
り、これに対抗して早く漁業政策の
支持を獲得し、IWCの正常化を
図ることが重要だ。昨年は公明党
で議員懇話会が結成され、SIP
I「持続的利用世界漁業資源」J
ARPAも発足した。国内の支持
体制をさらに強化し、国会との緊
密な関係も維持したい。関係自治
体との連携を強化する。4月に高
知市で開かれる調査船団の一般会
議。5月の長崎県生月町での第2
回三波輪捕地域センターを成功さ
せたい。

Annex 129: “Debate: Pros and Cons of Scientific Whaling”, *Mainichi Shimbun*, 3 October 2005, 3 (column by T Kasuya translated)

‘Debate: Pros and Cons of Scientific Whaling’

Column by Dr Toshio Kasuya, Lecturer, Teikyo University

Source: *Mainichi Shimbun*, 3 October 2005, page 3

There can be no doubt that the International Convention for the Regulation of Whaling does allow scientific whaling by its member countries. There is, however, a multitude of problems associated with the continuation of scientific whaling. The reasons for this can be broadly divided under three main points.

The first is the issue of whether it is appropriate to use the animals for experiments? The vast majority of scientific societies have self-imposed regulations which instruct that experiment animals should not be made to suffer any more than is necessary. The above Convention considers whales to be marine resources. Whales, however, are a shared asset belonging to humankind, and they are not the private property of the IWC member countries. It has been sixty years since the Convention was signed, and the Convention is no longer in keeping with the standard views of animals that now prevail internationally. If researchers disregard this and insist on continuing with whaling for science, this should be considered nothing other than the self-centred attitude of those researchers.

The second point is whether or not scientific whaling in fact has a scientific purpose as recognised by the Convention. The annual expenditure on research whaling is approximately ¥6 billion. Of this, leaving aside government subsidies, ¥5 billion is being paid for through the sales of whale meat. Were there no sales revenue, then the whaling industry stakeholders could not be maintained and the shipping companies could not collect a return on the construction costs of the whaling vessels. This mechanism is quite plainly an “economic activity”, in which there is no room to reflect any autonomy of the scientific researchers. This is surely not the “scientific purpose” that is recognised by the Convention.

The third point is whether the methods of “scientific whaling” are scientifically acceptable. The Institute of Cetacean Research asserts that it “cannot collect the data without lethal research methods”. However, collection of biopsy samples is enough to ascertain lipid levels and pregnancy rates. Whale faeces need only be collected to determine what the whales are feeding on.

The primary purpose of the second-stage research is “to construct a model of the ecosystem”. Since, at present, there is no ecosystem model for analysing the role of the whales in the ocean, the need to create such a model is understandable. While age data from the whales’ ear plugs cannot be obtained without killing the whale, the researchers ought first to build a model using the vast amounts of data accumulated through commercial whaling and the first-stage of the research, and then, only in cases for which the data is still insufficient, should they supplement it with scientific whaling.

In the 1980s I worked in the Japan Fisheries Agency and was involved in the drafting of the research whaling program. For this project, the parameters we were given were to “draft research that will allow the whaling of a sufficient number of whales to cover

costs and which will not be completed in a short time-frame.” I certainly regret my naiveté at the time when I reflect now on how I assisted in the establishment of the kind of scientific whaling that seeks to elude the law.

Dr Toshio Kasuya, 67, graduated from University of Tokyo; he has taught at Teikyo University from 2001 after working at the Japan Fisheries Agency and other government institutions; he has been a member of the IWC Scientific Committee; his special area of research is marine mammals.

日本の南極観測調査船は今年3月で計画期間が終了した。このため、政府は今冬、第2期調査を始める。観測船数は従来の倍の年間約850隻だ。調査船は国際捕鯨委員会(

論 調

WC)への報告だけで可能だが、世界的には批判も根強い。2人の専門家に意見を交換し、調査の是非をめぐらした。
【構成、写真は星月雄輝】
(文字は書家・前野少登氏)

調査捕鯨の是非

資源人口が急増し、捕鯨の重要性が再認識されている。中でも、南極の調査船は、資源の確保と環境保護の両面から、重要な役割を果たしている。調査船は、資源の確保と環境保護の両面から、重要な役割を果たしている。調査船は、資源の確保と環境保護の両面から、重要な役割を果たしている。

日本鯨類研究所理事長 **畑中 寛氏**

帝京科学大教授 **粕谷 俊雄氏**

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資源管理には不可欠

資源人口が急増し、捕鯨の重要性が再認識されている。中でも、南極の調査船は、資源の確保と環境保護の両面から、重要な役割を果たしている。調査船は、資源の確保と環境保護の両面から、重要な役割を果たしている。



畑中 寛氏



粕谷 俊雄氏

殺さずとも解明可能

資源人口が急増し、捕鯨の重要性が再認識されている。中でも、南極の調査船は、資源の確保と環境保護の両面から、重要な役割を果たしている。調査船は、資源の確保と環境保護の両面から、重要な役割を果たしている。

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貴重なたんぱく源

資源人口が急増し、捕鯨の重要性が再認識されている。中でも、南極の調査船は、資源の確保と環境保護の両面から、重要な役割を果たしている。調査船は、資源の確保と環境保護の両面から、重要な役割を果たしている。

「科学目的」に疑問

資源人口が急増し、捕鯨の重要性が再認識されている。中でも、南極の調査船は、資源の確保と環境保護の両面から、重要な役割を果たしている。調査船は、資源の確保と環境保護の両面から、重要な役割を果たしている。

はたなか・ひろし 北大平、水産庁、水産総合研究センター 理髪長などを経て、04年から現職。62歳。 かつや・としお 東大卒。水産庁などを経て01年から現職。IWC科学委員。専門は水生哺乳類学。67歳。

Annex 130: K Nakano, “To Protect Whale Eating Culture, The Japan Fisheries Agency Supports A Meat Wholesaler to Develop Sales Channels Targeting School Lunches”, *Nikkei Sangyo Shimbun*, 29 May 2006, 21

‘To Protect Whale Eating Culture, the Japan Fisheries Agency Supports a Meat Wholesaler to Develop Sales Channels Targeting School Lunches’

By Keisuke Nakano

Source: *Nikkei Sangyo Shimbun*, 29 May 2006, page 21.

Scientific Whaling Expansion and Increasing Stockpiles

Amid concerns about the surplus of whale meat resulting from the expansion in scientific whaling, a new whale-meat wholesaler company, Geishoku Rabo [TN: lit: Whale Cuisine Laboratory], located in Minato Ward, Tokyo, was established on 1 May with assistance from the Japan Fisheries Agency and other organisations. Its charter is to develop new sales channels for whale meat, which has almost disappeared from dining room tables during the 25 years since the commencement of the ban on commercial whaling. Any increase in whale-meat stocks is likely to add force to the criticism from environmental protection groups and so people in the seafood industry have high expectations of the new company.

Consistent supply difficult

Geishoku Rabo has been established as the Japanese equivalent of a limited liability company. The former consultant, Mr Hiroshi Tanaka, who will be the company’s managing director, has invested ¥1 million of his own funds in the company. Kyodo Senpaku (Chuo Ward, Tokyo) has provided a loan of ¥20 million for operating capital. Kyodo Senpaku has been exclusively commissioned to market whale meat by the Institute of Cetacean Research (ICR), which carries out scientific whaling. In consultation with ICR and Kyodo Senpaku, Geishoku Rabo will develop new sales channels for whale meat, and the company is to be dissolved in 5 years time.

Managing Director Mr Tanaka will target sales to catering services supplying hospitals and company cafeterias. The allowable catch in the Southern Ocean, the principal research zone, this year doubled to 850 whales, which was an increase to approximately 3,700 tonnes. Scientific whaling is also conducted in other sea areas and the amount of whale meat distributed domestically is predicted to reach a total of about 6,000 tonnes.

Mr Tanaka explains, however, that “this is an overwhelmingly small amount compared to the annual consumption of beef which exceeds 800,000 tonnes”. Low distribution volumes make it difficult to sell to businesses such as restaurant chains and high volume retail outlets which demand stable supplies. However, low volumes are manageable for organisational food providers which will provide it in the form of once-a-month “special menus”.

While middle-aged and older people retain a fondness for whale meat, it is far less familiar to the younger generation. This means that one of Geishoku Rabo’s primary tasks is to develop new menus for whale meat. Of the ten or so employees, the intention is that the majority will be chefs and dieticians. The aim is to encourage its use mixed with other meats and extol its nutritional superiority as a high-protein low-fat meat.

Kyodo Senpaku, the traditional seller of whale meat, has sold the meat mainly through the central wholesale markets located across Japan. Whale meat prices are decided by the Institute of Cetacean Research, and the current wholesale price is approximately ¥2,000/kg

for red meat. Partly because whale meat is expensive compared to other meat, stockpile levels are at about 1,300 tonnes. Geishoku Rabo intends to develop new markets amounting to 1,000 tonnes in the first year and to increase annual volumes handled to 3,000 tonnes after five years.

The annual budget for scientific whaling is almost ¥5 billion. Of this, government subsidies are only ¥500 million. The balance is provided by sales of whale meat and so, as the President of the Japan Whaling Association Mr Makoto Ito explains, “unless it sells well, there will be a significant impact on continued whaling”.

Seafood companies hesitant

Notwithstanding the expansion in scientific whaling, in March this year, Nippon Suisan and the other four seafood companies which had invested in Kyodo Senpaku, announced the transfer of all of their shares in the company to public interest organisations, including the Institute of Cetacean Research, for no consideration, explaining that “scientific whaling has a strong public interest aspect to it, and it is not easily carried out by the private sector”.

The backdrop to this is appears to be concerns with regard to environmental protection groups and similar organisations. Groups such as Greenpeace are fiercely opposed to the expansion of whaling in the Antarctic Ocean. In April, Nippon Suisan decided to suspend manufacture of canned whale meat as a result of a boycott on the products of its affiliated companies in Europe and North America. Company President Mr Naoya Gakizoe explained to investors that “Our very involvement in whaling leads to business risks”.

With the negative image of whaling and the drift away from whale meat among young people, the key question is whether during such adverse times it will be possible to protect Japan’s traditional culture of eating whale meat and carrying out whaling. The answer may depend on the trial and error conducted at Geishoku Rabo during the next five years.

[TN: Diagram/photo not reproduced]

The majority of the budget for scientific whaling is earned from sales of whale meat – courtesy of the Institute of Cetacean Research

鯨食べる文化守れ、水産庁支援で肉卸会社——給食向け販路開拓。

2006/05/29 日経産業新聞 21 ページ 1315 文字

その他の書誌情報を表示

調査捕鯨拡大、増える在庫

調査捕鯨の拡大で鯨肉余りが懸念される中、水産庁などの支援を受けた鯨肉卸の新会社、鯨食ラボ（東京・港）が五月一日、発足した。商業捕鯨禁止からほぼ四半世紀、食卓ではすっかりなじみの薄くなった鯨肉の新たな販路開拓を担う。鯨肉在庫が一段と積み上がると自然保護団体の批判に勢いを与えかねず、水産関係者は新会社の活動に期待を寄せている。安定供給難しく

鯨食ラボは合同会社（日本版LLC）の形で設立した。コンサルタント出身で代表を務める中田博氏が百万円を出資。運転資金として共同船舶（同・中央）から二千万円の融資を受ける。共同船舶は調査捕鯨を実施する日本鯨類研究所（同・中央）から鯨肉販売を一手に委託されている。鯨食ラボは鯨類研と共同船舶との協議で新販路を開拓し、五年後に解散する。

中田代表が狙うのは病院や社員食堂の給食事業への販売だ。主力調査海域である南極海での捕鯨可能数は今年からほぼ倍の八百五十頭、約三千七百トンに増えた。調査捕鯨は他の海域でも実施しており、鯨肉の国内流通量は計六千トン程度となる見込みだ。

とはいえ、「年間八十万トンを超える牛肉消費量と比較したら圧倒的に少ない」（中田代表）。流通量が少ないと、安定供給を求める外食チェーンや量販店への販売は難しい。給食なら月に一度の特別メニューといった形で、少量でも対応できるというわけだ。

中高年層には懐かしさを感じさせる鯨肉だが、若い世代にはなじみが薄い。鯨肉ラボではメニュー開発も重要な課題だ。十人程度採用する社員のうち大半を調理師や栄養士にする予定。他の肉と混ぜて使ったり、高たんぱく低脂肪といった栄養面での優位性を訴える。

従来から鯨肉を販売する共同船舶は、主に各地の中央卸売市場を通じて販売している。鯨肉の価格は鯨類研が決定するが、現在の卸値は赤肉一キロ当たり約二千元。他の食肉に比べ安くはないこともあり、すでに千三百トンの在庫を抱える。鯨肉ラボでは初年度一千トン程度の新たな販路を開拓、五年後には三千トン程度にまで取扱量を広げる考えだ。

調査捕鯨の年間予算はほぼ五十億円。うち国からの補助金は五億円にとどまる。残りは鯨肉販売でまかなっており、「売れないと（捕鯨継続に）大きな影響を受ける」（伊藤誠・日本捕鯨協会事務局長）。

水産各社、及び腰

調査捕鯨の拡大にもかかわらず、共同船舶に出資する日本水産など水産五社は三月、「調査捕鯨は公益性が高く、民間にはなじまない」として全株式を鯨類研など公的機関に無償譲渡すると発表した。

背景には自然保護団体などへの配慮もあると見られる。南極海の捕鯨拡大に、グリーンピースなどは猛反発。日本は欧米の関連会社の製品が不買運動にあい、四月に鯨肉の缶詰製造中止を決めた。垣添直也社長は投資家らに「捕鯨にかかわること自体が経営リスクにつながる」と説明した。

捕鯨へのマイナスイメージや若者の鯨肉離れ——。逆風下で鯨食や捕鯨という日本の伝統文化を守れるか。これから五年間の「ラボ」（実験室）での試行錯誤にかかっているといえ

そうだ。(中野圭介)

【図・写真】調査捕鯨の予算の大半は鯨肉販売でまかなわれている＝日本鯨類研究所提供

Annex 131: “Shimonoseki City Operator of Shimonoseki Kaikyokan Aquarium Becomes Scientific Whaling Major Shareholder; City to Support Re-start of Commercial Whaling”, *Nihon Keizai Shimbun – Regional Economy Section: Chugoku A*, 4 July 2006, 11

‘Shimonoseki City Operator of Shimonoseki Kaikyokan Aquarium Becomes Scientific Whaling Major Shareholder; City to Support Re-start of Commercial Whaling’

Source: *Nihon Keizai Shimbun – Regional Economy Section: Chugoku A*, 4 July 2006, page 11

Shimonoseki Marine Sciences Academy (Director: Mr Kiyoshi Ejima, Mayor of Shimonoseki City), an external organisation of the City of Shimonoseki in Yamaguchi Prefecture and the operator of the Shimonoseki Marine Sciences Museum, Shimonoseki Kaikyokan Aquarium, has become a major shareholder in Kyodo Senpaku (Chuo-ku, Tokyo; President: Mr Kazuo Yamamura), Japan’s only scientific whaling enterprise, by acquiring a 19.4% share in the company worth ¥49 million at face value. Shimonoseki City will use the data on whales owned by Kyodo Senpaku at Shimonoseki Kaikyokan aquarium and will lend further support towards the resumption of commercial whaling.

Mayor Ejima and President Yamamura made the announcement at a press conference at Shimonoseki City Hall on 3 July. Kyodo Senpaku is in the process of conversion into a public-benefit company, and it reportedly approved of Shimonoseki City’s efforts to become a “whale town”.

Kyodo Senpaku was established in 1987 during the ongoing moratorium on commercial whaling. It is the only company in Japan that continues to supply research vessels and crews to the government’s research whaling program. It is also contracted to sell the whale meat.

According to President Yamamura, since the company’s shareholders had been private-sector enterprises, from the viewpoint of “placing more emphasis on the public benefit” of the company’s operations, at the end of June, the five former shareholders, including a Maruha affiliate, transferred their shares in equal proportions to the Shimonoseki Marine Sciences Academy and four foundations based in Tokyo, including the Institute of Cetacean Research located in Chuo-ku, Tokyo.

Under Kyodo Senpaku’s new shareholder structure, the Academy and the other four foundations will each hold 19.4% of the shares, while Kyodo Senpaku directors will hold the remaining 3%.

Shimonoseki City’s new role as a major shareholder in Kyodo Senpaku has strengthened its links with whales, and is likely to enable it to promote its “whale town” measures nationally.

The Shimonoseki Kaikyokan aquarium plans to place efforts into research and exhibits about whales. If commercial whaling is resumed, this is likely to be useful for whaling-based promotional activities.

Shimonoseki City has held send-off ceremonies for the Southern Ocean research whaling fleet each season since 1998, and, in 2002, hosted the annual meeting of the International Whaling Commission (IWC). Mayor Ejima commented, “As a shareholder of the research whaling company, we want to continue to provide assistance towards the resumption of whaling with the understanding of our city’s citizens”.

[TN: Graphic not reproduced.] Shimonoseki City is the site of a send-off ceremony for the Southern Ocean research whaling fleet.

「海響館」運営の下関市団体、調査捕鯨社の大株主に、市、「商業」再開の支援に力。
2006/07/04 日本経済新聞 地方経済面 中国A 11 ページ

その他の書誌情報を表示

山口県下関市の外郭団体で水族館「海響館」を運営する下関海洋科学アカデミー（理事長・江島潔下関市長）が、国内唯一の調査捕鯨事業会社である共同船舶（東京・中央、山村和夫社長）の発行済み全株式の一九・四％（額面価格は四千九百万円）を譲り受け、有力株主となった。市は海響館で同社の持つ鯨に関するデータを活用するほか、商業捕鯨再開への一層の支援に力を入れる。

江島市長と山村社長が三日、下関市役所で記者会見し、明らかにした。共同船舶が公益性のある企業に転換するに当たり、下関市が「クジラの街」づくりに取り組んでいる点が評価されたという。

共同船舶は商業捕鯨の一時停止（モラトリアム）が続く中で一九八七年に設立。政府による調査捕鯨事業に対して調査船や乗組員の提供を続けている国内唯一の企業。鯨肉販売も委託されている。

だが株主が民間企業だったため「公益性を一層重視する」（山村社長）立場から、マルハ系企業など民間企業株主五社が六月末に下関海洋科学アカデミーと、日本鯨類研究所（東京・中央）など東京の四財団に株式を均等に譲渡した。

共同船舶の新しい株主構成は同アカデミーを含む五財団法人が一九・四％ずつ、残り三％を共同船舶役員が所有する。

下関市は共同船舶の有力株主となったことで、鯨との縁がますます強くなり「クジラの街」への取り組みを全国にアピールできるようになるとみている。

海響館では鯨の関係の調査・展示に力を入れる方針。仮に将来、商業捕鯨が再開された場合、母船基地誘致でも有利に働きそうだ。

市は九八年から南極海の鯨捕獲調査船団の出港式を開く一方、二〇〇二年国際捕鯨委員会（IWC）総会を誘致した。江島市長は「調査捕鯨会社の株主として、市民の理解を得ながら、捕鯨再開に向け支援を続けていきたい」としている。

【図・写真】下関市では南極海の調査捕鯨船団の出港式が開かれている。

Annex 132: “Kyodo Senpaku: 980 Shares Each to Five Foundations in Total Share Transfer”, *Nikkei Sangyo Shimbun*, 4 July 2006, 18

‘Kyodo Senpaku: 980 Shares Each to Five Foundations in Total Share Transfer’

Source: *Nikkei Sangyo Shimbun*, 4 July 2006, page 18

Shimonoseki: On 3 June, scientific whaling company Kyodo Senpaku (Chuo Ward, Tokyo; President Mr Kazuo Yamamura) announced that at the end of June its five corporate shareholders, including a Maruha-affiliate, had transferred all of the company’s shares to five incorporated foundations, including Shimonoseki Marine Science Academy (Shimonoski City, Yamaguchi Prefecture) and the Institute of Cetacean Research (Chuo Ward, Tokyo), with 980 shares transferred to each foundation.

The stock ownership level of each of the foundations is 19.4% (par value of ¥49 million) and Kyodo Senpaku directors own the remaining 3%.

During the period that commercial whaling has been temporarily suspended, Kyodo Senpaku has been supplying research vessels and crew for the government’s scientific whaling programs.

With the objective of emphasising the public interest nature of the program, the shares were transferred to public-interest corporations as they had been owned by private companies. An extraordinary general meeting will be held in mid-August to determine the company’s new directors and related matters.

The Shimonoseki City organisation which operates the Shimonoseki Kaikyokan Aquarium has become a major shareholder of the scientific whaling company. The City will provide support towards the resumption of “commercial activities”.

共同船舶、5財団法人に980株ずつ、全株式を譲渡へ。

2006/07/04 日経産業新聞 18 ページ

【下関】調査捕鯨事業の共同船舶（東京・中央、山村和夫社長）は三日、株主のマルハ系企業など五社が六月末に下関海洋科学アカデミー（山口県下関市）や日本鯨類研究所（東京・中央）など五財団法人に全株式を九百八十株ずつ譲渡したと発表した。

各財団の持ち株比率は一九・四％（額面価格は四千九百万円）で、残り三％を共同船舶役員が所有する。

共同船舶は商業捕鯨の一時停止が続く中、政府による調査捕鯨事業に対して調査船や乗組員を提供している。

だが、民間企業が株式を保有していたため、公益性を一層重視する立場から公益法人に株式を譲渡した。八月中旬に臨時株主総会を開き、新しい役員人事などを決める。

「海響館」運営の下関市団体、調査捕鯨社の大株主に、市、「商業」再開の支援に力。

Annex 133: T Miyazaki, “So That’s Why! Economics: Marketing Power-up, Boosting Excess Consumption at Pubs and School Lunches”, *Yomiuri Shimbun*, 5 September 2006 (morning edition), 11

‘So That’s Why! Economics: Marketing Power-up, Boosting Excess Consumption at Pubs and School Lunches’

By Takeo Miyazaki

Source: *Yomiuri Shimbun*, 5 September 2006 (morning edition), page 11

An unexpected excess sees a forgotten taste gain “regular” status on pub menus and targeted at school lunches

The number of food companies and eateries using whale meat is on the rise. But while whale meat for culinary purposes is being placed on the market, whale meat inventories have also been expanding. The people involved with whaling are trying hard to expand consumption.

Whale meat sales are a very important financial source for research whaling. Future research whaling is likely to be obstructed unless whale meat consumption increases, and this is why industry insiders see it as an emergency issue.

Health food promotion

Most of the whale meat eaten by consumers is meat from whales which have been caught for scientific whaling, processed and then sold after being studied for research. The Institute of Cetacean Research, which conducts survey whaling, puts the meat on the market through the Tokyo-based ship company Kyodo Senpaku, which is commissioned to carry out the whaling.

Kyodo Senpaku has been recently strengthening its sales promotion of whale meat, and so there have been more cases of food companies and eateries starting to sell the meat.

From March, Nippon Meat Packer’s Tokyo-based subsidiary, Hoko, began selling three different types of new product using whale meat, including a retort pack called *Yamatoni* as well as canned products with cooked whale meat.

The company said that “we expect this will sell well if we can get the baby boomer generation, which previously ate whale meat, to revive their memories of the taste.”

From November 2005, the restaurant chain store “Chimney”, also operated by Nippon Meat Packers, began selling seven types of whale meat dishes, including fried whale meat fritters and whale meat sashimi, at its 200 “Hana no Mai” eateries nationwide.

Until then, Hana no Mai had listed whale meat on its limited seasonal menus, but this was then raised a notch to appear on the regular menu. While the whale meat fritters are approximately 50 per cent more expensive than chicken meat fritters, their sales put them in the top 10 most popular products of the restaurant chain.

In addition to the above, the major foodstuffs supermarket Mauretsu also started selling 10 different lines of whale meat product, including sashimi, from June 2005.

