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**International Court
of Justice**

LA HAYE

**Cour internationale
de Justice**

THE HAGUE

YEAR 2013

Public sitting

held on Thursday 27 June 2013, at 3 p.m., at the Peace Palace,

President Tomka presiding,

*in the case concerning Whaling in the Antarctic (Australia v. Japan:
New Zealand intervening)*

VERBATIM RECORD

ANNÉE 2013

Audience publique

tenue le jeudi 27 juin 2013, à 15 heures, au Palais de la Paix,

sous la présidence de M. Tomka, président,

*en l'affaire relative à la Chasse à la baleine dans l'Antarctique
(Australie c. Japon ; Nouvelle-Zélande (intervenant))*

COMPTE RENDU

Present: President Tomka
Vice-President Sepúlveda-Amor
Judges Owada
Abraham
Keith
Bennouna
Skotnikov
Caçado Trindade
Yusuf
Greenwood
Xue
Donoghue
Gaja
Sebutinde
Bhandari
Judge *ad hoc* Charlesworth
Registrar Couvreur

Présents : M. Tomka, président
M. Sepúlveda-Amor, vice-président
MM. Owada
Abraham
Keith
Bennouna
Skotnikov
Cañado Trindade
Yusuf
Greenwood
Mmes Xue
Donoghue
M. Gaja
Mme Sebutinde
M. Bhandari, juges
Mme Charlesworth, juge *ad hoc*

M. Couvreur, greffier

The Government of Australia is represented by:

The Honourable Mark Dreyfus Q.C., M.P., Attorney-General of Australia,

as Counsel and Advocate;

Mr. Bill Campbell, Q.C., General Counsel (International Law), Attorney-General's Department,

as Agent, Counsel and Advocate;

H.E. Mr. Neil Mules, A.O., Ambassador of Australia to the Kingdom of the Netherlands,

as Co-Agent;

Mr. Justin Gleeson, S.C., Solicitor-General of Australia,

Mr. James Crawford, A.C., S.C., F.B.A., Whewell Professor of International Law, University of Cambridge, member of the Institut de droit international, Barrister, Matrix Chambers, London,

Mr. Henry Burmester, A.O., Q.C., Special Counsel, Australian Government Solicitor,

Mr. Philippe Sands, Q.C., Professor of Law, University College London, Barrister, Matrix Chambers, London,

Ms Laurence Boisson de Chazournes, Professor of International Law at the University of Geneva,

as Counsel and Advocates;

Ms Kate Cook, Barrister, Matrix Chambers, London,

Dr. Makane Mbengue, Associate Professor, University of Geneva,

as Counsel;

Ms Anne Sheehan, Acting Assistant-Secretary, Attorney-General's Department,

Mr. Michael Johnson, Principal Legal Officer, Attorney-General's Department,

Ms Danielle Forrester, Principal Legal Officer, Attorney-General's Department,

Ms Stephanie Ierino, Acting Principal Legal Officer, Attorney-General's Department,

Ms Clare Gregory, Senior Legal Officer, Attorney-General's Department,

Ms Nicole Lias, Acting Senior Legal Officer, Attorney-General's Department,

Ms Erin Maher, Legal Officer, Attorney-General's Department,

Mr. Richard Rowe, Senior Legal Adviser, Department of Foreign Affairs and Trade,

Dr. Greg French, Assistant Secretary, Department of Foreign Affairs and Trade,

Le Gouvernement de l'Australie est représenté par :

L'honorable Mark Dreyfus, Q.C., M.P., *Attorney-General* d'Australie,

comme conseil et avocat ;

M. Bill Campbell Q.C., General Counsel (droit international), services de l'*Attorney-General* d'Australie,

comme agent, conseil et avocat ;

S. Exc. M. Neil Mules, A.O., ambassadeur d'Australie auprès du Royaume des Pays-Bas,

comme coagent ;

M. Justin Gleeson, S.C., *Solicitor-General* d'Australie,

M. James Crawford, A.C., S.C., F.B.A., professeur de droit international à l'Université de Cambridge, titulaire de la chaire Whewell, membre de l'Institut de droit international, avocat, Matrix Chambers (Londres),

M. Henry Burmester, A.O., Q.C., *Special Counsel, Solicitor* du Gouvernement australien,

M. Philippe Sands, Q.C., professeur de droit au University College de Londres, avocat, Matrix Chambers (Londres),

Mme Laurence Boisson de Chazournes, professeur de droit international à l'Université de Genève,

comme conseils et avocats ;

Mme Kate Cook, avocat, Matrix Chambers (Londres),

M. Makane Mbengue, professeur associé à l'Université de Genève,

comme conseils ;

Mme Anne Sheehan, secrétaire adjoint par intérim, services de l'*Attorney-General*,

M. Michael Johnson, juriste principal, services de l'*Attorney-General*,

Mme Danielle Forrester, juriste principal, services de l'*Attorney-General*,

Mme Stephanie Ierino, juriste principal par intérim, services de l'*Attorney-General*,

Mme Clare Gregory, juriste hors classe, services de l'*Attorney-General*,

Mme Nicole Lyas, juriste hors classe par intérim, services de l'*Attorney-General*,

Mme Erin Maher, juriste, services de l'*Attorney-General*,

M. Richard Rowe, juriste hors classe, ministère des affaires étrangères et du commerce,

M. Greg French, secrétaire adjoint, ministère des affaires étrangères et du commerce,

Mr. Jamie Cooper, Legal Officer, Department of Foreign Affairs and Trade,

Ms Donna Petrachenko, First Assistant Secretary, Department of Sustainability, Environment, Water, Population and Communities,

Mr. Peter Komidar, Director, Department of Sustainability, Environment, Water, Population and Communities,

Dr. Bill de la Mare, Scientist, Australian Antarctic Division, Department of Sustainability, Environment, Water, Population and Communities,

Dr. David Blumenthal, Senior Adviser, Office of the Attorney-General,

Ms. Giulia Baggio, First Secretary, Senior Adviser, Office of the Attorney-General,

Mr. Todd Quinn, First Secretary, Embassy of Australia in the Kingdom of the Netherlands,

as Advisers;

Ms Mandy Williams, Administration Officer, Attorney-General's Department,

as Assistant.