The Institute of Cetacean Research and other related organisations are aiming to expand the sales channels whale meat. In May 2006, the ICR established the company Geishoku Rabo

[TN: lit: Whale Cuisine Laboratory], based in Tokyo, and this company has been marketing whale meat to industry sectors that produce lunches for organisations such as hospitals and universities.

Mr Tanaka, Managing Director of Geishoku Rabo, is making the appeal that "whale meat is high protein and low calorie. Its former reputation of being tough to eat has been improved through advances in refrigerating technology".

Whale meat inventories doubled in past ten years

The industry is so keen to market the product because consumption has remained stuck at low levels while supply has expanded considerably.

As the Institute of Cetacean Research increased the types of whales which it culls for detailed scientific surveys, the amount of whale meat provided rose from 2,450 tonnes in 2000, to 5,560 tonnes in 2005.

But consumption of whale meat has not expanded as expected. In 1982, the International Whaling Commission introduced a moratorium on commercial whaling, and Japan, from 1988, stopped commercial whaling. Per-capita whale meat consumption, which was 2,000 grams approximately 40 years ago, fell to 50 grams in 2005.

The result of this was that in distributor freezers and other areas, the inventory of whale meat in 2005, as a yearly average, increased 45% over the previous year, to 3,945 tonnes, which was about twice the amount of 10 years previously.

In December last year, the Institute for Cetacean Research, which sets the price for whale meat, lowered the wholesale price by 20 per cent. But while retail sales of whale meat expanded by 50% between January and July over the same period last year, distributors' inventories still did not fall.

One reason is that "there's a deep-seated feeling among consumers that whale meat is hard to get", according to an official in the Japan Fisheries Agencies' Whaling Section, while others point out a shift away from whale meat among young people, in particular.

Will unsold whale meat squeeze research whaling?

Approximately 90 percent of the ¥6 billion annual budget for research whaling is met through the sales of whale meat. Unless whale meat can be sold, it will be not possible to conduct the scientific whaling as they would like.

The Institute of Cetacean Research, from 2007 onwards, plans to further increase the number of whales culled for scientific research and expects that the amount of whale meat which will be provided to the market will expand to about 7,000 to 8,000 tonnes per year.

Unless consumption increases, inventories will only build up, leading to the situation where there will be insufficient funds to be directed to scientific whaling.

There is also the fact that Japan is seeking the resumption of commercial whaling at the International Whaling Commission. At the Annual Meeting, which was held in June this

year, the joint declaration put forward by Japan and other pro-whaling nations was adopted by a margin of one vote. The declaration included the statement that the temporary ban on commercial whaling was "no longer necessary". The international debate over whaling, however, may be influenced by the impression that whale meat consumption is not solidly expanding.

[なるほど！経済]クジラ、どんどん売り込め！ 消費ダブつく 居酒屋や給食に
2006/09/05 東京読売新聞 朝刊 11 ページ 1775 文字
その他の書誌情報を表示

◆意外にダブつく「忘れられた味」／居酒屋「定番」昇格／給食にも販促
鯨肉を扱う食品会社や飲食店が増えている。食用として市場に出されながら在庫となる鯨肉が増え、捕鯨関係者が消費拡大策に本腰を入れているためだ。鯨肉の売り上げは調査捕鯨の重要な財源になっている。鯨肉の消費を増やさないと今後の調査捕鯨に支障を来す恐れがあるため、関係者にとって緊急の課題となっている。(宮崎健雄)

■健康食PR

消費者が口にする鯨肉は主に、調査捕鯨で捕獲された鯨が調査後に加工され、販売されているものだ。調査捕鯨を行う財団法人の日本鯨類研究所が、実際の捕鯨の委託先である船会社の「共同船舶」(本社・東京)を通じ市場に出している。

ここに来て共同船舶などは、鯨肉の売り込みを強めており、食品会社や飲食店などで鯨肉の販売を始めるケースが増えている。

日本ハムの子会社「宝幸」(本社・東京)は3月から、鯨肉の大和煮のレトルトや焼き肉の缶詰など3種類の新商品を発売した。宝幸は「かつて鯨肉を食べていた団塊世代に味を思い出してもらえれば、受け入れられるはず」と期待する。

飲食店を展開する「チムニー」(同)は昨年11月から、系列の海鮮居酒屋「はな(花)の舞」全約200店で、竜田揚げや鯨肉の刺し身など七つの鯨メニューを加えた。これまでは期間限定メニューで提供してきたが、定番メニューに“格上げ”した。竜田揚げは鶏肉のからあげより5割ほど値段が高いが、売り上げでベスト10に入る人気商品という。

このほか、大手食品スーパーのマルエツも昨年6月から、鯨肉の刺し身など10品目を販売している。日本鯨類研究所なども、鯨肉の販路拡大を目指して今年5月、民間会社の「鯨食ラボ」(本社・東京)を設立し、病院や大学向けなどの給食業界に鯨肉を売り込んでいる。

鯨食ラボの中田博代表は「鯨肉は高たんぱく低カロリー。硬いなど昔のイメージも冷凍技術の進歩などで改善された」とPRする。

■在庫10年で倍増

関係者が売り込みに懸命なのは、鯨肉の供給量が大幅に増えたのに、消費量が低迷したままだからだ。日本鯨類研究所は、詳しい実態調査のため捕獲する鯨の種類を増やしており、鯨肉の供給量は2000年度の2450トンから05年度に5560トンに増えた。

ところが、消費の方は思うように伸びず、1982年に国際捕鯨委員会(IWC)が商業捕鯨の一時禁止(モトリアム)を決議し、日本は88年から商業捕鯨を取りやめたため、一人当たりの鯨肉消費量は、40年前の約2000グラムから05年は約50グラムまで落ち込んだ。

この結果、物流冷蔵庫などに保管されている05年の鯨肉流通在庫(年平均)は、前年比45%増の3945トンとなり、10年前の約2倍に膨らんだ。

昨年12月、価格を決めている日本鯨類研究所が卸売価格を2割下げたこともあり、今年1～7月の鯨肉の販売量は前年同期比で6割増えたが、流通在庫を減らすまでには至っていない。

「鯨肉は手に入りづらいというイメージが消費者に根付いてしまった」（水産庁捕鯨班）ことなどが要因とみられ、若者らを中心に「鯨肉離れ」が進んでいるとの指摘が出ている。

◆売れ残れば…調査捕鯨ピンチ？

調査捕鯨の年間経費約60億円のうち、約9割は鯨肉の売り上げで賄っている。鯨肉が売れないと、調査捕鯨が思うようにできなくなるわけだ。

日本鯨類研究所は07年度以降も調査のための捕獲量をさらに拡大する計画で、鯨肉の市場への供給量も年7000～8000トンまで拡大する見込みだ。消費が伸びなければ今後、在庫ばかりが積み上がり、調査捕鯨の費用が不足する事態に陥る恐れがある。

また、日本がIWCで商業捕鯨の再開を求めている事情もある。今年6月のIWC総会では、日本などの捕鯨支持国が共同提案した宣言が1票差で採択されたが、宣言には、商業捕鯨の一時禁止措置を「不要」とする文言が盛り込まれている。しかし、鯨肉の消費が順調に増えないようだと、捕鯨をめぐる国際論議に影響を与える可能性もある。

図＝鯨肉流通在庫の推移

図＝調査捕鯨による鯨肉の供給量

写真＝鯨肉の料理を出す居酒屋も増えている（東京・両国の居酒屋「花の舞」で）
写真＝天井まで高く積み上げられ、保管されている鯨肉の箱（東京都内で）

Annex 134: “Whale meat sales to livestock producers: Targeting non-fisheries sales channels”, *Nikkan Minato Shimbun* (Fisheries & Food News), 27 November 2006, at Japan Whaling Association website, <<http://www.whaling.jp/news/061127m.html>> on 21 February 2011

‘Whale meat sales to livestock producers: Targeting non-fisheries sales channels’

Source: *Nikkan Minato Shimbun* (Fisheries & Food News), 27 November 2006

In September, Geishoku Rabo [TN: lit: Whale Cuisine Laboratory] (Minato Ward; Managing Director, Mr Hiroshi Tanaka) began the sale of whale meat to the livestock industry. Having obtained permission to deal in seafood products, livestock producers in Osaka Prefecture have purchased red meat and breast meat from Geishoku Rabo to produce trial products.

They will also take on outsourced processing from Geishoku Rabo. Geishoku Rabo is a limited liability company which was incorporated on 1 May with the objective of opening new sales channels for whale meat following the expansion of the cetacean capture surveys and the increased supply of whale meat by-product.

The adoption of whale meat has been limited so far, and Geishoku Rabo aims to open new sales channels, such as hospitals and company cafeterias, which are unlikely to compete with existing markets.

ニュース

2008年(平成18年)11月27日(月) 日刊みなと新聞

畜産メーカーに鯨肉販売 ～水産以外の販路、開拓を目指す

鯨食ラボ(港区、中田博代表社員)は9月から畜産業者に鯨肉の販売を始めた。大阪府内の畜産メーカーが水産物の取り扱い許可を取得、鯨食ラボから赤肉、鯨肉などを仕入れて試作品を作る。鯨食ラボの委託加工も請け負う。同社は鯨類捕獲調査の拡大と副産物(鯨肉)の流通量増加を受け、販路開拓を目的に5月1日付けで設立された合同会社。これまで鯨肉の採用が少なく、既存流通ルートと競合しにくい病院医療・事業所給食などの販路開拓を狙っている。

記事に関する問合せ先: みなと山に舎新聞社(電話:0632-66-3214)

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JAPAN WHALING ASSOCIATION



Annex 135: K Oyamada, “(Observer: Taxes – Lifestyles – Money) The Real Reasons for Continued Whaling”, *Asahi Shimbun*, 18 January 2008 (morning edition), 8

‘(Observer: Taxes – Lifestyles – Money) The Real Reasons for Continued Whaling’

By Kenji Oyamada

Source: *Asahi Shimbun*, 18 January 2008 (morning edition), page 8

Two anti-whaling activists, an Australian and a Briton, were temporarily apprehended after boarding a Japanese whaling vessel without consent. There are various arguments for and against whaling, but acts such as boarding a ship without permission and attempting to tangle ropes in the ship’s propellers certainly cannot be excused.

At the same time, there are undoubtedly many people who ponder why the Japanese Government is so intent on continuing whaling? Most people would not be bothered if whale meat was not available. And the major seafood companies say that demand is limited and that they do not want to engage in commercial whaling.

The view of the Japan Fisheries Agency (JFA) is that fish stocks are in decline around the world because whales are eating several hundred million tonnes of fish a year and that research into their ecosystems is needed.

There is also the view that another aim of the JFA is to support the Institute of Cetacean Research (ICR), an incorporated foundation under its jurisdiction which implements the research whaling. The ICR is a destination for golden-parachuters from the JFA and, at present, four former JFA officials are ICR board directors.

The ¥7-8 billion earned from the sale of 4-5,000 tonnes of whale meat every year are used to fund its activities. In 2007, it received about ¥500 million in government subsidies. Last year, a fire on board one of the whaling vessels led to a drop in revenue. The price of whale meat was raised to make up for that lost revenue.

(ウオッチ 税・くらし・マネー) 捕鯨継続、本当の理由は

2008/01/18 朝日新聞 朝刊 8 ページ 432 文字

その他の書誌情報を表示

反捕鯨派の、豪州、英国の活動家2人が日本の調査捕鯨船に侵入し、一時身柄を拘束された。捕鯨についてはさまざまな議論があるだろうが、勝手に船に乗り込んだり、スクリューにロープをからませようとしたりする行為は、絶対に許されるものではない。

一方で「なぜ日本政府は捕鯨にこだわるのか」と思う人も多いだろう。クジラの肉がなくても多くの人には困らない。大手水産会社も、ニーズが少なく、商業捕鯨をしたいとは思っていないという。水産庁は、世界の魚資源の減少はクジラが年間数億トンの魚を食べているからで、生態系の調査が必要、と話す。

同庁所管の財団法人で、調査捕鯨を実施する日本鯨類研究所を維持するねらいもある、との見方もある。水産庁の天下り先で、今はOB4人が役員だ。クジラの肉を毎年4千～5千トン販売するなどして70億～80億円を得て活動費にしている。補助金は07年度で約5億円だ。去年は船で火事があり収入が減った。それをカバーするため、クジラ肉を値上げしている。(小山田研慈)

Annex 136: K Oyamada, “Scientific Whaling: Financial Pressure. ICR misses ¥1 Billion Financing Repayment in 2006/07 Account Settlement”, *Asahi Shimbun*, 2 February 2008 (morning edition), 9

‘Scientific Whaling: Financial Pressure. ICR misses ¥1 Billion Financing Repayment in 2006/07 Account Settlement’

By Kenji Oyamada

Source: *Asahi Shimbun*, 2 February 2008 (morning edition), page 9

The cash position for Japan’s scientific whaling is worsening. As of its 2006 business year account settlement (October 06-September 07), the Institute of Cetacean Research (ICR), the whaling program’s implementing organisation, has been unable to pay back ¥1 billion of the ¥3.6 billion interest-free loan provided by the government for operating expenses. Last year, incidents on the whaling vessels included a fire and a fatal accident. The direct cause for the missed repayment was a 20% drop in whale meat sales following interruptions to operations, but other factors, including escalating costs in line with recently expanded catch amounts, and a major drop in whale meat prices in 2005-6, have also made an impact.

Backfire: catch increase, price cuts

The ¥3.6 billion sum was provided as a short-term loan from the Overseas Fishery Cooperation Foundation of Japan, an organisation supervised by the Ministry of Agriculture, Forestry and Fisheries. The plan was to borrow it at the start of the fiscal year, and repay it by the end of the same year. As finances became tighter, however, it is understood that the ICR arranged to repay ¥1 billion of the loan in instalments over four years starting from 2007.

A national government subsidy is the source of the loan funds provided by the Overseas Fishery Cooperation Foundation of Japan, which means that the interest-free finance provided to ICR is, in effect, a government loan. The ICR started borrowing money from the Foundation from its 2001 settlement, when it began increasing the whale catch. The amount borrowed in the first year was ¥1.2 billion but as catch numbers increased so did the loan amount. The ICR is reported to have also borrowed from the private sector at one stage, but subsequently abandoned this strategy due to the high interest rates.

In 2005-6, ostensibly to expand its research on whale ecology, the ICR raised the number of whales caught in the Antarctic Ocean from 440 to 850. The volume of whale meat supplied also grew by over 30%. Because this is a public program and there is no need to generate a profit, the price of whale meat was lowered by an average of 20%, but this ultimately resulted in a drop in sales income of around 6% on the previous year.

At the same time, the ICR’s costs rose 10% as a result of the expansion in the whaling fleet from 5 to 6 vessels, and the lengthening of the survey period. One source said, ‘In retrospect, we probably reduced the whale meat price too much.’

The 2006 budget settlement recorded a deficit of ¥700 million, and returns to state coffers, usually in the order of several tens of millions, fell to zero. The explanation offered by the Fisheries Agency’s Far Seas Fisheries Division, which oversees the program, and ICR executives, is that “the problem last fiscal year was caused by fires and other unexpected difficulties. If we regain our regular pace this year, the balance of payments will return to normal.”

However, this year the ICR has seen a continuation of the intermittent obstructive action by American conservation groups, and since 15 February whaling activity has been suspended. A prolongation of this situation will result in a fall in whale meat supply volumes, and may lead to a further worsening in the ICR's financial position.

Projects operated by national policy company

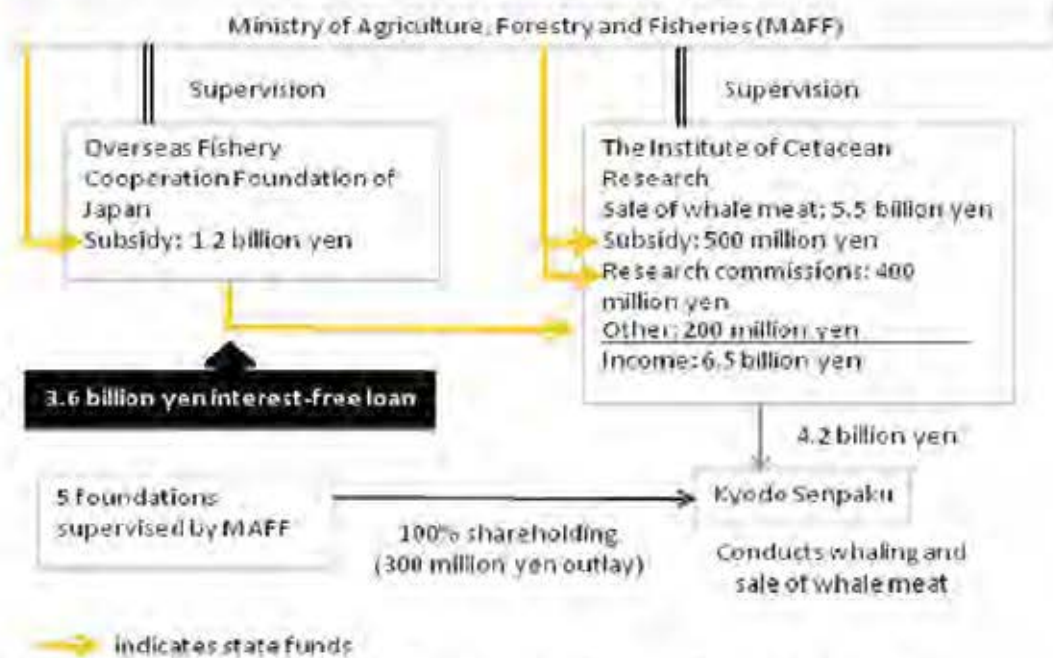
The company which manages the scientific whaling research vessels and crewmembers and actually implements the project is Tokyo-based Kyodo Senpaku. Kyodo Senpaku recorded sales of about ¥6 billion and net profit of about ¥5 million for its accounts period ending October 2007. The company says that it secures a profit every year.

Eighty percent of Kyodo Senpaku's sales income comes from the ICR in the form of charter fees and the commission, of 5.5%, on the sale of whale meat to leading wholesalers at wholesale markets nationwide.

The company has a staff of around 300 who are from major seafood companies. Sources say while there many are specialists in dissecting whales and predicting whale surface points, a major challenge is the issue of younger employees who want to avoid long periods at sea and do not stay with the company.

Kyodo Senpaku was formed through amalgamation of the whaling divisions of three firms, Taiyo Gyogyo (now Maruha Nichiro Holdings), Nippon Suisan, and Kyokuyo. These leading seafood companies, however, withdrew from the sector in 2006, due to the risk of being targeted by the anti-whaling movement and the profitability of whaling. All of Kyodo Senpaku's shares were sold to five juridical foundations under the Ministry of Agriculture, Forestry and Fisheries, effectively making it a national policy company.

Flow of Funds for Scientific Whaling
(Fiscal year 2006, rounded to nearest ¥100 million)



Institute of Cetacean Research: whale meat supply, sales income, interest-free loans
(Units: ¥100 million yen.)

| | Whale meat supply | Whale meat sale income | Foundation interest-free loans |
|-------------|-------------------|------------------------|--------------------------------|
| Fiscal 2000 | 2,450 tonnes | 50 | Nil |
| Fiscal 2001 | 2,620 tonnes | 48 | 12 |
| Fiscal 2002 | 3,270 tonnes | 57 | 20 |
| Fiscal 2003 | 3,380 tonnes | 59 | 25 |
| Fiscal 2004 | 4,150 tonnes | 71 | 25 |
| Fiscal 2005 | 5,560 tonnes | 67 | 36 |
| Fiscal 2006 | 4,154 tonnes | 54 | 36 |

Amounts in ¥100 million yen; October/September fiscal year (in line with scientific whaling season); fiscal 2006, is therefore, 1 October 2006 through 30 September 2007.

The Lifestyle Perspective

The prices of goods such as bread and noodles are of particular concern at the moment. MAFF has raised the source price of wheat by 30% since April. Food products from China are another worry. Other concerns include where the economy is headed, and what will happen to our pension and medical care systems.

A priority policy?

And then there is scientific whaling. I do think that Japan has a right to catch whales, and to eat them. Some level of research activity is probably necessary, too. But should whaling policy really be high on the priority list for a national government confronted by so many other problems? We live in an era when even the postal service has been privatised. Is this really the policy that the people want? I think we need to get back to basics and reconsider.

Annex 137: K Oyamada, [(From the coalface) Whale Meat Goes Unsold. Supplies Increasing, But Distribution Channels Not Expanding. Government-Backed Distributor Operating at Loss”, *Asahi Shimbun*, 19 February 2008 (morning edition), 8

“(From the coalface) Whale meat goes unsold. Supplies increasing, but distribution channels not expanding. Government-backed distributor operating at loss”

By Kenji Oyamada

Source: *Asahi Shimbun*, 19 February 2008 (morning edition), page 8

As a result of the Government’s expansion of its research whaling program, it now faces the challenge of what to do with the increased quantities of whale meat it produces. The company that it set up to develop new sales channels for whale meat is expected to post its second consecutive operating loss, and local distributors in regions with strong ties to whales are also reaching a limit to what they can do. Approximately twenty years after commercial whaling ended, consumers are less interested in whale meat, and it will be no easy task to bridge the gap between that waning demand and the growing volume of supply.

A sushi restaurant owner in Boso, Chiba Prefecture, asked, “Whale meat is very bloody, which puts female customers off. What can I do?”

“One suggestion would be to top the meat with a black sauce or put vegetables underneath it to make the blood less visible.” So advises Hiromitsu Nozaki (55), executive chef of Waketokuyama, a famous Japanese restaurant in Azabu, Tokyo.

On 28 January, the Institute of Cetacean Research, the non-profit organisation under MAFF jurisdiction that conducts the research whaling program, was one of the organisers of a whale cuisine seminar held at a cooking school in Tokyo.

Hiroshi Nakada (58), director of whale meat distributor Geishoku Rabo [TN: lit: Whale Cuisine Laboratory], suggested, “My company has developed a vacuum-sealed whale meat product that keeps the blood and other fluids in the meat and is very easy to cook with. I recommend you use that.”

Geishoku Rabo was established in May 2006. When the Antarctic Ocean whaling catch was increased from 440 to 850 whales, MAFF and the ICR called on Mr Nakada, then a director of a fisheries company, to help them sell the resulting whale meat. Mr Nakada invested 1 million yen of his own money and established the company. It has three staff, including Mr Nakada, who is assisted by two staff from the whaling company, Kyodo Senpaku (Tokyo).

The company closed its books for the second time at the end of this March, but has achieved only a fraction of its projected sales. It posted a loss of approximately 200 million yen in its first year, and a loss of around 150 million yen is expected for the second year as well. Mr Nakada has poured in a further 100 million yen of his own money and has asked Kyodo Senpaku to wait for payment of some of the proceeds of the whale meat supplied to Geishoku Rabo.

One of the most difficult aspects of handling whale meat is the bloody drippings that come out of the meat. In the autumn of 2006, Geishoku Rabo signed a contract with a large company that operates staff cafeterias, selling it 16,000 meal-sized portions of whale meat. However, no repeat orders were forthcoming, because of the complaint about blood coming out of the meat.

After that, Mr Nakada developed a method of freezing and other innovations that cut back on blood dripping. Kiwa Corporation (Tokyo), which operates the Benitora Gyoza Bo Chinese dumpling chain, and another foodservice company adopted the new products, but the volume is still small.

Geishoku Rabo now plans to put its efforts into marketing its products to the wholesale market, but it faces some high hurdles.

Wakayama Prefecture is where Taiji-cho, famous as the birthplace of organised whaling in Japan, is located. A major wholesaler in that prefecture that handles the meat from the research whaling program said that the volume it handles has increased from ten tonnes a year ten years ago to 35–40 tonnes today. However, because it cut prices down to wholesale levels, sales revenue has only doubled from 300 million yen to 600 million yen.

A source involved in whale meat sales in that company said, “The effects of the price cut have run their course. Unless we make a conscious effort to market it, our sales volumes drop immediately.”

Large-scale retailers also handle only small volumes. The ION group, which operates 1,200 supermarkets, including the JUSCO stores, sells whale meat only in Niigata and Nagasaki, regions that have historical ties to whaling. Ito-Yokado does not sell whale meat at all.

Inventories climb to 6,000 tonnes

How much whale meat do consumers actually eat? A clue to answering this question can be found in the *Whale Meat Supply Volumes* statistics released by the ICR twice a year, and the *Whale Meat Inventories* statistics produced by MAFF every month.

In FY1987, when research whaling began, 1,140 tonnes of whale meat were supplied. This increased as the whale catches grew, reaching 4,154 tonnes in FY2006.

Inventories have also jumped sharply. They had stayed below 3,000 tonnes, but suddenly jumped to 3,000–4,000 tonnes, and by the end of April 2006 had climbed to 5,969 tonnes. This was more than the record volume of 5,560 tonnes supplied in 2005–2006. “This would be inconceivable in a normal company”, commented a certified public accountant at a major auditing firm.

Supplies fell in 2007 due to a fire on board the whaling vessel and other problems, and inventories also dropped. By the end of October last year, they were down to 3,798 tonnes. A Kyodo Senpaku staff member involved in distribution said that, when the whale meat wholesale price was cut by 20% in 2005, sales grew by 50%. Sales increased by 12% the following year and by 7% more recently. He refused to give actual figures, however, saying, “The anti-whaling people would say that our data could not be believed, so we do not publish them.”

[TN: Photograph not reproduced.]

Hiromitsu Nozaki cuts into a piece of whale meat at a Japanese cuisine seminar, Ikebukuro, Tokyo. Photographer: Tsuyoshi Takeda

(現場から) 鯨肉、さばけぬ悩み 供給増えたが流通広がらず 国策販売会社、赤字続き

2008/02/19 朝日新聞 朝刊 8ページ 1610文字

その他の書誌情報を表示

政府が調査捕鯨を拡大した結果、増えた鯨肉をどう処理するかが課題となっている。新たな販路開拓のため立ち上げた企業は2年連続の赤字の見通し。クジラにゆかりのある土地の業者も限界を感じている。商業捕鯨中止から約20年。消費者の関心が薄れるなかで、供給量が増えるというギャップを埋めるのは簡単ではない。

(小山田研慈)

千葉・房総ですし店を営む男性が質問した。

「鯨肉は血が多く、女性は嫌がるのですが」

「肉に黒いソースをかけたり野菜を下にひいたりして、血が見えないようにするのも手です」

東京・南麻布の有名和食店「分とく山」の野崎洋光・総料理長(55)がそうアドバイスした。

1月28日、都内の調理専門学校でのクジラ料理講習会。農林水産省所管で、調査捕鯨を行う財団法人日本鯨類研究所(鯨研)などが開いた。

鯨肉販売会社「鯨食ラボ」の中田博代表(58)は「我が社は、血の混じった体液が出にくく料理しやすい真空パック商品を開発しました。ぜひご利用下さい」と訴えた。

「鯨食ラボ」は06年5月設立。当時、南極海での捕鯨頭数が440頭から850頭に増えたことから、農水省や鯨研が鯨肉を売り切るため、水産会社役員の中田氏に声をかけた。中田氏は自己資金100万円を投じて会社を設立。社員は中田氏を含めて3人だが、捕鯨実施会社「共同船舶」(東京)のスタッフ2人が手伝いに来ている。

3月末で2回目の決算期だが売り上げは予想の数分の1。1期目は約2千万円、2期目も約1500万円の赤字見込み。さらに自分で1千万円以上つぎ込み、鯨肉仕入れ代金の一部は共同船舶に待ってもらっている。

鯨肉の扱いで難しい点は、肉から血が混じった体液(ドリップ)が出ることだ。06年秋、社員食堂などを手がける大手企業と契約、1万6千食分を売った。しかし「肉から血が出て困る」との理由でそれっきりになった。

その後中田代表は、血の出にくい解凍の仕方などを開発。「紅虎餃子房」を展開する際コーポレーション(東京)や外食企業で採用された。ただ扱い量はまだ少ない。

今後、卸売市場向けの営業に力を入れるが、ハードルも低くない。

日本の組織的捕鯨発祥の地として知られる太地町(たいじちょう)のある和歌山県。調査捕鯨の肉を引き受ける卸大手によると、10年前に年間10トンだった扱い量は今は35～40トンに増えた。だが、それは卸売価格を値下げした効果で、販売額は3千万円から6千万円と倍増にとどまる。

卸大手担当者は「値下げ効果も一巡してきた。意識して売らないと、すぐ販売量は落ちる」。

大手流通での扱いも少ない。ジャスコなどを1200店展開するイオンも新潟、長崎など捕鯨にゆかりのある50店舗だけで扱う。イトーヨーカ堂では販売してい

ない。

○在庫6000トンまで増加

鯨肉はどれだけ消費者に食べられているのだろう。手がかりになるのが、鯨研が年2回発表している「鯨肉の供給量」と、農水省が毎月まとめる「鯨肉の在庫量」だ。

調査捕鯨が始まった87年度の鯨肉供給量は1140トン。その後、捕鯨頭数とともに増え、06年度は4154トンになった。

在庫量も急増した。2千トン台だったのが、04年後半から一気に3千～4千トンに増え、06年4月末には5969トンに。05～06年の最大年間供給量（5560トン）を超えた。「普通の企業ではありえない」（大手監査法人の公認会計士）

07年は船舶火災などで供給が落ち込み、在庫は減った。昨年10月末時点で3798トンだ。共同船舶の流通担当者によると、鯨肉の卸値を2割下げた05年度は販売量は5割伸びた。その翌年は12%、最近は7%増加しているという。ただ、実数については「反捕鯨派の人は『信じられないデータ』というだろうから、公表はしない」としている。

【写真説明】

日本料理の講習会でクジラの肉に包丁を入れる野崎洋光さん＝東京・池袋で、武田剛撮影

Annex 138: “Suspicion Arises over Research Whaling Program. Former Crew Member Says Company Approved”, *Asahi Shimbun*, 15 May 2008 (morning edition), 3

Suspicion Arises over Research Whaling Program. Former Crew Member Says Company Approved

Source: *Asahi Shimbun*, 15 May 2008 (morning edition), page 3

Some crew members of the Japanese whaling fleet are suspected of having taken meat from whales caught in the research whaling program without permission. A former crew member told the *Asahi Shimbun* that some members hid several hundred kilograms of whale meat and took it home. Suspicion has arisen that meat from whales caught in the Antarctic in the name of “scientific research” may have been put on the market through improper distribution channels.

Several hundred kilograms in some cases

The former crew member took part in the program in the Southern Ocean two years ago, working in the manufacturing section processing the carcasses of the captured whales. He said that most of the embezzled meat was from the portion called *unesu*, which is used to make whale bacon, and that the crew would salt the meat in their own cabins. Fatty red meat was also taken, he said, and some crew members took more than 10 cartons containing more than 20kg each, totalling several hundred kilograms.

He said that, when the ship returned to port in Japan, large courier trucks would be arranged and the cartons would be loaded on to them one after the other, along with clothing and other effects.

At the time, there were around 150 people on board the factory ship, where the caught whales were processed, including researchers from the Institute of Cetacean Research, the organisation in charge of the research program. 70-80 of those on board worked in the manufacturing section. The former crewmember said, “I think that almost all of those workers were doing it. The company also turned a blind eye to it and tacitly agreed to the practice. However, anyone who did it too crudely would be called in and given a warning.”

“Sold off locally”

Unesu is seen as a gourmet cut, and is put on the market for 2,000-3,000 yen/kg. ‘I’ve heard that crew members were selling the whale meat that they smuggled off the ship in their hometowns. If it was just for eating in their own homes, they wouldn’t need such large quantities. Some people also sent it to past crew members.

He said that the crew members each brought their own cartons to pack the meat and the salt used for salting it. He said that, in the vessel’s home port, “cardboard cartons would be sold out.”

The research whaling program lasts for about five months. The work is tough and securing enough workers is a challenge. “Quite a few of the younger people quit. If they smuggle the whale meat off the ship, they feel as though they can get something good out of it.”

Free “souvenirs” questionable. Nil payment of profits to government last fiscal year

The Institute of Cetacean Research acknowledged that crew members took some portions home as ‘souvenirs’. But the Institute stressed that it has rigorously instructed crew members not to sell whale meat on their own.

Fleet commander, Hajime Ishikawa, Deputy General Manager of ICR’s Survey Department, commented, “We gave it to them as souvenirs, so we could not censure them if they did decide to sell it, but we tell the crew not to sell it around recklessly and to avoid doing anything that would cast false suspicions.”

The International Convention for the Regulation of Whaling requires signatory countries to process as much of the whales caught as possible to effectively utilise marine resources. In line with the Convention, the edible parts of the whales, the “by-products” of the research whaling program are sold on the market and revenue from those sales is used to help fund the program in the following year. Such revenue makes up 90 percent of the total cost of the program, 5.4 billion yen per year.

However, this means that the remaining 10% of the cost, or approximately 500 million yen, comes from government subsidies. In years when revenue is high, several tens of millions of yen are returned to the state coffers, but there were no such returns last financial year.

Whale meat stocks are piling up amid dwindling consumption. It is questionable that the Japanese whaling fleet still maintains the practice of giving crew free “souvenirs” despite low revenue from whale meat.

Sources say that unusually cheap whale meat has been seen on the market before, raising the suspicion that it may have been distributed through improper channels. They say that some meat from whales caught by the program was found to have been sold to restaurants before it was sent to the market.

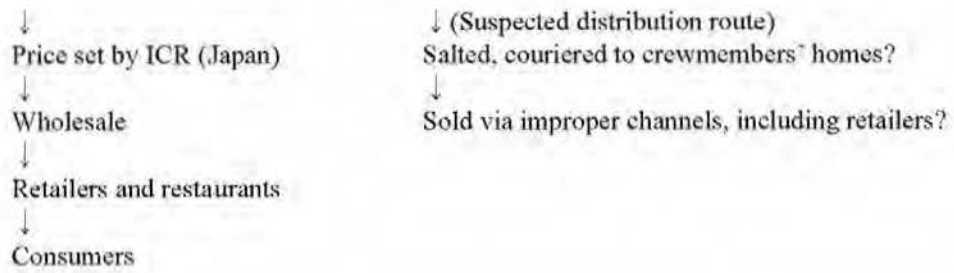
The environmental non-governmental group Greenpeace Japan is calling on Kyodo Senpaku to probe the suspected embezzlement and tell the truth about the results.

Calculation of profits is ambiguous and should be reconsidered

Professor Masahiro Yamao, Hiroshima University Graduate School (Fisheries Economics): “Although I cannot comment on the allegations as I have no knowledge of the facts of the matter, the practice of crew members taking souvenirs home has probably gone on for a long time. However, this time it is research whaling, which receives government subsidies. By-products are meant to be put on the market, so perhaps there should be reconsideration of anything that makes the calculation of profits ambiguous.”

Flow of whale meat obtained from research

Whales are researched, dismantled and frozen in the Antarctic Ocean and northern Pacific waters



疑惑招いた捕鯨調査 元乗組員「会社も了解」
2008/05/15 朝日新聞 朝刊 34 ページ 1620 文字
その他の書誌情報を表示

調査捕鯨船の乗組員が鯨肉を無断で持ち出したとされる疑惑で、元乗組員の男性は朝日新聞の取材に「数百キロの鯨肉を隠して持ち帰る人もいた」と証言した。「調査」の名のもとに南極海で捕った鯨肉が非正規のルートで流れている疑いが出てきた。= 1面参照

●「多いと数百キロ」

男性は、2年前に南極海の調査船に乗った。捕獲した鯨を解体処理する製造部門の作業員だった。

男性によると、無断で持ち帰られたのは、ほとんどがベーコンの原料となるウネスと呼ばれる部位で、乗組員らが各部屋で塩漬けしていた。他は脂の乗った赤身などだったといい、多い人で20キロ以上入る段ボール箱で10箱以上、計数百キロあったという。

船が日本の港へ戻ると、運送会社の大型トラックが手配されており、こうした段ボール箱が衣類などととも次々に積み込まれたという。

当時、捕った鯨を処理する母船には、調査主体の日本鯨類研究所（鯨研）の調査員を含めて約150人が乗り組み、このうち70～80人が製造部門に携わる。男性は「この作業員のほとんどがやっていたと思う。会社側も見て見ぬふり、暗黙の了解。ただ、あまりにもおおざっぱだと、呼ばれて注意される」。

●「地元でさばく」

ウネスは高級品とされ、1キロ2千～3千円で市場へ放出される。「隠して持ち帰った肉は地元で売りさばいていると聞いたことがある。家で食べるだけならそんな量はいらぬ。OBに送る人もいた」

肉を詰めるための段ボール箱や塩漬けのための塩は、乗組員がそれぞれ手配していたという。船の基地がある町では「段ボールが売り切れるほど」だったと話す。

調査捕鯨は5カ月ほどに及ぶ。作業員の仕事は厳しく、人手の確保が課題になっている。「若い人は結構辞めてしまう。無断で持ち帰れば、それなりにいい思いができる」

◆無償「土産」、残る疑問 収益納付、昨年度ゼロ

「土産」があったことは、鯨研も認める。ただ、これを売りさばいたりしないよう厳しく指導しているという。

調査団長の石川創・調査部次長は「お土産として渡したのだから売ってものがめだては難しいが、むやみに売り飛ばすようなことはするな、あらぬ疑いをかけられるようなまねはするなと乗組員には言っている」と話す。

国際捕鯨取締条約は、捕った鯨は可能な限り加工し、無駄なく有効利用するよう求めている。このため調査の「副産物」である食用部分は販売され、その収入は調査捕鯨の費用に充てられる。年間54億円の9割にあたる。

しかし、残る1割は国の補助。毎年、約5億円が投入される。収益が上がった年には数千万円を国に「収益納付」するが、昨年度はゼロだった。

鯨肉の消費量も伸びず、在庫も山積みの状態だ。収益が上がらない状態での「土産」の無償配布には疑問が残る。

関係者によると、鯨肉をめぐるのは、異常に安い肉が出回るなど通常のルートに

は乗っていない鯨肉の存在が疑われてきた。調査捕鯨の鯨肉が、市場へ放出される前に、飲食店などで売られていた例もあったという。

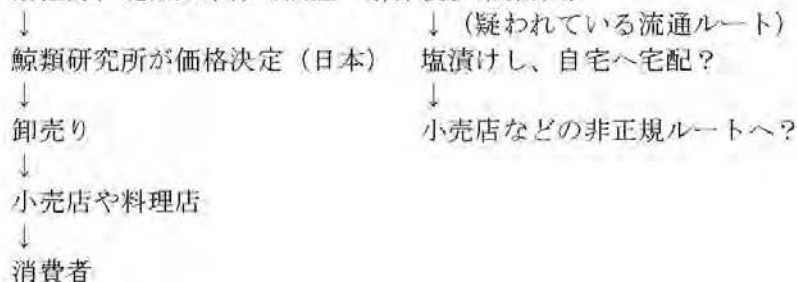
環境NGO「グリーンピース・ジャパン」は、「横領行為の解明と説明が求められる」と訴えている。

◇損益計算あいまい、考え直すべきだ

<広島大学大学院の山尾政博教授（水産経済）の話> 疑惑については事実関係がわからず何とも言えないが、土産の習慣は昔から乗組員の間にあったのだろう。しかし今は調査捕鯨になり、補助金が投じられている。副産物は販路に入れることになっているのだから、損益計算があいまいになるようなことは考え直した方がいいかもしれない。

■調査で捕れた鯨肉の流れ

南極海、北西太平洋で調査・解体後、冷凍保存



Annex 139: K Oyamada, “Commentary: Difficult Situation Reflected in Whale Meat Consumption”, *Nishi Nippon Shimbun*, 15 June 2008, 12

‘Commentary: Difficult Situation Reflected in Whale Meat Consumption’

By Kenji Oyamada

Source: *Nishi Nippon Shimbun*, 15 June 2008 (morning edition), page 12

The three big seafood companies, Maruha Nichiro Holdings, Nippon Suisan (Nissui) and Kyokuyo, which were formerly the main commercial whaling companies, have revealed that they won't re-enter the business even if the moratorium on commercial whaling is lifted. Commercial whaling activities have been frozen since a determination made by the International Whaling Commission (IWC) in 1986. While the Japan Fisheries Agency is seeking the removal of the moratorium, this is out of step with the intentions of these companies.

The back-drop is strong opposition by environmental groups in Europe and North America. To quote Nissui company director Mr Kunihiko Koike: “As a company involved in the sale of fish throughout the world there is nothing to be gained from involvement with whaling”. At the time commercial activities were frozen the share of sales held by commercial whaling had fallen to a level below 1%. Even were they to re-enter the market they don't see any future demand. Nissui executive director, Mr Yasuhisa Sato, maintains that “Those people who used to eat it a long time ago might have some nostalgic feelings about it, but I think they prefer other meat”, and Kyokuyo executive director Mr Hisaki Tada asserts that “Young people don't eat whale meat”. According to Maruha Nichiro Holdings director of operations, Seigo Kawazoe, “A whaling vessel requires several billions of yen in investment; the figures don't stack up”.

An official at the Far Seas Fisheries Division, Japan Fisheries Agency states that “These are management decisions made by each of the companies. Our focus is on the continuation of whaling technology, and we believe that the business would be profitable.”

Commercial whaling reached its peak in the sixties. With its decline the three big fisheries companies consolidated their whaling divisions to form the current Tokyo-based Kyodo Senpaku. In 2006, the three companies completely withdrew from the sector by transferring their shares in Kyodo Senpaku to five incorporated foundations under the jurisdiction of the Ministry of Agriculture, Forestry and Fisheries. Kyodo Senpaku conducts scientific whaling.

〔農漁食〕【解説】厳しい状況 浮き彫りに 鯨肉消費量

2008/06/15 西日本新聞朝刊 12 ページ 380 文字

その他の書誌情報を表示

商業捕鯨の中核企業だったマルハニチロホールディングス、日本水産、極洋の水産大手3社は、商業捕鯨が解禁されても再参入しない方針を明らかにした。商業捕鯨は国際捕鯨委員会（IWC）の決定で、86年から凍結されている。水産庁は解禁を目指しているが、企業の意向とはずれている。

背景には、欧米の環境団体の強い反対がある。日水の小池邦彦取締役は「世界で魚を販売する企業として、鯨にかかわって良いことは全くない」。

凍結された当時、売り上げに占める商業捕鯨の割合は1%に満たない水準に低下していた。再参入しても鯨肉への需要は見通せない。日水の佐藤泰久専務は「昔食べた人は懐かしいだろうが、他の肉のほうがおいしいのでは」とし、極洋の多田久樹専務も「若い人は鯨肉を食べない」とする。マルハニチロの河添誠吾常務は「捕鯨船は数十億円の投資がかかり、収支があわない」と語る。

水産庁遠洋課は「それぞれの経営判断だ。我々は捕鯨の技術を維持していくことを重視しているし、事業も採算はあうと思っている」と話す。

商業捕鯨は60年代がピーク。衰退に伴い水産大手3社が捕鯨部門を統合し、いまの共同船舶（東京）になった。3社は06年に共同船舶の株を農林水産省所管の5財団法人に譲渡し、完全撤退。共同船舶が調査捕鯨を行っている。（小山田研慈）

Annex 140: “‘No On-selling of Whale Meat’: ICR Investigation Report. Allegations of Unauthorised Removal of Whale Meat”, *Asahi Shimbun*, 19 July 2008

“‘No On-selling of Whale Meat’: ICR Investigation Report. Allegations of Unauthorised Removal of Whale Meat’

Source: *Asahi Shimbun*, 19 July 2008

Following allegations by the environmental NGO, Greenpeace Japan, that crew of the research whaling vessels were taking home without permission the meat of whales captured by the vessels, on 18 July, the Institute of Cetacean Research (ICR, Tokyo) and Kyodo Senpaku (Tokyo) reported to the Japan Fisheries Agency the results of their investigation into the matter. The investigation concluded that the whale meat that the crew took home was distributed to the crew as home-coming gifts and that it was not being sold on to restaurants.

The ICR stated that while the ICR owned the whale meat from the catch, Kyodo Senpaku had distributed 8 kg of salted *unesu* and 1.6 kg of red meat to each of the 215 crew and 26 ICR research officers to take home as gifts when they disembarked.

Because Kyodo Senpaku paid the costs of the gifted meat to the ICR, the ICR and Kyodo Senpaku view the practice of home-coming gifts as being “conducted fairly and appropriately” and intend to continue the practice. However, as the meat which had been provided to the ICR’s research officers was provided without any such payment, the ICR will cease the practice of research officers accepting these gifts.

All crewmembers and research officers were interviewed, and although some members said that they gave their allocation to others because they did not need it themselves, every person denied selling the meat on to third parties.

Greenpeace Japan has criticised the report of the investigation as “nothing but a cover-up.” A former crewmember has also given further statements to the *Asahi Shimbun* that whale meat was being taken home over and above the coming-home gifts.

605-4

「鯨肉の転売なし」

無断持ち出し疑念、鯨研、調査報告

環境NGO「グリーンピース・ジャパン」が調査捕鯨で捕られた鯨の肉を乗組員が無断で持ち出していたと指摘した問題で、財団法人・日本鯨類研究所（鯨研、東京）と、共同船舶（東京）は18日、持ち帰った鯨肉はすべて土留用として配布した肉で、無断の持ち出しや飲食店などへの転売はなかったとの調査結果を水産庁に報告した。鯨研によると、捕獲された鯨の肉は鯨研の所有となるが、共同船舶は下船時の土留用として、乗組員215人と鯨研の調査員28人に1人当たり塩蔵ワネス8.5と赤肉1.8を配布していた。

土留となった肉の費用は共同船舶から鯨研に支払われていたため、鯨研と共同船舶は「公平・適正に行われている」として土留の慣習は続ける方針。だが、鯨研調査員へは無償で提供されており、鯨研は調査員の受け取りはよめる。全乗組員・調査員から聞き取った結果、土留を不要としてほかのメンバーに譲った乗組員もいたが、転売は全員が否定したという。

一方、調査結果について、グリーンピース・ジャパンは「単なるつじつま合わせだ」と批判した。元乗組員の一人も、新たに「土留以外にも鯨肉の持ち出しはあった」と朝日新聞に証言した。

Annex 141: K Oyamada, “Sluggish Demand and Protests Encourage First Cut to Scientific Whaling Target (Corrected copy)”, *Asahi Shimbun*, 13 November 2008 (morning edition), 1

‘Sluggish Demand and Protests Encourage First Cut to Scientific Whaling Target (Corrected copy)’

By Kenji Oyamada

Source: *Asahi Shimbun*, 13 November 2008 (morning edition), page 1

On 12 November, it was announced that the target for the government’s scientific whaling catch will be cut for the first time. The Antarctic Ocean whaling target for the next season’s fleet, which will soon depart, will be cut by about 20% to around 750 whales, while the overall decrease for the full year will be about 10%. While there has been a trend for actual catch numbers to fall below the target, this is the first time, since the commencement of scientific whaling in 1987, that the target itself has been cut. The activities of anti-whaling group activities and sluggish demand for whale meat featured in the decision.

Japan’s scientific whaling is conducted under the International Convention for the Regulation of Whaling in two regions, the Antarctic Ocean and the north-west of the Pacific Ocean. The current annual whaling target is about 1,300 whales. The main effort is the scientific whaling conducted in the Antarctic Ocean from autumn to spring where the target is 850 Antarctic minke whales and 50 fin whales. Of this target, the government recently decided to reduce the number of Antarctic minke whales to 700.

Japan’s scientific whaling, which has seen an annual expansion of its targets, is now facing a turning point. The backdrop to this is the escalated obstructionist activities by American anti-whaling groups, which include hurling bottles containing chemicals at the research vessels during their research in the Antarctic Ocean. From this and other effects the catch in the Antarctic Ocean last season was 551 whales, 60% of the target. There has also been consistent criticism of the Japanese Government’s position from Australia and European countries.