The Government of Japan is represented by:

Mr. Koji Tsuruoka, Deputy Minister for Foreign Affairs,

as Agent;

H.E. Mr. Yasumasa Nagamine, Ambassador Extraordinary and Plenipotentiary of Japan to the Kingdom of the Netherlands,

as Co-Agent;

Mr. Alain Pellet, Professor at the University of Paris Ouest, Nanterre-La Défense, President of the Société française pour le droit international, associate member of the Institut de droit international,

Mr. Vaughan Lowe, Q.C., member of the English Bar, Emeritus Professor of International Law, Oxford University, associate member of the Institut de droit international,

Mr. Alan Boyle, Professor of International Law at the University of Edinburgh, member of the English Bar,

Mr. Yuji Iwasawa, Professor of International Law at the University of Tokyo, member and former Chairperson of the Human Rights Committee,

Mr. Payam Akhavan, LL.M., S.J.D. (Harvard), Professor of International Law, McGill University, member of the Bar of New York and the Law Society of Upper Canada,

Mr. Shotaro Hamamoto, Professor of International Law, Kyoto University,

Ms Yukiko Takashiba, Deputy Director, ICJ Whaling Case Division, Ministry of Foreign Affairs,

as Counsel and Advocates;

M. Jamie Cooper, juriste, ministère des affaires étrangères et du commerce,

Mme Donna Petrachenko, premier secrétaire adjoint, ministère du développement durable, de l'environnement, de l'eau, des populations et des communautés,

M. Peter Komidar, directeur, ministère du développement durable, de l'environnement, de l'eau, des populations et des communautés,

M. Bill de la Mare, scientifique, division de l'Antarctique australien, ministère du développement durable, de l'environnement, de l'eau, des populations et des communautés,

M. David Blumenthal, conseiller principal, services de l'*Attorney-General*,

Mme Giulia Baggio, conseiller principal, services de l'*Attorney-General*,

M. Todd Quinn, premier secrétaire, ambassade d'Australie au Royaume des Pays-Bas,

comme conseillers ;

Mme Mandy Williams, administrateur, services de l'*Attorney-General*,

comme assistant.

Le Gouvernement du Japon est représenté par :

M. Koji Tsuruoka, ministre adjoint des affaires étrangères,

comme agent ;

S. Exc. M. Yasumasa Nagamine, ambassadeur extraordinaire et plénipotentiaire du Japon auprès du Royaume des Pays-Bas,

comme coagent ;

M. Alain Pellet, professeur à l'Université Paris Ouest, Nanterre-La Défense, président de la Société française pour le droit international, membre associé de l'Institut de droit international,

M. Vaughan Lowe, Q.C., membre du barreau d'Angleterre, professeur émérite de droit international à l'Université d'Oxford, membre associé de l'Institut de droit international,

M. Alan Boyle, professeur de droit international à l'Université d'Edimbourg, membre du barreau d'Angleterre,

M. Yuji Iwasawa, professeur de droit international à l'Université de Tokyo, membre et ancien président du Comité des droits de l'homme,

M. Payam Akhavan, LL.M., S.J.D (Harvard), professeur de droit international à l'Université McGill, membre du barreau de New York et du barreau du Haut-Canada,

M. Shotaro Hamamoto, professeur de droit international à l'Université de Kyoto,

Mme Yukiko Takashiba, directeur adjoint à la division chargée de l'affaire de la chasse à la baleine devant la CIJ, ministère des affaires étrangères,

comme conseils et avocats ;

Mr. Takane Sugihara, Emeritus Professor of International Law, Kyoto University,

Ms Atsuko Kanehara, Professor of International Law, Sophia University (Tokyo),

Mr. Masafumi Ishii, Director-General, International Legal Affairs Bureau, Ministry of Foreign Affairs,

Ms Alina Miron, Researcher, Centre de droit international de Nanterre (CEDIN), University of Paris Ouest, Nanterre-La Défense,

as Counsel;

Mr. Kenji Kagawa, Director-General, Resources Enhancement Promotion Department, Fisheries Agency,

Mr. Noriyuki Shikata, Minister, Embassy of Japan in the United Kingdom of Great Britain and Northern Ireland,

Mr. Kenichi Kobayashi, Director, International Legal Affairs Division, Ministry of Foreign Affairs,

Mr. Joji Morishita, Director-General, National Research Institute of Far Seas Fisheries,

Mr. Akima Umezawa, Ph.D., Director, Fishery Division, Ministry of Foreign Affairs,

Ms Yoko Yanagisawa, Director, ICJ Whaling Case Division, Ministry of Foreign Affairs,

Mr. Naohisa Shibuya, Deputy Director, ICJ Whaling Case Division, Ministry of Foreign Affairs,

Mr. Ken Sakaguchi, ICJ Whaling Case Division, Ministry of Foreign Affairs,

Ms Akiko Muramoto, ICJ Whaling Case Division, Ministry of Foreign Affairs,

Mr. Masahiro Kato, ICJ Whaling Case Division, Ministry of Foreign