The sluggish demand for whale meat has also forced the Government’s hand. Although there is some structural resistance to lowering catch targets since the proceeds from the sale of whale meat, annually ¥5-7 billion, are used to finance scientific whaling, the gap between the supply of whale meat from scientific whaling and sluggish domestic demand has presented a serious problem.

(Correction)

The 13 November copy “First Cut to Scientific Whaling Target” incorrectly stated that “the target for the government’s scientific whaling will be cut for the first time”. The article’s statement that it has “been decided to reduce the number of Antarctic minke whales to 700” from 850 was not the number decided by the Government but was one of the estimate values used to calculate the level of annual catch in the Antarctic Ocean required to keep the scientific whaling operation financially viable. We have corrected this and apologise for the error.

調査捕鯨目標数、初の削減 肉の需要低迷、抗議にも配慮＝おわびあり
2008/11/13 朝日新聞 朝刊 1ページ 720文字
その他の書誌情報を表示

政府の調査捕鯨の捕獲目標が初めて削減されることが12日わかった。近く出航する今季の南極海での捕獲目標を約2割減らして750頭程度とし、年間全体でも約1割減ることになる。捕獲数は目標を下回る傾向にあるが、目標そのものを引き下げるのは87年の調査開始以来初めて。反捕鯨団体の反対活動や、鯨肉の需要低迷を考慮した。

(小山田研慈)

日本の調査捕鯨は国際捕鯨取締条約に基づき、南極海と北西太平洋の2海域で実施している。年間捕獲目標は現在約1300頭。秋から春にかけて南極海の調査捕鯨が主力で、目標はクロミンククジラ850頭、ナガスクジラ50頭としている。政府はこのうちクロミンククジラを700頭に減らす方針を固めた。

年を追って目標を拡大してきた日本の調査捕鯨は、転機を迎える。背景には、南極海の調査を巡り、米国の反捕鯨団体が調査船に葉が入ったビンを投げ込むなど妨害活動が激化していることがある。この影響などで昨季の南極海での捕獲は目標の6割の551頭だった。豪州や欧州各国も日本政府の姿勢を批判してきた。

また、鯨肉の需要低迷も政府の背中を押した。鯨肉の販売額(年間50億～70億円)を調査捕鯨の資金にあてているため、捕獲頭数を減らしにくい構図にあったが、調査後に供給される鯨肉と低迷する国内消費との差が問題となっていた。

<おわび>

13日付「調査捕鯨目標数、初の削減」の記事で、「政府の調査捕鯨の捕獲目標が初めて削減される」としたのは誤りでした。記事中で850頭から「700頭に減らす方針」としたクロミンククジラの数は、政府が決定したのではなく、南極海での調査捕鯨事業が年間で採算を維持するための試算値の一つでした。おわびして訂正します。

Annex 142: “IWC: Last Chance for Normalisation. Three Whaling Organisation Chiefs”, *Seafood Sector Journal*, 1490 (March 2009) 26

‘IWC: Last Chance for Normalisation. Three Whaling Organisation Chiefs’

Source: *Seafood Sector Journal* (‘Suisankai’) 1490 (March 2009) pages 26-28

[26] On 19 January, Minoru Morimoto, Director-General, Institute of Cetacean Research (ICR), Kazuo Yamamura, President, Kyodo Senpaku, and Keiichi Nakajima, Chairman, Japan Whaling Association, held a joint press conference at the ICR at which they commented on the obstruction of research by environmental groups, the state of whale meat sales, and approaches to dealing with the IWC and promotional activities.

Director-General Morimoto

The second stage research in the Antarctic was suspended for 31 days due to obstruction by the Greenpeace and Sea Shepherd organisations. This has limited the catch to 55 Antarctic minke whales [TN: in total, Japan caught 679 whales in the 2008-09 under JARPA II]. The research that commenced in November last year has also been confronted by the *Steve Irwin* vessel which belongs to the Sea Shepherd organisation.

We are receiving support from the Government and the Diet for the avoidance measures it is taking with regard to the ongoing obstruction of the cetacean capture program by the environmental organisations. We have, of course, also started strengthening its procedures and equipment. While difficulties are still envisaged in the future, we intend to continue the research without being defeated by illegal obstructive activities.

In respect of the IWC, two meetings focused on normalisation of the IWC have been held following the agreement at the Santiago Annual Meeting, and a third has been scheduled to be held in Rome in March. While it cannot be predicted as to whether a package agreement will be reached, this will be the last chance for normalisation of the IWC and we appreciate the efforts of the relevant government officials.

Our duty is the collection of scientifically corroborative data such that whaling can be resumed pursuant to the Convention, and we will fulfil this duty.

President Yamamura

The reason that Sea Shepherd conducts obstructive activities is to attract funding through the broadcasting of images of their activities. To date, the Sea Shepherd’s activities have been located mainly in Australia, which has had a boom economy, and so we will keep a watch on the impact of Australia having [27] shifted into recession.

Due to the reduced number of whales due to obstruction activities as well as the sudden spike in fuel prices, Kyodo Senpaku is facing difficult conditions, and so we are presently advancing a business improvement plan. We have reduced our office space by 45%, decreased directors’ remuneration and are now reviewing the number of research vessels that we operate. Were fuel prices to continue to fall as they have been, this would provide us with a favourable tail wind, if not a *kamikaze* [TN: lit: divine wind].

Whale meat sales were healthy for the first half of last year and inventories were substantially reduced to the extent that there was a shortage of the *shirote-mono* cut. Since autumn, however, sales have sharply declined. Looking ahead, sales of red meat, which competes with tuna and other fish species, are likely to struggle. Developing a responsive sales strategy for whale meat is difficult because whale meat prices are allowed to be revised only once a year and because there is a general rule of fixed price sales. We cannot, however, just complain about the situation. We have the features of consistently stable production amounts and prices. We will promote whale meat in a way that assures consumers that it is a safe and healthy ingredient. In the case of red whale meat, this is usually sold as a commercial ingredient for sashimi as it is expensive, so we will propose new ways of consuming it and look at whether the red meat price can be separately reviewed. We understand that some local regions have the custom of eating whale on *setsubun*, the end-of-winter holiday. We intend to use this to expand consumption just as the *nori* seaweed industry turned the Kansai region's *ehō-maki* sushi-roll [TN: which uses *nori* seaweed to wrap the sushi-rolls and is eaten at *setsubun*] into a national custom.

President Nakajima

IWC: While work towards the normalisation of the IWC is advancing under the guidance of Chair Hogarth, this is merely an attempt to proceed on the terms originally spelled out in the IWC Convention. Given the significant distance [28] between the sustainable-use countries and the anti-whaling countries the drafting of a mutually acceptable package agreement proposal will not be easy. There is six months until the Madeira Annual Meeting. We hope the processes will advance in a way that is line with genuine normalisation.

Association Activities: This year we will continue activities to advance understanding of whaling and spread whale cuisine. We will continue activities, the whale cuisine culture meetings featuring Professor Takeo Koizumi, the whale cuisine seminars at Yukio Hattori's school for chefs, and assist the whale expert outreach programs carried out by the Institute of Cetacean Research. We will participate in university festivals as part of our strategy to target the younger generation, and we will respond proactively to requests from women's universities, fisheries high schools and union schools.



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IWC正常化へ最後のチャンス

＝クジラ3団体トップ＝

日本鯨類研究所の森本稔理事長、共同船舶株式の山村和夫社長、日本捕鯨協会の中島圭一会長の3名は1月19日、鯨研内で合同記者会見を行い、環境団体からの調査妨害、クジラ販売状況、IWCやPR活動への取組みなどを、次の様に語った。

森本理事長

第Ⅱ期南氷洋調査はグリーンピース、シーシェパードから妨害を受け31日間もの中断を余儀なくされた。捕獲もクロミンク55頭にとどまった。昨年11月からの調査は今回もシーシェパードのアーウィン号がやってきた。

環境団体から連続して妨害を受けている鯨類捕獲調査に対しては、政府、国会からも回避対策について支援していただいている。もちろん私ども自身も、体制や設備を強化している。今後も困難が予想されるが、不当な妨害に屈することなく調査を続行する。

IWCに関しては、サンチャゴでの合意に基づき正常化に向けての合意が2回開催され、3月にローマで3回目が見込まれている。ここでパッケージ合意がまとまるかどうか予断を許さないが、正常化に向けて最後のチャンスであり、政府関係者にご努力いただきたい。

私どもは、条約にのっとり捕鯨が再開されるよう、科学的裏付けとなるデータ収集が任務であり、これを全うしていく。

山村社長

シーシェパードがなぜ妨害活動を行うのかと言えば、自分たちの活動映像を流して資金稼ぎをするためである。これまでは好景気にわく豪州を活動の場としていたが、一転不況となったので、これがどう影響するか、注視

していきたい。

妨害によるクジラ数量減少、さらには燃油高騰で、当社も厳しい情勢にあり、現在、経営改善計画を進めている。事務所面積を45%減らし、役員報酬は引き下げ、調査船の数の見直し検討に入っている。燃油がこのまま下がってくれば、神風とまではいかなくても、追い風にはなろう。

クジラ販売面では、昨年前半までは順調で、在庫も大幅に軽減され、シロテものは品不足するまでだったが、秋以降急ブレーキがかかっている。今後、マグロなどの他魚種と競合する赤身は苦しいだろう。クジラは年に1回しか価格改定ができず、さらには定価販売が原則なので、こまめな販売戦略を立てにくい。しかし泣きごとは言っていない。生産量と価格が常に安定している、という面もある。安全安心で、健康的な食材という点を強調しながら販促に努めたい。また、赤身は価格が高いため、刺身商材が一般的だが、新しい食べ方を提案していくこと、もしくは赤身のみ価格を見直すことができるようなことも考えていく。一部地方では、節分にクジラを食べる習慣があるという。関西の「恵方巻き」がノリ業界のしかけで全国文化になったように、これをいかした消費拡大もやっていきたい。

中島会長

<IWC>フォガース議長主導で、IWC正常化へと作業が進められているが、もともとIWC条約に明記されている通りにやっというものには過ぎない。しかし持続的利用



島会長

と反捕鯨国の距離を考えると、双方が受け入れるパッケージ合意案をつくるのは、そう簡単ではないだろう。マディーラ本会議まで、あと半年。真の正常化にそってプロセスが進

むよう願っている。

＜協会活動＞本年も、捕鯨への理解を深めてもらうことと、クジラ食文化普及のための活動を推進する。小泉武夫先生を中心とするクジラ食文化の集い開催、服部幸應先生の調理師学校で、クジラ料理講義の実施、日本鯨類研究所が行う「クジラ博士の出張授業」への協力などを引き続き実施する。若い世代への対策ということで、大学の学園祭にも参加しているが、女子大や水産高校、組合学校などからも依頼があり、積極的に取組む。

Annex 143: H Sugimoto, “Interview/ Masayuki Komatsu: Commercial whaling could be sustainably resumed”, *Asahi Shimbun*, 31 May 2010
<<http://www.asahi.com/english/TKY201005300214.html>> on 9 March 2011

asahi.com (朝日新聞社) : Interview/ Masayuki Komatsu: Commercial whaling co... Page 1 of 6

Interview/ Masayuki Komatsu: Commercial whaling could be sustainably resumed

BY HIROAKI SUGIMOTO THE ASAHI SHIMBUN

2010/05/31

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When the International Whaling Commission (IWC) meets for a general assembly in June, it is set to discuss proposals to further cut down on whale catches. While Japan stopped commercial whaling in the face of strong opposition by anti-whaling countries, Masayuki Komatsu, a former senior official of the Fisheries Agency who represented Japan in past IWC negotiations, urges Japan to act on scientific data in the negotiations. He also argues that Japan should increase its catches to supply whale meat at lower market prices. Excerpts from an interview with *The Asahi Shimbun* follow:

* * *

Question: As of last year-end, as much as 4,000 tons of whale meat was in stock. It appears consumers are turning the other way. Why aren't they buying whale meat?

Answer: The meat does not sell because it is expensive and of poor quality. When you look at whale meat sold in the market, you notice a red, blood-like juice oozing from it. The juice that makes the meat tasty drained because cell membranes were broken when the meat was frozen. This is because the temperature can only be lowered to 30 degrees below zero on whaling ships. Since tuna is quick-frozen to minus 70 degrees, cell membranes remain intact. In whaling, too, new ships should be built so that the meat can be quick-frozen for better quality. I am sure it would drastically change the awareness of

consumers. Whale meat could be used as a sushi ingredient in place of tuna.

To begin with, current whaling is aimed at scientifically studying the rise and fall of whale populations, sexes and age and distribution of groups. This is called research whaling. The whale meat on the market is a by-product of such research. But that does not justify the poor quality of meat on the market. When the number of catches is increased, costs can be lowered and tasty whale meat can be supplied at lower prices.

Q: Isn't Japan catching whales to sell the meat?

A: The purpose of ongoing research whaling is to gather scientific data so that commercial whaling can be resumed. The right to conduct research whaling is recognized under an international treaty. The convention also recognizes the sale of meat from captured whales.

Q: There is strong international criticism against whaling. How has Japan been presenting its case at the IWC?

A: For one thing, it has been maintaining that whales should be used as a sustainable source of food based on scientific findings. It also stands by the basic stance that food cultures that differ by region should be respected.

The IWC has been tackling the improvement of methods to control resources based on reflection that whale populations drastically declined as a result of past over-hunting. Japan had provided two research-sighting ships for a project to look into the population of minke whales in the Antarctic Ocean every year from December to February for 12 years. Researchers of the IWC's Scientific Committee were also on board the vessels. As a result, the Scientific Committee concluded in 1990 that some 760,000 minke whales were alive. Such research continues to this day. The committee is expected to reconfirm the current population at between 460,000 and 690,000.

Q: Do you mean there are enough minke whales to resume commercial whaling?

A: The IWC calculates quotas for catches based on such scientific data as current populations and past catches. In the case of minke whales, as of 1992, the annual quota had been calculated at 2,000, accounting for 0.26 percent of the total population. The breeding rate of whales is estimated at 4 percent and there is no chance the minke whales would go extinct with such a quota on catches. Still, anti-whaling countries are opposed to commercial whaling and there are no prospects for its resumption.

Q: Why are anti-whaling countries opposed to a resumption despite the backing of scientific data?

A: The Japanese side also has problems. What surprised me when I started taking part in the negotiations in the Scientific Committee was that Japanese researchers remained silent throughout the complicated discussions because they couldn't follow what was being discussed in English. If you do not speak out, you will lose. To overcome the problem, I invited experts from South Africa and Norway and organized study sessions with domestic researchers to revise the basic plan for Japan's research whaling.

Q: In February, the IWC released a draft plan by its chairman to set caps on catches by whale species and regions to cut down on the number of overall catches. The proposed plan makes no distinction between research and commercial whaling with or without objection and calls for the IWC to comprehensively control catches. In April, the proposal was revised to require Japan to halve the catch under the research whaling to about 400 in five years and halve it again to about 200 in the following five years. Member nations hope to agree on the proposal at the annual commission meeting to be held in June. Some Japanese officials also support it. What do you think?

A: It poses a big problem. The IWC is only authorized to make decisions on commercial whaling with no objection. Research whaling is a right authorized by an international treaty. Allowing the IWC to comprehensively control catches constitutes the abandonment of Japan's right to research whaling. Moreover, the resumption of commercial whaling that Japan has called for would also be shelved. We cannot provide a proper explanation to Caribbean and African countries that have been supporting us.

To begin with, since minke whale resources in the Antarctic Ocean are abundant, there is no reason to reduce catches. We must honor the principle that debates should be based on scientific data. If we ignore that principle, decisions would be made arbitrarily. In IWC meetings, Japan has consistently insisted that debates should be based on scientific findings. Japan must stick to its basic position that it will call for resumption of commercial whaling through discussion supported by scientific data.

Q: But Japan's actual minke whale catches are significantly smaller than planned. The situation seems to make Japan's argument less persuasive. What do you think?

A: It is a problem. According to plans, Japan was supposed to catch up to 935 minke whales in the Antarctic Ocean, but actually it caught only 506 in fiscal 2009. This is because of sluggish sales of whale meat. Since it is unpopular with consumers, in an effort to cover whaling costs, Japan reduced the number of catches to maintain prices at high levels. As a result, the expensive meat does not sell. It is a vicious circle. Whaling countries such as Norway and Iceland are boosting catches. Japan, too, should shift its policy and increase catches to supply cheap and tasty whale meat at the risk of price collapse.

Q: Since fewer Japanese consumers are eating whale meat, why should Japan stick to whaling at the cost of international bashing?

A: It is unreasonable to impose a ban on using resources that can be used in a sustainable way. We rely on livestock as a main source of animal protein. But we need huge quantities of oil to produce the chemical fertilizers used to grow the grains that will become feed for cattle. Livestock farming needs a massive amount of water and it also produces waste. Meanwhile, whales sustain themselves in the ocean. Making better use of them will reduce our dependence on livestock.

I wish to stress once again the importance of advancing discussions and making decisions based on scientific data. In that sense, the decision concerning the bluefin tuna was regrettable. When the conference of the parties to the Washington Treaty (Convention on International Trade in Endangered Species of Wild Fauna and Flora) met in March, it rejected a proposal to ban international trade of the Atlantic bluefin tuna with the objections of Japan and other countries.

But I believe Japan should have cooperated with the European Union and the United States to strengthen the regulation. Generally speaking, whale resources are abundant although there are differences among species. While the minke whale has a green light above it, the fin whale has a yellow light, for example. But a red light is flashing over the bluefin tuna, whose populations have dwindled as a result of overfishing.

Banning the bluefin tuna trade may appear disadvantageous to Japan in the short term, but if we develop policy based on scientific grounds, we can win trust of the international community in the end. The principle of sustainable use also applies to abundant whales.

* * *

Masayuki Komatsu is a former Fisheries Agency section chief who was known as a tough negotiator when he represented Japan in IWC negotiations from 1991 to 2004. He quit the agency in 2007 and became professor of ocean and marine

resource policy at the National Graduate Institute for Policy Studies in 2008.

**Annex 144: “Vows to Fight the Good Fight at IWC Meeting”, *Minato Shimbun*,
24 May 2010, 3**

‘Vows to Fight the Good Fight at IWC Meeting’

Source: *Minato Shimbun*, 24 May 2010, page 3

600 Guests Band Together at Event for the Protection of Whaling Tradition and Culinary Culture.

The Society for the Protection of Whale Culinary Culture (Chairman: Takeo Koizumi, Professor Emeritus, Tokyo University of Agriculture) held its 22nd Event for the Protection of Whaling Tradition and Culinary Culture on 20 May. The 600 guests included Diet Members from all sides of the political arena. The event was held to affirm the solidarity of all concerned parties in the lead-up to the International Whaling Commission Annual Meeting in Morocco in June. Minister for Agriculture, Forestry and Fisheries Hiroataka Akamatsu reported, “The Japan Fisheries Agency is discussing the issues firmly with the anti-whaling United States.” With so many opposing positions in the IWC, the Minister declared vigorously, “We want to resume whaling with the understanding of all nations, so that whale resources can be utilised in a sustainable and effective manner.”

Society Chairman Takeo Koizumi reported on the results of an opinion survey that an American research company conducted in anti-whaling countries, revealing, “71% of people in the United States, 52% in France and 60% in Australia support whaling.” He spoke of his zeal towards the resumption of whaling, saying, “If we assert the legitimacy of whaling, we will be certain to achieve our goal. The only foods in which Japan is 100% self-sufficient are rice and whale [meat]. We want to boost our whale-related culture and foster it for the next generation.”

Diet Member Tadamasu Kodaira, Chairman of the Democratic Party of Japan’s Whaling Response Diet Members Council, criticised the obstructive actions of the anti-whaling group Sea Shepherd, saying, “They are a threat to Japan’s traditional whale-related culture.” Noting that the reduction of whale catch limits would be a major topic at the upcoming IWC Annual Meeting, he sought the cooperation of everyone attending the function to “continue our efforts (towards the resumption of whaling) going forward, so we may bequeath Japan’s wonderful culinary culture to our descendants.”

Diet Member Yasukazu Hamada, Chairman of the Liberal Democratic Party’s Whaling Diet Members League, pointed out the importance of the sustainable use of whales based on scientific evidence built up by the IWC. He stressed, “Japan will capture whales under proper management. Working hard for the resumption of commercial whaling is Japan’s slogan.”

Other Diet Members at the function pointed out the differences in culinary culture. Komeito Diet Member Hiroyoshi Nishi said, “Trying to correct the culinary culture of whale meat is a matter of cultural differences.” Democratic Socialist Party Diet Member Hideo Yoshiizumi said, “Each country has its own culinary culture, like Australians eating kangaroo meat.” Japanese Communist Party Dietmember Tomoko Kami emphasised, “Surely it is acceptable to eat whale where there is scientific evidence that the resources can be secured.”

The event featured cuisine from whale meat specialists from around the country, including Tokuya and Neboke [TN: restaurants], and Maruho and Shitamichi Suisan [TN: whale meat

processed foods manufacturers]. Guests enjoyed whale bacon, *harihari* udon noodles, *saezuri* [TN: whale tongue] in vinegared *miso* sauce, *sarashi-kujira* [TN: salted tail meat that has been covered in boiling water then cooled in cold water], *kushikatsu* [TN: breaded whalemeat shish kebabs] and other dishes, reaffirming the importance of the whale culinary culture. The toast was given by the Society's Deputy Chairman, *rakugo* performer Hayashiya Kikuou, who said that he wanted to lead anti-whaling nation Turkey (to which he has traveled on holiday) towards support of whaling, and treated the gathering to his whale joke [TN: play on words of Japanese name for humpback whale; translation omitted] that has become a standard feature of the annual event.

**Annex 145: “Reaffirmation of Whale Meat Culinary Culture”, *Suisan-Keizai*,
24 May 2010, 6**

‘Reaffirmation of Whale Meat Culinary Culture’

Source: *Suisan-Keizai*, 24 May 2010, page 6

Event for the Protection of Whaling Tradition and Culinary Culture held in lead-up to IWC Annual Meeting.

The 22nd Event for the Protection of Whaling Tradition and Culinary Culture was held at the Kensei Kinen Kaikan in Nagata-cho, Tokyo on 20 May. The function was attended by many Diet Members who are part of a very well-organised cooperative mechanism in the Diet, representing all political parties, from the Democratic Party of Japan to the Japanese Communist Party, and including Minister for Agriculture, Forestry and Fisheries, Hiroataka Akamatsu. They reaffirmed Japan’s culture of eating whale and the importance of scientific management, before enjoying whale cuisine.

The event, which is held every year prior to the Annual Meeting of the International Whaling Commission, features whale cuisine from restaurants from around the country that serve whale. As well as taking a fresh look at [Japan’s] whale-related culture, it aims to cheer on the Japanese Government delegation to the IWC. This year, approximately 600 guests from all over Japan attended the function.

In his remarks at the start of the event, Tadamasu Kodaira, Chairman of the Democratic Party of Japan’s Whaling Response Diet Members Council, said, “The [IWC] Chair has put forward a proposal for the downsizing of whaling, but Japan will not lower its banner of whale-related culture. Let’s all engage in retaining our culinary culture.” Yasukazu Hamada, Chairman of the Liberal Democratic Party Whaling Diet Members League, also expressed words of encouragement, saying, “Japan’s position towards whaling is one of the proper management and utilisation of resources. We should push our position through without breaking down the negotiations that we have built up to date.” Minister Akamatsu also said, “We want to pursue the management and utilisation of whale resources in cooperation with other countries.”

Takeo Koizumi, Chairman of the Society for the Protection of Whale Culinary Culture, said, “It is important to assert the legitimacy of eating whale; this will be certain to lead to the resumption of commercial whaling.”

Rakugo performer Hayashiya Kikuou proposed the toast, after which the guests enjoyed whale cuisine such as *haruhari* udon noodles, whale sashimi, whale *karaage* [TN: deep fried whale], *saetzuri* [TN: whale tongue] in chilli vinegared *miso* sauce, and whale steak.

捕鯨の伝統と食文化を守る会



あいさつする野田大臣

IWC年次 会合に向け

2010.5.24 水曜日

クジラ食文化を再確認

第22回捕鯨の伝統と食文化を守る会（IWC）年次会合前、文化を守る会が5月20日に毎年開いているもので、東京・水戸町の鹿敷記念館で開かれた。鹿松広葉林水産大臣をはじめ、民主党から共産党まで、全党派が参加し、IWCの重要性を再確認し、クジラ料理を賞した。

この会は国際捕鯨委員会（IWC）年次会合前、文化を守る会が5月20日に毎年開いているもので、東京・水戸町の鹿敷記念館で開かれた。鹿松広葉林水産大臣をはじめ、民主党から共産党まで、全党派が参加し、IWCの重要性を再確認し、クジラ料理を賞した。

第22回 捕鯨の伝統と食文化を守る会



あいさつする小平自民

第22回 捕鯨の伝統と食文化を守る会



さまざまなクジラ料理が並んだ

多過ぎる。水戸市は「クジラ料理の食文化を全国に広げたい」と、エールを送った。

鹿松広葉林水産大臣は「捕鯨を継承するよう努力を要する」と述べ、クジラ料理の食文化の重要性を訴えた。また、水産大臣は「クジラ料理の食文化を全国に広げたい」と、エールを送った。

水産大臣は「捕鯨を継承するよう努力を要する」と述べ、クジラ料理の食文化の重要性を訴えた。また、水産大臣は「クジラ料理の食文化を全国に広げたい」と、エールを送った。

**Annex 146: “Whaling Issue Petitions”, Nikkan Suisan Keizai Shimbun,
10 June 2010, 3**

‘Whaling Issue Petitions’

Source: *Nikkan Suisan Keizai Shimbun*, 10 June 2010, page 3

Whaling Issue Petition (1)

8 June 2010

Mr Minoru Morimoto, Director-General, the Institute of Cetacean Research
Mr Kazuo Yamamura, President, Kyodo Senpaku Kabushiki Kaisha
Mr Keiichi Nakajima, President, Japan Whaling Association
Mr Yoshikazu Shimomichi, Chairman, Japan Small-Type Coastal Whaling Association

We wish to note our deepest appreciation with regard to the special consideration given to the whaling problem.

As stated in the introduction, the cetacean capture research being undertaken in the Antarctic Ocean have seen the ships and crewmembers of Japan’s survey fleet exposed to dangerous hazards due to the obstructionist activities conducted by the anti-whaling group Sea Shepherd, which have comprised extremely serious terrorist and criminal actions that have grown increasingly severe over the years, and, meanwhile, capture numbers have substantially declined, and, for these reasons, the implementation of the research is currently faced with serious impediments.

During the period that these events have occurred, the International Whaling Commission (IWC) has held discussions with the aim of reaching an agreement at the IWC Annual Meeting this year on the “future of the IWC”, and, recently, the proposal put forward by the IWC Chairman was presented for discussion.

With regard to the Chairman’s proposal, we approve of the recognition of whaling quotas for Japanese coastal whaling, which we have desired for a prolonged period. On the other hand, with regard to research whaling, we note that the catch targets for Antarctic minke, which the Japanese Government has currently set at 850 +/- 10% a year, would be reduced substantially in stages, to 400 whales a year over a five year period starting from the end of this year, and then to 200 whales a year, during a subsequent five year period. In addition, the quota for offshore captures in the northern Pacific Ocean for minke, Bryde’s, sei and sperms would be reduced to half or less than the current quotas.

It is our assessment that the continuation of cetacean research would be extremely difficult, under the existing administrative framework, were the capture quotas to be set in accordance with the proposal by the Chairman recently put forward for discussion. Further, we believe that the quota presently recommended in the Chairman’s proposal for the coastal capture of minke would be insufficient for both the stability of business operations of the small-type whalers and also to make a contribution to local economies and dietary lifestyles.

We respectfully request your kind consideration to instructing the implementation of the countermeasures listed below to protect Japan’s whaling traditions and culture, to ensure the sustainable use of cetacean stocks, to seek the resumption of commercial whaling, and to

respond to the expectations of the foreign countries which are supportive of Japan's whaling policy:

1. To negotiate persistently ahead of the upcoming IWC Annual Meeting with regard to Japan's coastal whaling with a view to resuming whaling with a capture quota that is of an appropriate amount, and, with regard to Antarctic Ocean and northern Pacific Ocean offshore research whaling, to secure quota amounts which can produce meaningful scientific results.
2. From the next fiscal year and onwards, to put in place all of the countermeasures required to establish safety, including the cessation of the obstructive activities conducted repeatedly each year by the anti-whaling groups, and the securing of effective cooperation from the relevant countries.
3. To provide support to enable the continued steady implementation of whale research by undertaking a review of the current administrative frameworks for survey whaling which have now been placed in a severe situation due to the impact of the damage caused by the Sea Shepherd.

Whaling Issue Petition (2)

8 June 2010

Mr Yoji Fujisawa, Chairman, All Japan Seamen's Union

The malicious and extremely dangerous pirate-like obstructive activities which are being carried out against the survey whaling being implemented in the Southern Ocean by the anti-whaling group Sea Shepherd are escalating in intensity each year, and have reached a level where they present a real risk of personal injury.

The crewmembers and ships employed in survey whaling in the Southern Ocean have been exposed to extremely dangerous situations due to the above obstructive activity, and the continuously present risk of a major marine accident or physical injury is serving to obstruct survey whaling operations.

It is unclear what response ought to be made in the event that crewmembers of the obstructing ships were to become injured due to the defensive measures practiced by [whaling] fleet crewmembers. On occasion, there is potential for fleet crewmembers to be unilaterally criticised by the international community and defensive countermeasures exceed those that would be practiced normally by crewmembers, who are regular private citizens.

With regard to this situation, we would be grateful for the dispatch by the Japanese Government of a Coast Guard patrol vessel to secure the safety of the crewmembers and ships which will travel to the whaling grounds this autumn. We request that at the 62nd IWC Annual Meeting, a proposal is put forward seeking the immediate termination of the dangerous obstructive activities which are conducted by the Sea Shepherd and other anti-whaling groups, and effective responses by the countries involved.

Should discussions be advanced at the Annual Meeting in line with the proposal put forward by the Chairman and Deputy Chairman, we are concerned about the emergence of major

employment problems following the reduction in stages of the capture quota. It is obvious that the anti-whaling countries are contriving to set as zero the Southern Ocean capture quota in ten years time, after Japan has reduced the numbers in stages. We demand that the negotiations are not simply handed to the government officials and that no easy compromises are made. We will never forget the crewmembers who lost both access to stocks and income as a result of Japan's accepting the cessation of Southern Ocean commercial whaling in return for the maintenance of northern Pacific fishing operations.

The aim should be the resumption of commercial whaling through negotiating persistently for the resumption of coastal whaling and, in the case of Antarctic Ocean and northern Pacific Ocean survey whaling, to secure capture quotas at the current levels to collect adequate scientific data while protecting sustainable use of cetacean resources based on scientific grounds and whaling's traditional culture, which are Japan's basic principles.

The survey whaling administrative framework has been driven into a severe situation due to the reduction of operating days following the Sea Shepherd's obstructive activities. By continuing survey whaling, and seeking the resumption of commercial whaling, ships of a certain scale must be secured to capture the number of whales needed to obtain scientifically accurate data. In order to build an administrative framework where stable survey whaling can be continued, we strongly urge national government support and the securing of fleet ship numbers, including the building of a new factory ship.

捕鯨問題についての要請書（1）。

2010/06/10 日刊水産経済新聞 3ページ 1155文字

平成22年6月8日

(財)日本鯨類研究所理事長 森本 稔
共同船舶株式会社社長 山村 和夫
日本捕鯨協会会長 中島 圭一
日本小型捕鯨協会会長 下道 吉一

常日頃から捕鯨問題について格別のご高配を賜り、心から厚くお礼申し上げます。

ご案内のとおり、南極海で実施している鯨類捕獲調査につきましては、反捕鯨団体シーシェパードによる極めて悪質なテロ行為・犯罪行為である妨害活動が年々激しくなり、我が国の調査船団の船舶及び乗組員の身体が危険にさらされる一方、捕獲頭数は大幅に減少するなど、調査の遂行に重大な支障を来しております。

こうした中で、国際捕鯨委員会（IWC）において、「IWCの将来」をめぐり、本年のIWC総会での決着を目指した協議が行われていたところ、このたび、IWC議長提案が提示されました。

この提案では、長年の念願であった日本の沿岸捕鯨枠が設けられており評価いたすところでもありますものの、他方、調査捕鯨に関しましては、現在、日本政府が設定している南極海でのクロミンククジラの捕獲枠である年間850頭±10%は、本年末から始まるシーズン以降5年間は年間400頭、その後の5年間は年間200頭と大幅かつ段階的に縮小することとされています。また、北太平洋沖合の捕獲枠（ミンククジラ、ニタリクジラ、イワシクジラ、マッコウクジラ）については、半数以下に削減されています。

今回提示された議長提案に即して捕獲枠が決定された場合、現在の体制による鯨類調査の継続は困難になるものと思慮されます。また、ミンク鯨の沿岸捕鯨枠に関しましても、現在議長提案で提示されております頭数では小型捕鯨業者が安定した経営を行いつつ、地元経済や食生活に貢献して参るためには十分とはいえません。

わが国の捕鯨の伝統と文化を守り、鯨類資源の持続的利用を図り、商業捕鯨の再開を目指し、かつ、わが国の捕鯨政策を支持している諸外国の期待に応えるためにも、下記の対策の実現に向けてご指導ご高配を賜りたく、よろしくお願い申し上げます。

記

1. 来るIWC総会に向けて、わが国沿岸捕鯨については、適正な規模の捕獲枠で再開するとともに、南極海および北太平洋沖合の鯨類調査については、科学的意義のある成果を出し得る規模の捕獲枠を確保するよう、粘り強く交渉をすること。
 2. 毎年繰り返されている反捕鯨団体による妨害活動を中止させるため、関係国の実効ある協力を得るなど、次年度以降の安全確保のための万全の対策を講ずること。
 3. シーシェパードによる妨害の影響などにより、厳しい状況に陥っている現在の調査捕鯨の体制の整備と見直しを図り、鯨類調査が引き続き安定的に継続実施できるよう支援を行うこと。
- 以上。

捕鯨問題についての要請書（2）。

2010/06/10 日刊水産経済新聞 3ページ 1002文字

平成22年6月8日

全日本海員組合組合長 藤澤 洋二

南氷洋で実施している調査捕鯨に対し反捕鯨団体シーシェパードによる、悪質で危険極まりない海賊的妨害行為が繰り返し行なわれ、その度合いは年々エスカレートし人身に危害が及ぶ状態となっています。

この妨害活動によって、南氷洋調査捕鯨に従事する乗組員と船舶は非常に危険な状況に晒

され、重大な海難事故や人身事故の発生が危惧される状況が続いており調査捕鯨の業務活動にも支障をきたしています。

一方、船団乗組員の防衛対策によって、相手方妨害船の乗組員に怪我人等が発生した場合の対応も明確ではありません。場合によっては、船団乗組員が一方的に国際的な非難を浴びる可能性もあり、民間人である船員が行なう防衛対策としての限界を超えております。

このような状況の下、今秋の出漁に際しましては乗組員及び船体の安全確保のため、我が国政府は海上保安庁巡視船を派遣する等、万全の対策を講じてください。第62回IWC年次総会において、シーシェパード等の反捕鯨団体が行う危険な妨害活動の即時停止と関係国の実効ある対応を求める提案をするよう要請します。

また、今回のIWC議長・副議長提案を基に総会での議論が進められた場合、捕獲頭数の段階的削減によって重大な雇用問題の発生が危惧されます。反捕鯨国がわが国の段階的削減の後、10年後に南氷洋の捕獲量をゼロにすることをもくろんでいることは明白です。交渉を官僚任せにせず、安易な妥協はしないよう強く要請をします。わが国が北洋操業維持と引き換えに南氷洋商業捕鯨停止を飲み、結果として両方の資源・権益を失った失態を乗組員は忘れていません。

沿岸捕鯨の再開を求め、南極海と北太平洋の調査捕鯨は十分な、科学的データが収集できる、現行規模の捕獲頭数を確保するよう粘り強い交渉を行い、わが国の基本原則である、科学的根拠に基づく鯨類資源の持続的利用と捕鯨の伝統的文化を守りつつ、商業捕鯨の再開を目指すべきです。

またシーシェパードの妨害活動による操業日数の減少により、調査捕鯨の体制が厳しい状況に追込まれています。調査捕鯨の継続によって、商業捕鯨の再開を目指し、精度の高い科学的データを得る頭数を捕獲するには一定規模の船隊確保が必要です。安定的に調査捕鯨が継続できる体制の構築のため、国家支援と母船の新造を含めた船団隻数の確保を強く要請いたします。以上。

Annex 147: “Whale Meat Consumption – One Third of Horse Meat”,
Sankei Shimbun, 27 June 2010, 25

‘Whale Meat Consumption – One Third of Horse Meat’

Source: *Sankei Shimbun*, 27 June 2010, page 25

Whale meat, which once sustained Japan through food shortages after the Second World War, has now been reduced to very small quantities distributed as the by-product of research whaling following the withdrawal from commercial whaling. According to the Ministry of Agriculture, Forestry and Fisheries (MAFF), Japan’s annual domestic consumption is 4-5,000 tonnes. This is one third the consumption of horse meat, and even less than that of herring roe.

A MAFF official said that “You cannot say that it’s not our dietary culture just because the amounts are limited. As long as there are people who say they want to eat it and want to do whaling, MAFF will endeavour to put in place the right environment.”

鯨肉消費、馬肉の3分の1

2010/06/27 産経新聞 東京朝刊 25 ページ

日本の戦後の食糧難を助けた鯨肉だが、商業捕鯨の撤退後は調査捕鯨で捕ったものが調査後に流通するなど、わずかな量になった。農林水産省によると、現在の国内消費量は年間4千～5千トン。馬肉の3分の1、カズノコよりも少ない。同省は「量が少ないから食文化でないとはいえない。食べたい、捕りたいという人がいる以上、農水省は環境整備に努める」としている。

Former Japanese fisheries boss joins Lateline

Australian Broadcasting Corporation

Broadcast: 17/06/2010

Reporter: Tony Jones

Former Japanese Fisheries Agency chief Masayuki Komatsu speaks to Lateline.

Transcript

TONY JONES, PRESENTER: And earlier we were joined by Masayuki Komatsu, the former chief of the Japanese Fisheries Agency who's in the past for many years represented Japan in IWC negotiations.

Masayuki Komatsu, thanks for joining us.

MASAYUKI KOMATSU: Thank you very much for inviting me.

TONY JONES: What do you believe will happen at the International Whaling Commission meeting in Morocco next week?

MASAYUKI KOMATSU, FORMER CHIEF, JAPANESE FISHERIES AGENCY: I don't think anything happens because, you know, there are wider gaps among member nations.

TONY JONES: The British newspaper the Sunday Times has published its investigation of vote buying at the International Whaling Commission. It alleges that Japan has been engaged in paying money directly to delegates from small nations. What do you say to that?

MASAYUKI KOMATSU: I think that it was made by reporter person who disguised himself to ask, you know, member nations if it's probably conducted. I think a situation should be investigated further and if that is, you know, truth, I think IWC must conduct some serious investigation for such a conduct.

Not only our country being, you know, conducted of so called allegations of bribery but it should be taken back before a moratorium. There are plenty of rumour at that time that vote buying by the anti-whaling nation has been conducted, led by, you know, NGOs and the US and other anti, you know, whaling nations that significantly influenced the adoption of the moratorium. I think all of those should be investigated fully.

TONY JONES: Were you aware of vote buying or did you help buy the votes of delegates when you represented Japan at the IWC?

MASAYUKI KOMATSU: No, as far as I know that there is no bribery conducted or vote buying has been conducted.

TONY JONES: One delegate, the Head of Fisheries in Guinea told the newspaper that Japan pays millions in aid to his country but it also pays the bills for the delegation's travel, for their hotels, for their meals and it gives each delegate \$300 a day in spending money.

MASAYUKI KOMATSU: I think that sort of, you know, comment and any conduct being, you know, conducted by the, you know, sort of interview should be investigated and perhaps, you know, IWC must exercise investigation of any conduct of the, you know, conduct being conducted currently and in the past. I think it's a good opportunity for IWC to normalise those kind of things.

TONY JONES: Well, if Japan is doing this, if it's making these payments, would you regard that as corrupt?

MASAYUKI KOMATSU: I think before that there should be investigation because newspaper says that, you know, that obtainment of the information is, you know, made by the kind of pseudo or pretending, you know, guys try to contact with the representative of a particular countries. So I think that should be investigated first.

TONY JONES: Okay, let's move on. Do you still say that minke whales are the cockroaches of the sea?

MASAYUKI KOMATSU: I think what I mean by, what I meant by saying so is that, you know, cockroach is plenty in its number and also reproduction is very rapid and big that's why I, you know, imitated to the minke whales, related to the minke whales. I believe that there are still, you know, plenty of minke whale in the Southern Ocean which no-one's territory, which should be utilised and investigated for the scientific reason and for the benefit of the all human being, particularly for the sake of the peace.

TONY JONES: Japan wants the Commission to lift the ban on commercial whaling, including in the Southern Ocean around Antarctica. If that happens will that bring an end to your so called scientific whaling?

MASAYUKI KOMATSU: I don't think so. I don't think a Commission could make such, you know, legal activity. If that should be done I think, you know, it should be investigated and carefully, you know, levied whether it's scientifically and conventionally appropriate. I don't think that should be collective decisions if such action should be taken.

TONY JONES: In 2009 Japan set out to kill as many as 935 whales in Antarctic waters in the Southern Ocean but according to your figures it only killed 506, why is that?

MASAYUKI KOMATSU: I think it's because of the, you know, sabotage or terrorist-like activity by the Sea Shepherd. It's really disturbed activity of research whaling in the Southern Oceans. If there were no such, you know, terrorist-like activity or sabotage, I'm sure that Japan had accomplished entire missions.

TONY JONES: But I've read a recent interview that you did in Japan where you say the catch was lowered because of the sluggish sales of whale meat. They reduce the catch to keep the prices high, isn't that what you said?

MASAYUKI KOMATSU: I think that is also true because of the stagnation of the sales of whale meat. Some government officer tried to think that if reduction of the, you know, supply would be down that may lead to a bit higher price of, you know, the whale meat.

TONY JONES: Well, that's just supply and demand, isn't it? That's got nothing to do with science?

MASAYUKI KOMATSU: I think yes, it sort of, you know, responding supply and demand but I must say that, you know, Article Eight of the Convention stipulate the conduct of, you know, scientific research activity but article Eight, paragraph Two, clearly mentions that, you know, by-product should be hundred and sold at the market of appropriate countries, in this case in Japan.

TONY JONES: As you know the Australian Government is planning to take legal action against Japan in the International Court of Justice to stop this so-called scientific whaling. What will Japan do if Australia wins that case?

MASAYUKI KOMATSU: Main reason to take, you know, research activity to the ICJ, International Court of

Justice, is to say that, you know, Japanese whaling is a commercial activity thereby it's contrary to the moratorium which Australia believes are still, you know, in effect.

I don't think that argument constitute any good reasons. Firstly, Japan's activity is fully recognised and permitted under Article Eight of the convention which is relating to the scientific whaling. Secondly, I think a moratorium is not valid anymore under the situation where we have seen plenty of minke whales, humpbacks and fin whale in Southern Ocean as well as any other ocean over the world.

Thereby I don't think moratorium is any more effective so that reason Australia and the litigation is not anymore valid.

TONY JONES: But the Australians will argue in the court that you don't need to kill whales in order to study them.

MASAYUKI KOMATSU: I keep saying to Australian Government and New Zealand Government you are leisure activity is inefficient to obtain the appropriate level of the sampling. In particular you have no biopsy sampling for the minke whales and the fin whales such as, you know, fin whale types of the whales which migrates swiftly. Thereby your conduct does not constitute any scientific ground to elucidate the whale science in the Southern Ocean.

TONY JONES: Will this case hurt relations between Australia and Japan?

MASAYUKI KOMATSU: I think it depends and if Australia fully understands what Japan is doing in terms of a scientific, you know, research sincerely and after you fully understand what we are doing, I don't think it's really hurt bilateral relations.

But what we need is sincere, open discussions. I am lucky enough that even though I was sort of opponent of Australia, I really welcomed by many of the Australian people because I believe that I am a bit frank to you.

TONY JONES: Masayuki Komatsu, we'll have you leave you there. We thank you very much for taking the time to join us.

MASAYUKI KOMATSU: Thank you so much, thank you for, you know, giving me opportunity.

Annex 149: A Ideta, “Feature: The Greenpeace Theft Trial”, *Chunichi Shimbun*, 26 August 2010 (morning edition), 12 [excerpt translated]

‘Feature: The Greenpeace Theft Trial’

By Ao Ideta

Source: *Chunichi Shimbun*, 26 August 2010 (morning edition), page 12 [excerpt]

Former whalers testify about “palaces” purchased with on-sold whale meat, high-priced cuts taken home as “samples”, monopolies by Japan Fisheries Agency affiliates, concerns about subsidy-dependence, meat concealed in work-clothes and salted in cabins, and over-catch thrown overboard.

The verdict for two employees of Greenpeace Japan, the environmental conservation group, who have been charged with theft after allegedly stealing whale meat being distributed in 2008, is set to be handed down in the Aomori District Court on 6 September.

At the time, the two alleged that they had taken the whale meat to use as items of evidence, based on their suspicion that it had been embezzled. When they were arrested, however, the focus of attention shifted totally towards the question of whether they would be pardoned for a crime if their intention had been to bring charges. Prior to the verdict, we are reconsidering the incident.

The trigger for the alleged investigation into the illegal actions of “research whale ship crewmembers embezzling whale meat” was triggered by the accusation of an insider.

A former male crew member in his 50s responded to this newspaper’s request for an interview and began the discussion as follows, “It is common practice among fishers to set aside the best fish for their families. In the case of the whaling, however, since it’s taxpayers’ money being used to take the whales, I thought this was very highly irregular.”

Each year in November, the whaling ships head off to the Antarctic Ocean. For half a year, until the following April, between 200 and 300 crewmembers are part of the fleet that pursues minke and other whales. After capturing the whales and completing the research, which includes taking various measurements, the whales are dissected on the ships’ decks. The crewmembers dissect the huge bodies from which white-coloured steam rises, and, after taking the measurements, they separate the meat into different groups according to the cuts, and then freeze it.

According to the man, during this process veteran whalers give orders to “put aside the meat from this part” and separate off some meat. The cut which is particularly high-quality is the *unesu* cut (which is the stripe-patterned cut between the whale’s chin and its stomach) which is processed into “whale bacon”. These cuts are reportedly concealed in the crewmembers’ sleeves, taken back to their rooms and salted.

“I was told that you could sell it for ¥10,000 to ¥15,000 per kilogram. Even then, that would be about half the market price, and it would sell like hot cakes. Some men would take home 100 kilograms of it. There were even men who, I was told, had on-sold whale meat and built themselves new houses or ‘whale palaces’ with the proceeds”, he said. These cuts are, reportedly, completely separate from the official meat gifts which are given to crewmembers by the company when they finish the voyage.

The two Greenpeace Japan employees who heard the reports from this man, took away from a distribution centre in Aomori Prefecture a cardboard box which they had followed as it was sent home by courier by a crewmember of a scientific whaling ship had returned to its home port. What was in the box was 23.5 kilograms of *unesu* whale meat. The Greenpeace Japan employees used this as evidence of crewmembers committing fraud, saying that “if this were an official present, it should be frozen, but it was actually at room temperature. Furthermore, there was a large quantity of a high-grade cut of whale meat.” The case was, however, dropped.

Instead, the employees were arrested and charged with theft and trespassing. When they were arrested, seventy investigators searched six locations, including Greenpeace Japan’s office in Shinjuku, Tokyo, and their residences. While the press gave wide coverage to these events, talk about the allegations of embezzlement of whale meat faded away.

The allegations of embezzlement of whale meat were, belatedly, taken up again in February this year during the court case when it started.

A former crewmember who had crewed on whaling ships for many years said that he had wanted to give evidence, “Precisely because I want to see the resumption of commercial whaling, and I wanted to do something about the decline in morality in research whaling”. His evidence included statements such as “I witnessed crew members taking out large quantities of meat”, “employees of the Institute of Cetacean Research, which is the primary body that does research whaling, were actually taking home for themselves prime cuts of whale meat, calling them ‘samples’”, and other similar testimony.

Although the official gift of whale meat to the employee by the employer was 8 kilograms or less, the crewmember who sent home 23.5 kilograms of *unesu* changed his explanation time and again. While he said that he “received it from his colleagues”, the number of “colleagues” changed from one, to two, to four, after which he ultimately said three colleagues had given him their meat. However, one of those colleagues testified that “I didn’t give it to him.”

The owner of the *unesu* whale meat also said, “I made the ten pieces by cutting into halves five pieces of *unesu*.” DNA testing, however, showed that the *unesu* whale meat pieces that he alleged were from the same whale, were, in fact, from two different types of whale, with seven pieces coming from one whale and the remaining three pieces coming from another. So his explanation was no longer considered valid.

The former crew member mentioned in the introduction to this report continued, “What I wanted to bring attention to was not the embezzlement by the crew but the irregular things that I, as a fisher, noticed about the research whaling.”

One of the things he described was, “When too many whales were caught, they just kept throwing the meat overboard into the sea. My fellow crew members and I said to each other that if they have enough to throw overboard they shouldn’t be catching so much in the first place.”

Following periods during which whales could not be caught due to the obstructive activities of the anti-whaling groups the fleet would then increase the daily take of whales. But when twenty or more whales were caught the ships’ freezers would fill up and so the off-cuts were thrown overboard.

The former crew member recalls that, when the target quota rose sharply between 2005 and 2006, “even saleable quality meat was frequently thrown away”.

So what is the current situation of research whaling? Ms Ayako Okubo, a researcher at Tokyo University’s Research Center for Advanced Science and Technology (RCAST), says, “It’s supposed to be research into the whale ecosystem for the resumption of commercial whaling, but, it’s really just become a means of supplying whale meat.” She also sees as problematic the way in which research whaling is turning into a subsidy-dependent industry.

The basic mechanism is like this. The primary implementation body is the Institute of Cetacean Research. However, whaling operations and whale meat processing and sales are exclusively commissioned on a permanent contract to Kyodo Senpaku, which is an amalgamation of the whaling divisions of a number of seafood companies.

Each year, the ICR receives subsidies from the Japan Fisheries Agency which issues the permits for research whaling; the ICR has successive generations of board directors who are former employees of the JFA. This year, the subsidy included countermeasure expenditures to manage the obstructive activities by the anti-whaling groups, was ¥800 million. In other words, Kyodo Senpaku is operated like a family business under the umbrella of the JFA, and it has been likened to a “convoy of whale meat concessions.”

[...]

特報 グリーンピースの窃盗裁判 元調査捕鯨船員証言 鯨肉横流して『御殿』 高価な部位『サンプル』と土産に 水産庁系企業独占 補助金産業化懸念も 作業服に隠し部屋で塩漬け 『捕りすぎは海へ捨てる』

2010/08/26 中日新聞朝刊 12 ページ 2627 文字

二〇〇八年に環境保護団体「グリーンピース・ジャパン」の職員二人が、宅配中の鯨肉を盗んだとして窃盗罪などに問われた裁判の判決が九月六日、青森地裁で言い渡される。二人は当時、鯨肉横領疑惑の「証拠品」として鯨肉を持ち出したのだが、逮捕時は「告発目的なら犯罪も許されるのか」という点ばかりが注目され、横領疑惑は置き去りにされた。判決を前に、あらためて事件を考えてみるとー。(出田阿生)

「調査捕鯨船の船員が鯨肉の横流しをしている」という不正行為の疑惑調査は、元船員の内部告発がきっかけだった。

「一番良い魚を家族への土産にするのは、漁師の常識。でも、クジラは税金を使って捕ってるんだし、おかしいと思った」。元船員の五十代男性は、今回、本紙の取材に応じ、こう話し始めた。

南極海に船が出るのは毎年十一月。翌年四月まで半年間、二百数十人が乗り組む船団がミンククジラなどを追う。捕獲後に計測などの調査を終えると、甲板で解体する。真っ白に湯気が上がる巨体を切り分け、計量して部位別に枠に入れ、冷凍する。

男性によると、この工程でベテランの船員が「ここの肉をとっとけ」と命令し、肉を取り分ける。特に高級なのが、ベーコンに加工されるウネス（下あごから腹にかけてのしま模様の部分）という部位。これを作業服の袖に隠し部屋に持ち帰り、塩漬けにするという。

「キロ一万〜一万五千元で買ってもらえると聞いた。それでも市場の半値くらいだから、飛ぶように売れる。百キロくらい持って帰る人もいる。鯨肉を売りさばいた収入で自宅を新築して『クジラ御殿を建てた』と言われる人もいた」。下船のときに船会社から支給される正規の土産とは、まったく別物だという。

この男性の話聞いたグリーンピース・ジャパンの職員二人は、〇八年に調査捕鯨船が日本に帰港した際、船員が自宅あてに送った宅配便の荷物を追いかけて、青森県内の集配所で、段ボール一箱を持ち出した。

入っていたのは、二三・五キロのウネス。職員らは「正規の土産なら冷凍品のはずなのに、常温の状態。しかも高級な部位が大量に入っている」と、船員による横領行為の証拠品として東京地検に告発したが、不起訴とされた。

職員らは逆に、窃盗と建造物侵入の罪に問われて逮捕、起訴された。逮捕と同時に捜査員七十数人が出て、東京都新宿区の事務所や自宅など六カ所を家宅捜索。こちらの報道が繰り返されているうちに、いつの間にか鯨肉横領疑惑の話は消えてしまった。

鯨肉横領疑惑がようやく狙上（そじょう）に上ったのが、今年二月から始まった裁判だった。

長年、捕鯨船に乗り組んでいた別の元船員が「商業捕鯨の再開を願うからこそ、調査捕鯨のモラル低下を何とかしたい」との思いで出廷。その中で「船員が鯨肉の持ち出しをしているのを目撃した」「調査捕鯨の実施主体である財団法人・日本鯨類研究所（鯨研）の職員が、高価な『尾の身』という部位をサンプルだといって、実際は土産として持ち帰っていた」などと証言した。

また「正規の土産」は八キロまでのはずだが、ウネスを二三・五キロも自宅に送った理由

について、持ち主の船員の説明は二転三転した。「同僚からもらった」と話したが、その人数は「一人→二人→四人」と変わった後、結局三人に。しかも、名指しされた同僚の一人は「あげていない」と証言した。

さらに持ち主は「五本あったウネスを半分に切って十本にした」と説明したが、DNA鑑定の結果、同一のクジラとされたのは、七本と三本の二種類に分かれ、話が通らなくなった。

冒頭の元船員男性は話を続ける。「そもそも訴えたかったのは、横領の話じゃなくて、漁師として感じた調査捕鯨のおかしさなんです」

そのひとつが「捕りすぎたときは、どんどん肉を海に捨てること」と言う。「捨てるくらいなら捕らなきゃいいのに、と仲間内で話していた」

反捕鯨団体の妨害行動でクジラを捕れない期間が続いた後は、一日の捕獲頭数を増やす。だが二十頭以上だと船の冷凍室がいっぱいになるため、雑肉を捨てるという。

特に、捕獲目標頭数が急増した〇五年から〇六年は「売れる肉でも頻繁に捨てていた」と男性は振り返る。

では現在の調査捕鯨の実情はどうか。東京大先端科学技術研究センター特任研究員の大久保彩子さんは「商業捕鯨再開のためのクジラの生態調査とされているが、実質的には鯨肉供給の手段になっている」と話す。

その上で、調査捕鯨が「補助金産業」化していることを問題視する。

その構図とは一。実施主体は鯨研だが、捕獲作業や鯨肉の加工販売は、水産会社の捕鯨部門が統合してできた株式会社「共同船舶」が随意契約で独占的に請け負う。

鯨研は、調査捕鯨に許可を出す水産庁から毎年補助金をもらい、歴代の役員には天下り下同庁OBがいる。今年の補助金は、捕鯨妨害行為への対策費を含めて約八億円。すなわち共同船舶は、水産庁傘下のファミリー企業で「鯨肉利権の護送船団」との指摘もある。

連合軍総司令部（GHQ）が戦後の食糧難対策で南極での捕鯨を許可し、鯨肉消費がピークとなったのは一九六二年。その後の消費は落ち込む一方だ。国際捕鯨委員会（IWC）が商業捕鯨のモラトリアム（一時停止）を採択し、日本では八七年から調査捕鯨に切り替えられたが、鯨肉の在庫はだぶつき、最近では四千数百トンを超える。捕鯨事業の経費は鯨肉を売って賄われるが、これも赤字に陥っている。

大久保さんは「商業的に成り立たない南極海での捕鯨を、国が補助している。仮に商業捕鯨が再開され、補助金が受けられなくなれば、かえって南極海捕鯨は衰退する可能性が高い」とみる。

IWCは六月の会合で「南極海での調査捕鯨を大幅に縮小するかわりに、沿岸での商業捕鯨を認める」との議長案が議論されたが、決裂した。

「捕鯨国にも、反捕鯨国にも、今の状態が一番都合だともいえる」と大久保さん。「反捕鯨国は、国内産業との利害関係がないから『商業捕鯨には何が何でも反対』と理念に突っ走っていい。捕鯨国が存在するから、反捕鯨団体のシー・シェパードには資金が集まるし、“活躍”の場を与えられる」

いわば「日本の食文化の伝統を守れ」というメッセージのもと、反捕鯨国・団体への国民の反感に守られる形で調査捕鯨が存立する。

大久保さんは言う。「各国の意地の張り合いの中、国際規制がないまま調査捕鯨が続けられることが一番問題でしょう」

Annex 150: “Fisheries Agency Personnel Disciplined for Accepting Whale Meat. Five Supervisors on Research Whaling Vessel”, *Hokkaido Shimbun*, 23 December 2010, 25

‘Fisheries Agency Personnel Disciplined for Accepting Whale Meat. Five Supervisors on Research Whaling Vessel’

Source: *Hokkaido Shimbun*, 23 December 2010, page 25

The Japan Fisheries Agency (JFA) announced on 22 December that five of its personnel who oversaw the research conducted on board Japan’s research whaling vessels had violated the National Public Service Code of Ethics by accepting whale meat after disembarking the vessel, and that the Agency has officially reprimanded three of those five officials. The disciplinary action was dated 22 December.

The three reprimanded personnel participated in the research whaling program in the Antarctic Ocean from 2000 to 2004. Upon their return to Japan, they each received packages containing 3-7 kilograms of whale bacon and other meat by mail from Kyodo Senpaku, the owner of the research whaling vessel.

Two other officials (both currently on secondment) who, while receiving whale meat, paid a part of the value of the meat or returned it received warnings.

The supervisory responsibility of current JFA Deputy Director-General, Junji Yamashita, and one other official currently on secondment to a university, who held the position of Director of the Far Seas Division during the period in question, was also called into question and the two men received strong warnings.

The JFA explained that none of their personnel requested the whale meat, but gave the excuse that, “Kyodo Senpaku has a custom of purchasing some of the whale meat after the research has been completed and distributing it among the crew, and they may have done the same for the JFA personnel.”

社会

鯨肉受け取りで水産庁職員処分＝調査船監督の5人

356 語

2010年12月23日

北海道新聞

HOKKAIDU

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日本語

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水産庁は22日、調査捕鯨船で調査を監督した当時の同庁職員5人が下船後に鯨肉を受け取り、国家公務員倫理規程に違反したとして、うち職員3人を戒告の懲戒処分としたと発表した。処分は22日付。

同庁によると戒告の3人は、2000年から04年に南極海などで行われた調査に参加。帰国後に調査捕鯨船を所有する会社「共同船舶」から、郵送でベーコンなど鯨肉約3～7キロを受け取った。

鯨肉を受け取ったものの、代金の一部を支払ったり、鯨肉を返却した職員2人（ともに出向中）は訓告など。

さらに監督責任を問い、当時、遠洋課長だった山下潤次長と、大学に出向中の1人を厳重注意にした。

水産庁は職員側から鯨肉を要求した事実はなかったと説明。「調査後に共同船舶が買い取った鯨肉を乗組員に配る慣習があり、水産庁職員にも同じように配ったのではないかと釈明している。

Annex 151: “New Developments Under Severe Conditions. Interview with Mr Fujise, Director-General, Institute of Cetacean Research”, *Nikkan Suisan Keizai Shimbun*, 27 December 2010, 2 [excerpt translated]

‘New Developments Under Severe Conditions. Interview with Mr Fujise, Director-General, Institute of Cetacean Research’

Source: *Nikkan Suisan Keizai Shimbun*, 27 December 2010, page 2 [excerpt]

[...]

Reporter: You mentioned that research is needed on the competition between whaling and other fisheries in both northern and southern areas and on the ecosystems. At the same time, however, it seems the ICR’s financial position is very severe due to the obstruction activities and the recession.

Mr Fujise: The capture survey travels along a pre-planned route, catches whales at those locations, conducts on-board biological examinations on the whales, and then it produces whale meat and other by-products, sells the by-products in Japan, and uses the income as funds for the next research program. The expenses incurred by these activities, regardless of the by-products produced, cost a certain amount of money. When whale meat was very popular, as in the old days, it was possible to raise plenty of funds for the research in the following year. But, at present, due to the domestic economic conditions and the obstructionist activities against scientific whaling we aren’t able to conduct scientific whaling as planned, and it would be impossible to say that things are going smoothly. Fundamental issues of how unfeasible it is will emerge if we try to continue with the current process whereby the income from the by-products is used to meet the survey costs. This is because to do the survey we are required to spend a certain level of budget.

The sighting surveys that Japan did in cooperation with the IWC for 32 years – the IDC/SOWER surveys – finished last year, and so the role of the sighting surveys which will be conducted by JARPA II will be more important than ever.

Reporter: You have been inaugurated as Director-General at a time when the survey’s fundamentals are being reviewed.

Mr Fujise: I don’t have any exceptional wisdom about how to break through the current impasse. But as the scientist in charge of scientific whaling, I see a need to do more PR about the significance of the survey program which is not yet well appreciated by the general public.

[...]

厳しい状況下でも新たな動き、藤瀬良弘・日本鯨類研究所理事長インタビュー。

2010/12/27, 日刊水産経済新聞, 2 ページ, 4002 文字

長期にわたり膠着した状態の IWC や環境保護団体による捕鯨調査船への妨害活動、景気後退による鯨肉販売の不振など、クジラ業界を取り巻く環境は明るいとは言えない。そのような状況の中、11月に日本鯨類研究所の理事長に藤瀬良弘氏が新任した。また、鯨肉販売の面でもクジラのもつ潜在的な力を利用した健康補助食品の開発など、新たな取り組みも進められている。新しい動きを取り上げ、今後のクジラ業界の展望などを紹介する。

◇鯨類研究者となったきっかけは。

◆藤瀬理事長／琉球大学海洋学科に入学時に、当時の琉球大の教授でもあり、日本の鯨類研究の大家であった西脇昌治先生とお会いし、西脇門下で助手の宮崎信之先生のもとで小型鯨類の研究を行った。昭和50年(1975年)代初めごろは、船に乗って大型鯨類(クジラ)の研究をすることが大変難しかった。

琉球大学での学部生、愛媛大学での大学院生時代には、和歌山県太地町のイルカ漁業の調査や研究標本の採材を行い、愛媛大学大学院時代には立川涼先生の研究室でイルカ類の生態と汚染物質の研究を行った。その後、北海道大学大学院に移ってからは、サケ・マス流網漁で混獲されるイルカの調査や岩手県での突きん棒漁業でのイルカ調査に参加し、毎年45日から75日間漁船に乗って調査した。

87年に、国内で商業捕鯨モラトリアムが発効し、南極海での鯨類捕獲調査がスタートしたが、当時職員だった加藤秀弘先生(現東京海洋大学教授)に、新生となった(財)日本鯨類研究所がクジラの調査員を募集しているのを聞いて、第一回調査に参加したのが日鯨研との出会いだった。

◇鯨研の調査には最初から関わりました。

◆藤瀬理事長／南極海の調査(JARPA=87~04年度)には1回目の予備調査から3回目まで連続して乗船し、5回目と6回目では、調査団長を務めた。北西太平洋の調査(JARPN=94~99年度)が94年から始まるため、93年は北の調査の基本設計に関わった。北の調査では当初、南極海の調査と同様の設計をしたら、現場では晴れているのに海面は一面の厚いガスに覆われて全く探鯨ができず、計画(100頭)のうち21頭という結果。調査設計の難しさを痛感した。

◇南北の調査の経過と成果について。

◆藤瀬理事長／第1期の北の調査の目的は、ミンククジラの系群構造を解明する調査である。これまでの研究から、日本周辺には、太平洋からオホーツク海に分布する系群、日本海から黄海、東シナ海に分布する系群の2系群があると考えられてきたが、反捕鯨学者がさらに細かいサブ系群があるのではないかと仮説を提案したため、この疑問に答えるために計画された調査である。この調査結果は、その都度IWCに報告され、現在も続いている北西太平洋のミンククジラへのRMP(改定管理方式=超保守的な持続的年間捕獲量)の適用する作業において利用されている。この12月にも科学者の作業部会が韓国で開催されたが、北のミンクにRMPを適用する作業がゆっくりとだが、確実に進んでいる。

◇00年からJARPN2が始まりました。

藤瀬理事長 JARPN1で、道東沖を調査すると、サンマ受け網漁業を行っている

付近で、ミンククジラが頻繁に出現していた。実際にミンククジラの胃の中には多量のサンマが発見されたため、そこでは漁業と鯨類が競合関係にあるのではないかと推定された。北西太平洋ではクジラを含めた海洋生態系として全体をみていく必要があるとして、第2期調査(JARPN2)が設計された。第2期調査では、ミンククジラの食性調査が加わり、また、ミンクだけでなく、ニタリクジラやマッコウクジラなどによる食性調査やクジラの餌となる餌生物の調査も行われている。

◇最初の食性調査でミンクの胃の中に、ぎっしりサンマが詰まっていた写真を見た漁業者はびっくりしました。

◆藤瀬理事長／一般的には、ヒゲクジラはプランクトンや小魚などを食べているというのが通説だったので、大型魚類も食えることが新たに分かったことは驚きだった。捕獲調査では、ミンクの胃内に大量のサンマが確認され、餌問題の大きさを痛感した。胃袋からはサンマやスルメイカなど日本の漁獲対象魚種が多く、見付かっている。

JARPN2でのこれらを報告を受け、クジラを含めた海洋生態系全体をみて調査を進めていく必要があることをさらに強く感じており、将来は、海獣類や海鳥類を含めた形に拡大していく必要があるだろう。

○南の調査について。

◆藤瀬理事長／18年続いたJARPAでは、資源量推定とともに、クロミンククジラの資源管理に有用な性成熟年齢や妊娠率、自然死亡率などの生物学的特性値の研究を追求してきた。クロミンククジラについては、1WCにおいてその資源量が76万頭とされ、その後の資源量推定作業も継続されており、クロミンククジラが持続利用可能な資源であることを示唆する結果が得られている。また、RMP(超保守的な持続的年間捕獲量)の予備的な試算では2000頭(100年間)という数字がでている。残念ながら、このような試算結果は、本委員会での政治的な決定によって、明確な計算作業も開始されていない状況にある。

◇05年から始まったJARPA2は。

◆藤瀬理事長／18年の間の長期の調査により、クロミンククジラは北半球のミンククジラとは別種であること、性成熟年齢や脂肪の厚さ、胃内容物の量が変化してきたこと、夏季に南極海に來遊するクロミンククジラが南側のバックアイス付近まで局在するなど南極海生態系の変化の様子が見えてきた。

また、90年ぐらいから南極海でザトウの発見率が増え、ミンクを超える水準にまで達した。こうした鯨種間の構成の変化や南極海の生態系の変化を追っていくためにJARPA2を立ち上げた。ミンクだけでなく、ザトウやナガスなどを調査する必要があるが、JARPA2には、豪州・ニュージーランドなどの反捕鯨国の反発が強いうえに、グリーンピースやシー・シェパードによる嫌がらせや妨害行為が激しくなり、計画された調査が100%実施できない。

◇南極海の生態系にはかなりの異変がみられる？

◆藤瀬理事長／私見だが、70年代がクロミンクの資源量が増加する節目だと思う。商業捕鯨でナガスやシロナガスクジラの捕獲が増え、相対的にミンククジラが食べられるナンキョクオキアミの量が増加。そのため、成長を加速させて、早く成熟して繁殖に加わり、資源を増大させていったのではないかとと思われる。しかし、70年ごろに環境収容力近くまで増大したため、ミンククジラが個々に利用できる餌の量にも限界が生じ、早熟化の停止や脂肪の厚さの減少がみられてきたと考えている。ミンククジラが本格的に商業捕鯨の対

象となったのは71年からであり、混同されやすいが、生物学的特性値に変化が表れるには相応の時間が必要となり、商業捕鯨の影響と考えるより、別のインパクトが70年ごろにあったと考えるのが妥当である。

このようなクロミンクの変化を解明していくには、ザトウやナガスクジラなど、クロミンクを越すバイオマスをもってきた鯨種との関係を、競合モデルなどを用いて明確化し、南極海生態系の変化として明らかにしていく必要がある。そのためには鯨類だけでは完結せず、その餌生物や同じ餌を利用する生物も併せて調査していく必要がある。

◇南も北も漁業との競合や生態系全体からみた調査が必要ということですが、一方では調査妨害や不況による財政逼迫もあり厳しい情勢です。

◆藤瀬理事長／捕獲調査は設計された調査コースを航行しながら、遭遇したクジラを捕獲し、船上で鯨体の生物調査を行い、その後鯨肉など副産物を生産して、これを日本に持ち帰って販売し、収益が次回調査の資金として利用することになっている。しかし、この調査活動にかかる費用は、副産物の生産にかかわらず、毎年一定の費用がかかる。かつてのように鯨肉が引く手あまたの時代ならば、翌年の調査経費を十分賄うことが可能であったが、現在の国内の経済状態ならびに妨害団体による調査妨害で計画通り調査を実施できない状況が続いており、とても順調とは言えない。これまでのように調査の副産物の収益で調査経費を賄うという計画では、基本的なムリが生じてくるだろう。なぜならば、調査を行うためには、ある程度経費をかけてやらなければならないからだ。

IWCに日本が協力して32年間継続してきた目視調査（IDCR/SOWER）も昨年までとなり、JARPA2の目視調査の担う役割も今まで以上に重要になっている。

◇調査の根幹を見直す時期の理事長就任です。

◆藤瀬理事長／難局を打開するためによい知恵があるわけではないが、まずは、まだ一般にはあまり知られていないこの調査計画のもつ本来の意義を、担当する科学者としてもっとPRしていく必要があると思っている。

世界的に水産資源が減少し、資源争奪が行われている中で、鯨類を含む海洋生態系としてとらえる「多魚種の一括管理」という手法は、漁業を取り巻く環境や資源の変化を解明し、持続的に活用するためますます重要な意味をもってくると思う。日本鯨類研究所は調査を行い、成果を上げ、鯨類の資源管理とその持続的利用に貢献することが本来の目的であるが、海洋生態系の一員としての鯨類の役割についても、より多くの方々、とりわけ水産に関わる方々に理解してもらえよう努力していきたい。

【藤瀬良弘（ふじせ・よしひろ）氏略歴】 昭和32年大阪府出身。53歳。水産学博士。平成22年11月30日、世界一の鯨類研究機関である「日本鯨類研究所」初のプロパー出身理事長に就任。真面目で緻密、物事にあまり動じない沈着な性格とみえるが、水産系らしくお酒には強いと評判。

Annex 152: “Three Whaling-Related Organisations: Promoting Whale Meat by Strengthening the Sales Structure”, *Minato Shimbun*, 24 January 2011, 6

‘Three Whaling-Related Organisations: Promoting Whale Meat by Strengthening the Sales Structure.’

Source: *Minato Shimbun*, 24 January 2011, page 6.

*Difficult times due to obstruction activities and sluggish sales.
Japan Whaling Association downsizes activities significantly.*

On 20 January, the three major whaling-related organisations, the Institute of Cetacean Research (ICR), the Japan Whaling Association (JWA) and Kyodo Senpaku, held a joint press conference to announce policies concerning strengthening countermeasures to the obstruction activities targeting the whaling fleet and the promotion of whaling by-product sales.

Mr Kazuo Yamamura, President of Kyodo Senpaku, explained that “because the income produced through by-product sales in the first period dropped 30 percent” the response to the situation had included curtailing the JWA’s activities. The situation had also been impacted by the reduction in the whale catch numbers, due to obstruction activities, and sluggish by-product sales.

The ICR reduced the number of its full-time board members to one, and on 30 November 2010, Mr Yoshihiro Fujise, formerly a member of the Institute’s administrative staff, was inaugurated as ICR Director-General. Fujise said he was concerned about the damage due to the obstruction activities, and requested that “countermeasures be implemented” as the current model of meeting the costs of research by selling the by-product was no longer viable.

President Yamamura talked about the policies of the whaling-related organisations that aimed to reduce costs, strengthen whale meat sales structure, and positively differentiate whale meat products from other foods.

Mr Yamamura said he had strengthened the sales structure by replacing the “Sales Distribution Division” with a “Marketing Division”, and had recruited two advisors from outside the company. Mr Yamamura said “we’ll try to get buyers’ interest by emphasising its healthiness, and that customers can feel reassured that it’s safe.” The consumer-focused messages will include health aspects such as the whales are from the very clean Antarctic Ocean, traceability is conducted through DNA registration, and that the food includes balenine.

Referring to the reforming of the distribution system, including changes to price setting and distribution methods, Mr Yamamura pointed out that “whale meat is passed over due to its high price; there’s a lack of responsiveness in the price setting,” and added that “We want to aggressively sell whale meat like any other product”.

Mr Yamamura, who is also Vice-President of the JWA, said, “Although we won’t be undertaking any major activities for the foreseeable future, we aren’t at all giving up our position on the resumption of commercial whaling. We will overcome the crisis and we want to fully restore the JWA to its role as a standard bearer.” JWA staff have been assigned to the marketing division of Kyodo Senpaku to work on expanding by-product sales.

Expressing Concern about Unjustified Obstructions: New ICR President Fujise

The new ICR Director-General, Mr Fujise, participated in the first scientific whaling survey in the Antarctic Ocean in 1987, joined the ICR as a researcher in the following year, and was a member of the ICR's administrative staff. His research focused mainly on the biological characteristics of minke whales used to manage resources. Mr Fujise said, "Biological characteristics thought to be stable in the past, such as premature development and changes to blubber thickness, are showing very large changes, and large-scale research is needed to elucidate the reasons for these changes." He expressed concern, however, about the obstructions to research, saying that "there is an issue with research information being limited by the obstructive activities."

During the most recent scientific whaling season, the whaling fleet experienced extremely vicious obstructions, such as a collision with an anti-whaling vessel and illegal embarkation. As a result, the research was suspended for 31 days. Mr Fujise said, "Violent obstruction activities are continuing this season, and the difficult and dangerous conditions are expected to continue. We will conduct the research as best we can, whilst ensuring the safety of the crew members." For security reasons, Mr Fujise did not elaborate on the details of the measures being taken by the fleet. Illegitimate obstruction activities against scientific whaling have continued each year since 2005, which has resulted in the scientific whaling program not being completed as planned. Furthermore, because by-product sales are no longer able to meet the costs of scientific whaling, Mr Fujise also called for a change in the research model, saying that "we have recently requested support for a range of countermeasures in the near future".

Last year, the IWC held its annual meeting in Agadir, Morocco. Large differences remained between member countries, and no consensus agreement was reached on the future of the IWC as proposed by the Chair and Vice-chair. Mr Fujise said that "it was remarkable that member countries agreed to Denmark's proposal about humpback whale catch quotas," but he expressed concern about the Commission's complete failure to function. This year, the IWC Scientific Committee meeting will be held in Tromso, Norway, at the end of May, and the Annual Meeting will be held in Saint Helier, United Kingdom, in July. Mr Fujise added that "The IWC has entered a period of contemplation and is not holding any meetings at present. We need to keep a close watch on the direction of discussions at the Annual Meeting."

Stay of execution: Japan suspends annual whale hunt

Dickie, Mure; Smith, Peter. *Financial Times* [London (UK)] 17 Feb 2011: pp. 10.

Abstract

"Today's news may well signal the beginning of the end of Japanese whaling in the Southern Ocean," she said. "There are indications that the activities of Sea Shepherd have been effective in significantly reducing this year's catch,"...

Full text

Japan has suspended its annual Antarctic whale hunt, handing a propaganda victory to a group of antiwhaling activists which has been harassing its fleet, write Mure Dickie in Tokyo and Peter Smith in Sydney

Tokyo's fisheries agency said it was considering whether to abandon this year's hunt weeks ahead of schedule because of the activities of vessels of the Sea Shepherd Conservation Society.

"Captures have been suspended in the interest of safety as [Sea Shepherd] has been tailing the research mother ship *Nisshin Maru* since February 1," said Tatsuya Nakaoku, a fisheries official.

The decision comes amid growing international pressure on Tokyo to stop its cull of about 800 whales in the Antarctic, a hunt that is conducted under an exception for scientific research within the international moratorium on commercial whaling. Activist harassment last year meant the fleet caught only 506 whales.

Julia Gillard, Australia's prime minister, and her New Zealand counterpart, John Key, on Wednesday renewed their call for an end to Japan's Antarctic whaling.

Ms Gillard also welcomed Wellington's recent decision to back Australia's action in the International Court of Justice to stop the annual hunt.

Japan has rejected foreign demands that it abandon whaling as hypocritical and has denounced as dangerous and illegal Sea Shepherd's tactics of manoeuvring its vessels to obstruct whaling ships while bombarding their crews with rancid butter.

But the high-profile setback to the hunt is likely to energise anti-whaling groups, which already enjoy a high media profile in many western nations.

Rachel Siewert, an Australian Greens senator, said an early end to the whale hunt would be welcome.

"Today's news may well signal the beginning of the end of Japanese whaling in the Southern Ocean," she said. "There are indications that the activities of Sea Shepherd have been effective in significantly reducing this year's catch."

Masayuki Komatsu, a former senior researcher at Japan's fisheries agency, said it now appeared "highly likely" the hunt would end early, signalling a lack of political will in Tokyo to defend a legal research programme governed by international agreement.

"If Japan is giving up in the face of that unacceptable behaviour, that will set a bad precedent for those who respect the law," Prof Komatsu said.

He said determination to continue the hunt might have been undermined in part by concerns about Japan's growing stockpile of unsold whale meat, which is dwindling in popularity among younger consumers.

Meat from the hunt is sold for food under a treaty provision requiring that resources from research not be wasted.

Tensions between Japanese whale hunters and western activists escalated last year when a high-tech boat operated by Sea Shepherd sank after a collision with a Japanese ship. A Sea Shepherd member was later captured after he boarded a Japanese whaling vessel.

Two Japanese Greenpeace activists who alleged corruption in the research programme were in September convicted of stealing whale meat belonging to a sailor from the fleet.

The activists took meat from a shipping company warehouse in an attempt to gather evidence of what they said was illegal trading, but they were arrested when they turned it over to police.

Credit: By Mure Dickie in Tokyo and Peter Smith in Sydney

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Annex 154: “Halt of Japan’s whaling mission provides food for thought”, *Mainichi Daily News*, 19 February 2011, at <<http://mdn.mainichi.jp/perspectives/editorial/news/20110219p2a00m0na001000c.html>> on 22 March 2011

Halt of Japan's whaling mission provides food for thought - The Mainichi Daily News Page 1 of 2

Halt of Japan's whaling mission provides food for thought

The government has decided to end its research whaling program early this season. Agriculture, Forestry and Fisheries Minister Michihiko Kano explained that it had become difficult to keep whaling ships and their crew safe while the radical environmental group Sea Shepherd persistently tailed the vessels in a bid to obstruct their work.



In this photo released by Sea Shepherd Conservation Society, the crew of the Japanese whaling ship Yushin Maru No. 3, right, aims its water cannon at the Sea Shepherd's high-speed trimaran Gojira during their encounter Friday, Feb. 4, 2011 in the Southern Ocean, Antarctica. (AP Photo/Sea Shepherd, Gary Stokes.)

Sea Shepherd's protests are extreme and dangerous. Its activists began tailing four Japanese whaling ships at the beginning of this year, shortly after they left Japan. They obstructed the Japanese vessels' work, hurling a rope into one ship's path in a bid to tangle its propeller, and throwing bottles at ships on another occasion. Because of the group's interference, the whaling ships have been able to catch far fewer whales than planned.

Aborting the mission should be regarded as the right decision if the safety of the crew is at stake. The remaining question is whether or how Japan should conduct its next research whaling mission.

It is unreasonable to criticize Japan for conducting a scientific survey on the population of whales and their distribution. Furthermore, it is a matter of course that any country should make effective use of marine resources, including whales.

The domestic demand for whale meat as food has drastically decreased in Japan. Whale was an important source of protein shortly after the end of World War II when Japan faced severe food shortages, and was often served in school lunches. Because of this, whale meat apparently creates a sense of nostalgia for many baby-boomers and people from older generations, but the number of those who eat it has significantly decreased. Therefore, stocks of whale meat in Japan have surged to unprecedentedly high levels.

The government cited Sea Shepherd's violent protests as the reason for aborting the current research whaling mission. However, a drastic change in Japanese people's eating habits is also believed to be behind the decision.

Many Japanese people feel uncomfortable about aborting the research whaling program due to pressure from overseas, and have expressed support for the continuation of the mission. However, few Japanese people eat whale meat today, and the need to continue research whaling has significantly decreased. The change in

Japanese people's dietary habits is a more important factor behind the decision than Sea Shepherd's protests.

The end of the current mission marks an end to the second phase of the six-year-long Cetacean research project in the Antarctic Ocean. The government will plan a third phase, which could represent a major turning point in Japan's research whaling. The government should take this opportunity to fundamentally review its whaling policy, and even consider suspending the program. Already at the International Whaling Commission, some member countries have proposed to substantially downscale research whaling.

From both a medium- and long-term perspective, Japan should improve its protection of marine resources to a level meeting international standards. Japan has come under mounting criticism from the international community not only over its whaling program but also over tuna fishing. In order to avoid unjustifiable criticism from overseas, Japan should improve its whole policy on marine resource protection.

(Mainichi Japan) February 19, 2011

Annex 155: P Birnie, "Opinion on the Legality of the Southern Ocean Sanctuary by the International Whaling Commission"

92/10143

Opinion on the Legality of the Designation of the Southern Ocean Whale Sanctuary by the International Whaling Commission

The "Memorandum of Opinion on the Legality of the Designation of the Southern Ocean Whale Sanctuary by the IWC" submitted by Japan raises questions concerning the correct interpretation of the International Convention for the Regulation of Whaling (ICRW) and concludes that in adopting this Sanctuary the Commission exceeded the powers accorded to it under that Convention.

This conclusion is arrived at without specific reference to the general principles of international law governing interpretation of treaties as laid down in the relevant articles of the Vienna Convention on the Law of Treaties 1969¹ to which Japan is party. The Convention is not retroactive but its provisions in this respect are regarded by leading commentators as constituting a general expression of the principles of customary international law on the subject.² Article 31 (1) of the Vienna Convention states that "A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose."

Article 31 (2) makes it clear that the "The context for the purpose of interpretation of a treaty shall comprise, in addition to the text, its preamble and annexes", *inter alia*, and Article 31 (3) requires that "There be taken into account, together with this, (a) any subsequent agreement between the parties regarding the interpretation of the treaty as the application of its provisions; (b) any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation."

Only to confirm the meaning resulting from the above process or if interpretation on the above basis leaves a meaning ambiguous or obscure or leads to a result which is manifestly absurd or unreasonable, does Article 32 permit recourse to supplementary means of interpretation, including the preparatory work of the treaty and the circumstances of its conclusion. The two articles should be operated together³ and the meaning should emerge from the treaty as a whole. According to international law the language of the treaty must be interpreted in the light of the rules of general international law in force at the time of its conclusion, and also in the light of the contemporaneous meaning of its terms.⁴ The doctrine of ordinary meaning, in effect, involves only a presumption and another meaning can be established if there is evidence to support it. Moreover, parties can agree on a particular interpretation, or, under Article 31 (4) accord a special meaning to a term, if the parties intend this.

When a treaty establishes an institution such as the IWC, the subsequent practice of that institution can also be taken into account, insofar as it has legal relevance, in arriving at an interpretation. In general, good faith requires that an interpretation giving effect to the convention's objects and purposes will be preferred, although the Vienna convention does not specifically provide for this. The International Court of

¹Text in J Brownlie (3rd. ed.) *Basic Documents in International Law*, Clarendon Press, Oxford (1983)

²I Sinclair, *The Vienna Convention on the Law of Treaties*, (2nd revised ed.), Manchester University Press (1984).

³Yearbook ILC (1966), II, 219-20

⁴J Brownlie, *Principles of Public International Law*, Clarendon Press, Oxford, (4th ed.) 1990, 629

Justice has supported the application of the principle of effectiveness and developments in some regional courts have shown both an "effective" and an "evolutionary" approach to interpretation of their constitutive instruments.⁵

Institutions such as the IWC are not confined to a narrow interpretation of articles such as Article V based on purely grammatical or linguistic grounds. The IWC can in interpreting such ambiguous phrases as "scientific findings" in Article V (2) (b), adopt an interpretation that fulfils the ICRW's preambular objectives. Moreover contracting governments will now be required to take into account in good faith the UNCED Rio Declaration and Agenda 21 which require application of the precautionary principle or approach and emphasise the rights and needs of future generations.

It is for the Commission to adopt an interpretation that conforms to the broad general principles reflected in the Vienna Convention which themselves require an interpretation that conforms to the ICRW's objectives and purposes. As the ICRW makes no provision for dispute settlement by independent means, the Commission's decision on the Sanctuary, taken through use of the normal voting procedures laid down in Article V, is determinative, and must be regarded as having taken account of all the relevant factors, guidelines and its own relevant practice in this field.

⁵Brownlie, *supra* n.3, 632

Annex 156: Government of Japan, "The Program for Research on the Southern Hemisphere Minke Whale and for Preliminary Research on the Marine Ecosystem in the Antarctic", 1987, SC/38/04 [not including Appendices]

SC/38/04

The Program for Research on the
Southern Hemisphere Minke Whale and
for Preliminary Research on the
Marine Ecosystem in the Antarctic

The Government of Japan

March 1987

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1. Introduction

The moratorium decision on all commercial whaling made at the 34th Annual Meeting of the International Whaling Commission (IWC) came into effect in the 1985/86 season for the Antarctic pelagic whaling and the 1986 season for the coastal whaling. It should be noted, however, that the above decision was made without any scientific justification and in the absence of any recommendations by the Scientific Committee of the IWC (IWC/SC).

The member nations of the International Convention for the Regulation of Whaling (ICRW) should, as a matter of their duties, undertake scientific research in order to achieve the objectives of the ICRW which are to "ensure proper conservation and optimum utilization of the great natural and renewable resources represented by the whale stocks". Japan, therefore, has been continuously contributing strenuously in all possible areas to the study and research on whales through sighting surveys and analyses of data obtained from commercial whaling. Japan neither believes that the cessation of the commercial whaling subsequent to the moratorium decision exempts the Contracting Governments from such duties, nor does it believe that it is proper to disrupt the continuous progress being made on the study on the whales. In the light of this belief Japan has developed a program for research on the southern hemisphere minke whale and for preliminary research

on the marine ecosystem in the Antarctic based on Article VIII of the ICRW.

This program will be implemented so as to;

- (a) estimate various biological parameters including, inter alia, the age-specific natural mortality coefficient which is essential for the assessment of the population productivities of the southern hemisphere minke whale and its management and which the IWC/SC has been discussing as the most important parameter in recent years.
- (b) elucidate the role of whales (the sperm whale and the minke whale) as a key species in the Antarctic marine ecosystem.

The program consists of the research take of whales based on Article VIII of the ICRW and the sighting surveys.

Japan firmly believes that the results to be obtained by the implementation of this program will provide scientific basis for resolving problems facing the IWC which have generated confrontation among the member nations due to the divergent views on the moratorium.

[The summary of the scientific aspects regarding the management of the southern hemisphere minke whale and its relation to this research program (Appendix 1) and the summary of the discussion on the Antarctic marine ecosystem (Appendix 2) are attached to this paper as references to provide a basis for a deeper understanding of this program.]

2. Purpose of the Research

- (1) Estimation of the Biological Parameters Required for the Stock Management of the Southern Hemisphere Minke Whale

The main subject species of this research program is the southern hemisphere minke whale (Balaenoptera acutorostrata), the exploitable population size of which has been estimated to be at least about 260,000 by the IWC/SC.

The main reason for the failure of the IWC/SC to recommend an agreed catch limit in recent years for the southern hemisphere minke whale stock is that the IWC/SC has not been able to reach agreement on the value of the natural mortality coefficient and its age-specific patterns.

Therefore, the primary purpose of this program is to estimate the age-specific natural mortality coefficient by samples through stochastic samplings which are carried out in combination with systematic sighting surveys. The program is also designed to estimate the stock size and its changes required for stock management, and the reproductive parameters and their changes based on the same samples.

- (2) Elucidation of the Role of Whales in the Antarctic Marine Ecosystem

While global scientific interest in the Antarctic

ecosystem has been growing as reflected in the coming into force of the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), the most important need is for data on the prey-predator relationship among the krill, fish and squid, and whales.

To meet the purpose of this program, the stomach contents of the sperm whale (Physeter catodon) will be analyzed to identify the krill-squid-sperm whale prey-predator relationship which is considered as one of the major energy-flows in the Antarctic marine ecosystem. A further analysis of the stomach contents and the measurement of blubber thickness, etc., of the minke whales taken, as part of the research based on (i) above, will be undertaken in order to elucidate the krill-minke whale energy-flow.

3. Research for Estimation of the Biological Parameters Required for the Stock Management of the Southern Hemisphere Minke Whale

(1) Research Method

The samples obtained from the commercial whaling in the past could not represent properly the population structure of the minke whales migrating to the Antarctic because of:

- (a) the concentrated operations in the high density area near the ice edge zone, and
- (b) the catching selectivity with preference for larger whales.

Therefore, the biological parameters estimated using those samples from the commercial whaling are susceptible to some biases.

In order to overcome such shortcomings of the data obtained from the commercial whaling, this program will implement the research take of whales to collect stochastic samples free from possible biases by "nearest neighbors sampling method" (sampling of the animals nearest to the points randomly distributed) based on the density distribution of animals obtained by the expansive sighting survey over the research area, and estimate various biological parameters using the samples thus collected (see Appendix 3 for the details of the sampling method). Therefore, the biological parameters estimated as the result

of this program are expected to be free from biases inherent to the samples from the commercial whaling. For this reason these parameters thus obtained will be useful for the re-evaluation of the parameters already obtained from the commercial whaling in the past. In addition, the natural mortality coefficient, which is the primary purpose of this research program, will be estimated by calculating the decreases of the relative frequency of a given year class between two samples taken in a same area with an appropriate intermission.

(2) Research Items

i) Age-Specific Natural Mortality Coefficient:

Up to 1983, a fixed value had been used for the natural mortality coefficient regardless of age, but if the age-specific natural mortality coefficient could be obtained, then estimate of replacement yield (RY) will be remarkably improved. This parameter is also necessary as an input parameter for the cohort analysis. By using the age-specific natural mortality coefficient, a more accurate estimate of the recent change of RY can be made, and thereby the increasing rate of the stock can be obtained.

ii) Reproductive Parameters:

The estimates of neo-natal sex ratio, litter size, pregnancy rate, age at sexual maturity and others and their changes have to be obtained in order to identify the

reproductive parameters in the stock. Under this research program, biological observation and collection of specimens are to be undertaken with respect to these parameters.

iii) Stock Size:

The stock size of the southern hemisphere minke whale has been estimated by using the data collected by the sighting survey conducted under the International Decade of Cetacean Research Program of the IWC (IWC/IDCR).

Under the present program, systematic sighting surveys based on the line-transect theory (an IDCR type) will be continued to estimate the stock size. By coinciding the Area for the whale sightings with that for the research take of whales, both the stock size and biological parameters such as age-specific natural mortality coefficient can be obtained for the same Area and same year. Hence the stock assessment of the southern hemisphere minke whale stock will be made far more accurate than before, and the repetitive sighting surveys within the same Area will enhance the accuracy of the population estimates.

In addition, various experiments in relation to the sighting parameters will be conducted with the sighting surveys in the program.

iv) Distribution, Structure and Behavior of Minke Whales in the Low Latitudes:

Despite that the biological information of the southern hemisphere minke whales in the breeding area (outside of the Antarctic) is extremely important in order to identify the

stock size, reproductive parameters and migration and other characteristics, these information are very scarce. Therefore, the first several years of this program will include the sighting surveys in the low latitudinal waters to collect information on the pattern of distribution and density, structure and behavior especially that of cow-calf pairs in order to provide the basis for the future researches.

(3) Research Area

Area IV (70°-130°E) and Area V (130°E-170°W) will be surveyed under this research program. The following are the reasons for this selection.

The cumulative numbers of the minke whales taken in the Antarctic by Japanese fleet from 1978/79 through 1985/86 seasons were 455 (Area I), 172 (Area II), 3,772 (Area III), 5,621 (Area IV), 7,913 (Area V), and 3,271 (Area VI). During this period, the biological investigation were conducted on all whales caught. The information from the past researches, therefore, was concentrated in Area IV and Area V, while very little information was obtained for Area I and Area II. For this reason, a lot of information of the stocks migrating into the high latitudes of Area IV and Area V are now available together with the operational knowledge for catching such as the sea and ice condition there. Those information makes the research more efficient.

It should be noted that the researches will be conducted for the two consecutive years in a particular Area, alternating Area IV and Area V in every two years.

(4) Sample Size

Since the primary purpose of this research program is to estimate the age-specific natural mortality coefficient, the sample size must be at least the minimum number required for the estimation of this coefficient.

0.086 (95% confidence limit: 0.060, 0.12) was the value for the natural mortality coefficient (M) of the southern hemisphere minke whale adopted by the IWC/SC in the most recent year. Under this research program, sample size is calculated so as to make detection possible of the decrease between two sets of samples taken in different years in the relative frequency of a cohort to estimate the age-specific natural mortality coefficient, using $M=0.086$ as well as its lower limit of 0.060.

The probability of successfully detecting the change of relative frequencies of the same cohort over the two consecutive years assuming $M=0.086$ (or $M=0.060$) would be extremely low, unless a very large sample size is made available. However, if a certain period of interval could be allowed between two sets of samples, the cumulative number of animals dead due to natural mortality during such period would grow large and thus detection of decrease can

be made possible with a smaller sample size. If the interval between the two samplings is set longer, the natural mortality coefficient can be estimated with a sufficiently high precision with a small sample size, while there could be a demerit from a prolonged sampling interval such as a possible noise that might occur in the age composition due to continuous increase of recruitment. Under this research program, the sampling interval of four years is adopted in consideration of the effect of the catch to the reproductivity of the stock and the practical reasons of the logistics such as the steaming capacity of the research vessels. However, actual sampling will be made in the two consecutive years in a particular Area. Samples thus collected from two consecutive years are pooled together to make one set of age composition for comparison with similar set of age composition collected after four years from the same Area. Assuming no change in the stock size, with $M=0.086$, during two samplings, the relative frequency to the total samples of a given year class in the second sampling (P_2) must decrease to 70.9% of that in the first sampling (P_1) after four years ($P_2=P_1e^{-0.086 \times 4}$). This research program is designed to obtain the sample size necessary for the detection of such decrease in the relative frequency of one certain year class in a statistically significant manner.

According to the data collected from the commercial whaling, the sample size must be considerably large for

estimating the natural mortality coefficient of individual cohort. In the case of a limited sample size below a certain level, some handling strategy such as grouping of the cohort will be necessary.

According to the crude age composition of the Antarctic Area IV and Area V obtained from the commercial whaling (Fig. 1), the age at which the calculation of the natural mortality coefficient is possible from the catch curve is approximately the age of 20 or above, and the relative frequency of animals above this age is 30% to 20%. If these age groups were combined to 5 - 6 groups, then the average relative frequency of each group amounts to 6 - 5%. If the decrease in the age compositions of the same cohort is detected at 5% significance level (at $p=0.05$) with the research cycle of four years, the sample size is calculated to be 1,479 to 1,794, the average of which is approximately 1,650 (from Appendix 4). Adopting the average 1,650 as the sample size and dividing this number into the two year sampling period, 825 samples are required in each sampling year.

In the case where the estimate of the natural mortality coefficient obtained turns out to be smaller than expected, $M=0.060$ for example, the estimate with sufficient precision cannot be achieved with the sample size of about 1,650 and therefore, an increase of the sample size or re-grouping of the cohort will become necessary. In this case, the estimate of the natural mortality coefficient could be

obtained with the same precision as the case in which $M=0.086$ is adopted, by grouping the cohort into two or so groups.

Such inefficiency in the estimation was resulted from the lack of the data of the younger age whales. In the case of the well designed sampling of whales covering evenly all the waters of distribution, such inefficiency would be eliminated. Moreover, the estimation efficiency and its reliability would be enhanced if the relationship between the natural mortality coefficient and age is established.

(5) Outline of the Implementation of the Research Program

The first stage of the program will be for four years from 1987/88 to 1990/91. The second stage will be for another four years from 1991/1992, and the third stage will be from 1995/96. The first stage will be implemented with the research in the two Areas, Area IV and Area V, with a rotation of research Areas by every two years as one cycle. The research in this stage will include the sighting survey for the third round in Area IV and Area V where the sighting surveys have already been conducted by the IWC/IDCR, together with the assessment of the population structure such as age composition and other biological aspects based on the whales taken under the stochastic sampling.

The research in the second stage will be sampling of the whales to derive, inter alia, the age-specific natural

mortality coefficient by the comparison of the age composition with the samples taken during the course of the first stage of the program. This will be carried out again in combination with the sighting surveys in the Area IV and Area V. The research in the third stage will be the follow-up of the research conducted in the first and second stages, the detail of which will be worked out later in the light of progress made in those stages.

Although the importance of the collection of the biological data from the low latitudinal waters (breeding grounds) has been recognized, only a very limited information on the distribution, structure and behavior of the minke whales have been available to date. Therefore, the survey of the time-space distribution pattern, density and structure by sighting will be initiated in the early part of the research program so as to consider the implementation of the research involving take of whales in the low latitudinal waters (breeding grounds) to ascertain the stock identity, reproductive cycle and juvenile natural mortality coefficient.

The outline of the annual plans for the sighting surveys and the sampling of whales is shown in the following Table 1.

Table 1
Plan for Implementation of the Research Program

| Season | Stage | Area for Sighting | Area for Sampling |
|---------|-----------|-------------------|-------------------|
| 1987/88 | 1st Stage | IV | IV |
| 1988/89 | " | IV | IV |
| 1989/90 | " | V | V |
| 1990/91 | " | V | V |
| 1991/92 | 2nd Stage | IV | IV |
| 1992/93 | " | IV | IV |
| 1993/94 | " | V | V |
| 1994/95 | " | V | V |
| 1995/96 | 3rd Stage | - | - |
| 1996/97 | " | - | - |
| - | - | - | - |
| - | - | - | - |

i) Sighting Surveys:

| | |
|-----------------------------|--|
| Number of Vessels; | Two vessels each year. |
| Area; | The same Area in which sampling is conducted |
| Relation with the IWC/IDCR; | The period and duration, steaming distance and research items under sighting survey of |

this program will be adjusted with the IWC/IDCR type survey to the extent possible.

ii) Sampling:

Time: December to March
Number of Vessels: One factory ship (research base) each year, and two sampling vessels each year
Area and Sample Size: The following total number in each Area will be sampled over the period of four years in the first stage.

| | | | |
|---------|---------|-----|---------|
| 1987/88 | Area IV | 825 | } 1,650 |
| 1988/89 | Area IV | 825 | |
| 1989/90 | Area V | 825 | } 1,650 |
| 1990/91 | Area V | 825 | |

4. Research to Elucidate the Role of Whales in the Antarctic Marine Ecosystem

(1) Research Method

Examination of the stomach contents and measurement of nutritious characteristics of the sampled sperm whales and minke whales (see chapter 3) will be implemented.

(2) Research Items

i) Stomach Contents of the Sperm Whale:

Identification of the food species and measurement, as far as possible, of the weight of the stomach contents as well as examination of other characteristics such as the nutritious condition of the whale.

ii) Biological Parameter of the Sperm Whale:

In addition to the research on the stomach contents described above, various biological examinations will be carried out with all sampled whales in relation to the reproductive and growth parameters.

iii) Stomach Contents and Amount of Fat Reserve of the Whale:

The food species from the stomach contents of all sampled minke whales will be identified, and as far as possible the weight of the contents will be measured. Some indices of amount of the fat reserve such as thickness of

blubber will be also measured.

In addition, biological measurement of length, weight, and sex, as far as possible, of the food species such as krills which retain their original form, and collection of krills with fresh condition or other organisms among the stomach contents will be made.

iv) Research on the Marine Pollution Using Whale Tissues and Stomach Contents:

Concerns have been expressed regarding the marine pollution in a global scale today, and it is feared that the pollution is reaching the Antarctic. Although it may be outside of the principal purposes of this research program, examination of heavy metals and other substances in the tissue of various organs and debris in the stomach of the sampled whales will be conducted.

(3) Research Area

i) The Sperm Whale:

The research involving take of sperm whales will be implemented in the four Divisions, Div. 4 - 7.

ii) The Minke Whale:

The samples collected according to the research described in chapter 3 will be used. Therefore, the research area will be the same area as described in chapter 3-(3).

(4) Sample Size

i) The Sperm Whale:

The research will be implemented for duration of the first and second stages of the research under chapter 3, with two years of sampling in each Division (Div. 4 - 7).

The maximum sample size in each year is 50 males.

ii) The Minke Whale:

The samples collected according to the research described in chapter 3 will be used.

5. Organization of the Research

(1) The Whale Research Coordinating Committee (Provisional Name)

A standing committee will be organized which coordinates various phases of this research program and will be tentatively called "Whale Research Coordinating Committee". The committee will consist of the Whale Research Institute, the Far Seas Fisheries Research Laboratory, the Fisheries Agency and other relevant institutions.

The secretariat of this committee will be located in the Whale Research Institute, who will be also in charge of the liaison and communication with other organizations and individuals outside of the Committee.

(2) Sampling

The Whale Research Institute will implement the sampling research. Therefore, the special permit by the Government of Japan provided for by Article VIII of the ICRW will be issued to the Whale Research Institute.

(3) Sighting Surveys

The Government of Japan is prepared to offer two

research vessels for the IWC/IDCR sighting research cruise, provided that the sighting survey Area coincides with the sampling research Area and it would not interfere with the implementation of this research program by Japan.

(4) Researches Proposed by Other International or Domestic Institutions

The Whale Research Coordinating Committee will consider proposals for researches by other international or domestic institutions, following the procedure described below, provided that such proposals are made on timely basis and without hindrance to the implementation of this program.

- (a) Submission(s) for research item(s) proposed by scientific research organization(s), or scientist(s), either international or domestic.
- (b) Consideration on practicability of a proposal such as:
 - instrument required for the proposed research
 - restrictions by time available
 - restrictions by manpower available
- (c) Adjustment of the allocation of the research costs

(5) Opportunities for Participation by Foreign Scientists

Opportunities for participation in the research cruises under this program will be given to any scientist to the extent allowed by accomodation and other logistic

consideration, provided that such participation does not cause inconveniences in the implementation of the program. The selection of the participants, however, will be finalized by the Whale Research Coordinating Committee who will consider the various conditions such as accommodation and others for determination.

(6) Conditions for Participation

i) Costs:

Costs for participation, travel expenses to and from the port of boarding the research vessel, meals on board the research vessel, and any special instruments required by the participant will be borne by the participant.

ii) Indemnification and insurance for casualty or personal injury on board the research vessels:

The Whale Research Institute and the crew of the research vessel or research team will not be held responsible for any casualty or personal injury to the participants resulting from the participant's negligence or force majeure.

iii) Cancellation of participation:

Any participants who are found to have intentionally sabotaged in the course of implementation of the researches and thereby impaired the execution of such researches shall be cancelled of his/her participation in this program.

(7) Publication of the Information Collected by the Research

i) Basic rules:

All the data specified in Schedule 27, 28, and 29 to the ICRW, collected under this program, will be reported to the IWC according to the guideline set forth separately. Such data and materials will be placed under the supervision of the IWC allowing free access to the scientific activities by the IWC. In addition, the biological materials collected by this program will be kept in the custody of the Whale Research Institute and may be offered to researchers for scientific studies. However, this principle does not necessarily apply to some of the information pertaining to the researches on the Antarctic ecosystem.

ii) Procedures for reporting:

The format of the report containing information to be given to the IWC will be determined separately. The deadline for such reporting to the IWC will be set in accordance with the activities of the IWC/SC.

iii) Obligation of the users:

Persons who have utilized information or data collected by this program for their scientific thesis or other publications shall be required to so state and describe the data source including at least the title of this program and workers' name(s) who compiled the original data in such thesis or publications, and shall be obliged to send a copy

of such thesis or publications to the Whale Research
Institute.

6. Expected Effects of the Catches on the Stock

(1) The Minke Whale

i) Sample Size Compared with RY:

The IWC/SC has recommended to the IWC every year since 1979 the catch limits of the stocks of this species based on the RY estimates with correction for the sex ratio in the catch. In the recent years, however, the IWC/SC has not been able to reach agreement on the estimates of the RY values. The 37th Annual Meeting of the IWC/SC in 1985 lost the basis for the need of recommendation of the catch limits because of the moratorium for the commercial whaling. Although an agreement was reached on the stock size, there were four different proposals on RY at that IWC/SC Meeting (Table 2).

Table 2: The proposals on RY of the southern hemisphere minke whale at 37th IWC/SC

| | Area IV | Area V |
|--------|-------------|-------------|
| View 1 | 885 | 921 |
| View 2 | 1,328 | 1,381 |
| View 3 | 1,328-1,771 | 1,381-1,842 |
| View 4 | 1,498 | 1,119 |

The planned sample size for the first stage of the research is 1,650 animals in the Areas IV and V, respectively (825 whales per year). Since the sampling in each Area will be conducted for two years out of four year period, the mean annual sample size during four years will be 413. It should be noted also that the number of samples of 825 is less than the smallest RY (View 1) recommended for Area IV or V (Table 2) and is between 45% and 74% of RYs of other views.

As already known, the stock size of the minke whale migrating into the Antarctic whaling ground estimated by the sighting survey is considerably smaller than that of the total population, so that a real RY for total population should be greater than the values expressed in all of the views above (Table 2); hence the upward correction of RY would be necessary.

ii) Diffusible Effects of Sampling to the Reproduction:

The present sampling plan does not exceed the minimum estimation of RY in any of the single year, and the mean annual sample size in each stage of the research is far below RY. Therefore, on the premises that there is no environmental changes, the stock size of the southern hemisphere minke whale is expected to continue to increase under this research program.

iii) Diffusible Effects of Sampling to the Ecosystem:

The IWC/SC has no established technique with regard to the assessment of the effects to the ecosystem. In the case

where 825 whales are taken in one stage (mean annual sample size of 413 whales) out of the estimated population of about 50,000 whales at least, the detection of the effects of such catches to the ecosystem within the short term of the research will be likely to become impossible due to their absorption into the various noises. Therefore, the detection of the effects needs to be made in relation to other factors in the ecosystem over a long term.

(2) The Sperm Whale

1) Sample Size Compared with RY:

The stock assessment of the Antarctic sperm whale was made at the Annual Meeting of the IWC/SC in 1979 for the last time; no systematic assessment with regard to the stock has been made since then. It should be noted that there have been no catches from these stocks since 1981/82 season.

At the Sperm Whale Sub-Committee in 1979, (a) CPUE analysis based on the La Jolla model, (b) analysis by division using the population estimated by sighting (of which, an analysis of mark and mark recapture data for Division 3, and estimation technique of catch/fishing mortality for Division 3, and estimation technique of catch/fishing mortality for Division 9 were utilized) were made. The estimates made by using the technique (b) were not adopted for recommendation to the IWC after all.

The estimates by the above technique (a) for Divisions

2, 4, 5, and 9 were adopted, but were considered to give underestimates, while it was pointed out that some factors exist in the technique that might give over-estimates. In addition, due to the doubts concerning the compatibility between the observed value of pregnancy rate and the estimated value from the La Jolla model, it was impossible to estimate the MSY and the level of MSY against the Initial Management Population. It was possible, however, to estimate the population of Division 3 utilizing the mark and mark recapture analysis.

The stock size and RY for Divisions 1 to 8 as of 1979 were calculated as shown in the Table 3 below. The stock assessment for Division 9 was made at the IWC/SC Meeting in 1980.

Table 3: The Stock size and RY of the sperm whale for Div.'s 1 to 8

| | Division | | | | | | | |
|-------------------|----------|--------|--------|--------|--------|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Male Population | - | 10,610 | 6,580 | 7,560 | 4,160 | | | |
| RY | - | 765 | - | 743 | 741 | - | - | - |
| Female Population | - | 41,140 | 42,900 | 32,260 | 30,840 | | | |
| RY | - | - | - | - | - | - | - | - |

In the Sub-Committee, some members believed that the

IWC/SC should recommend the estimates to the IWC. Other members believed that it should not make recommendation because they believed that there was a serious doubt in the estimates.

In 1980, the Annual Meeting of the IWC/SC conducted the stock assessment of Division 9, and estimated that the population of the males of over age 10 in 1981 is 66,500 and the females over age 9 in 1981 is 124,600. Although the estimated value of RY was not shown, it was recommended that the MSY of the females was 405.

ii) Diffusible Effects of Sampling to Reproduction:

No assessment technique is available at the present time to accurately evaluate the effects of the catch which represents approximately 7% of RY to the reproduction of each stock. Furthermore, the effects of such number of the catch would be impossible to measure because it would be overshadowed by the dynamics of the population caused by the natural factors; its effects are considered to be only negligible for either short or long term.

iii) Diffusible Effects of Sampling on the Ecosystem:

As in the case of the diffusible effects to reproduction, it would be almost impossible to quantify the effects to the ecosystem. Such effects are considered to be virtually negligible.

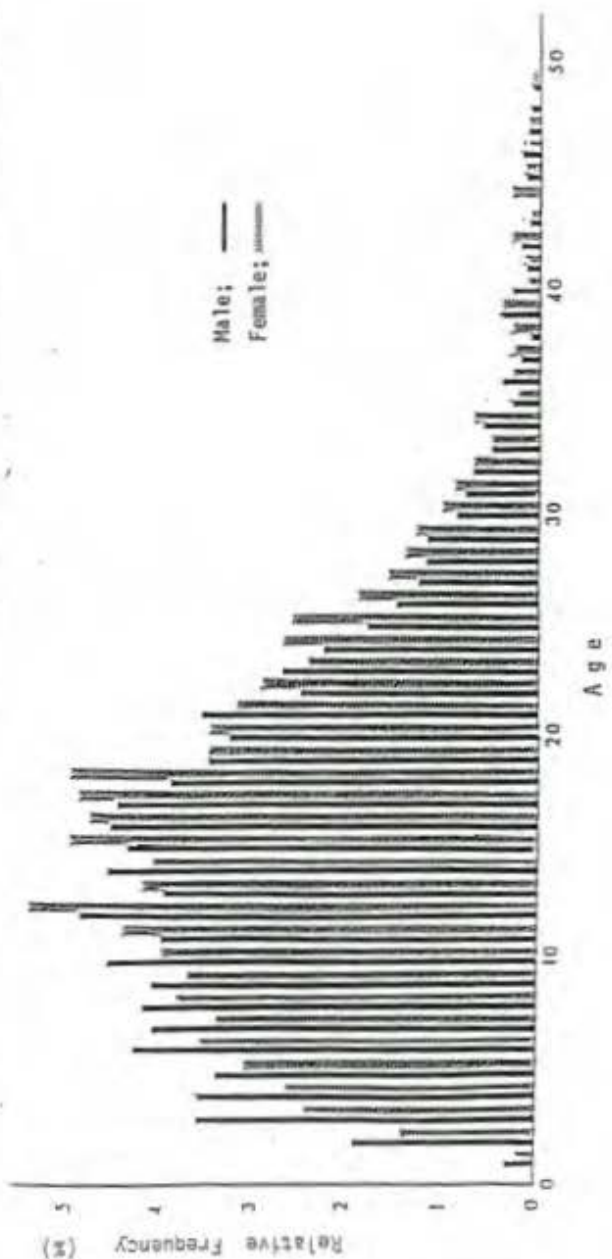
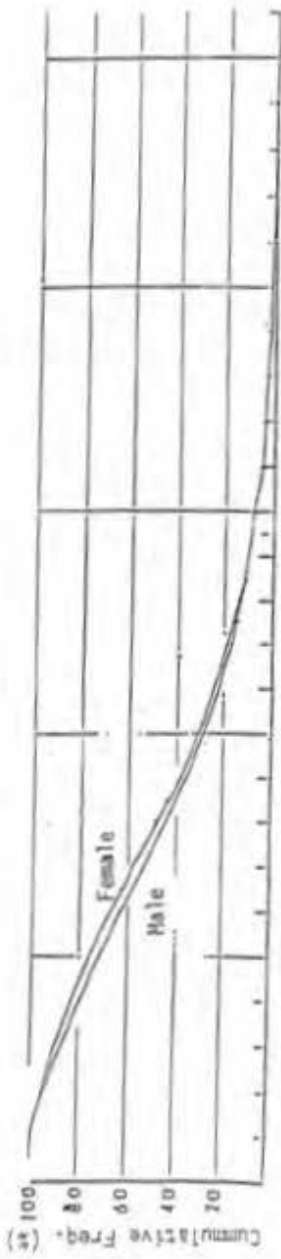


Fig. 1 Age compositions (bottom) and cumulative frequency (relative) starting from oldest age class (top) by sex based on the catches by the Japanese Antarctic whaling expeditions from 1970/79 to 1979/84, see page 36. Area IV.

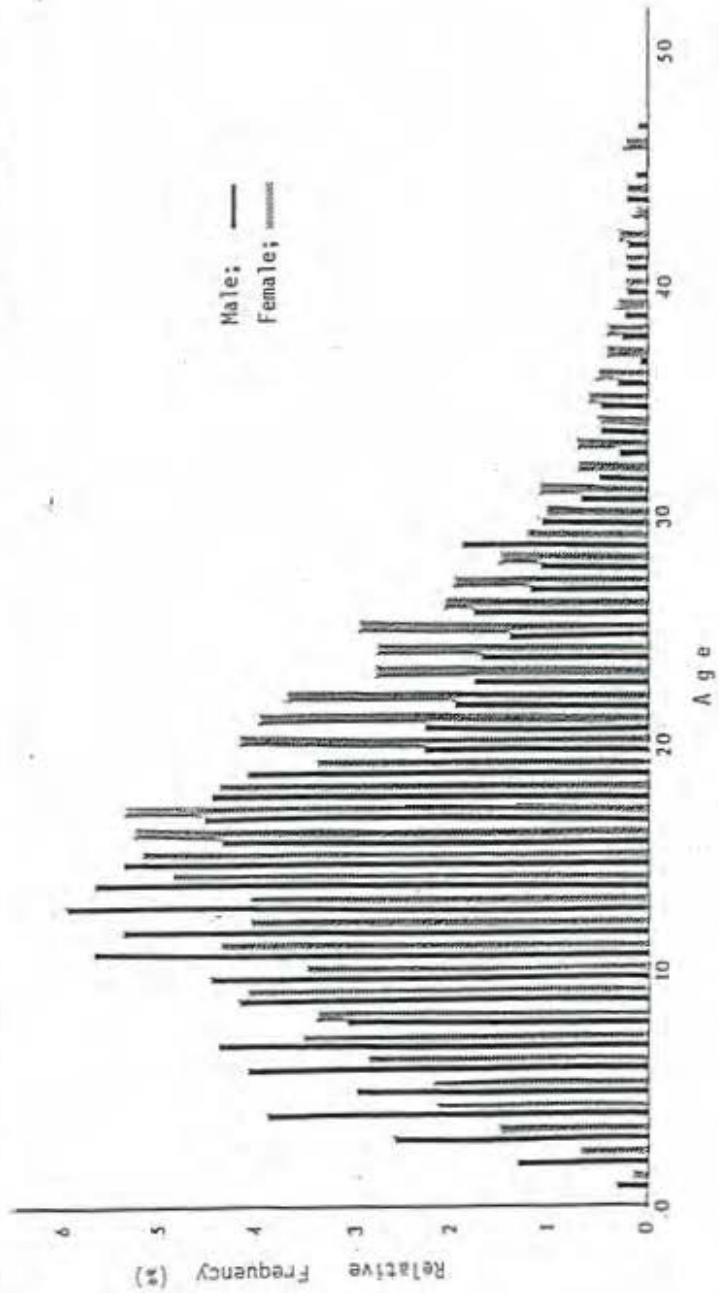
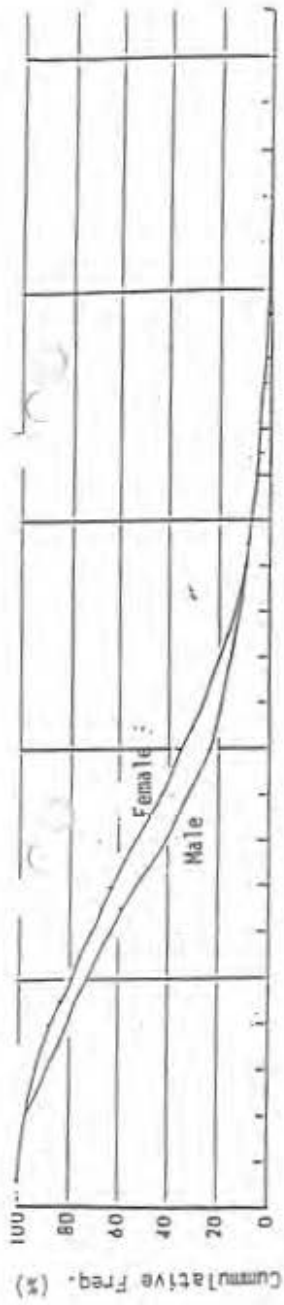


Fig. 1 (cont.) Area V

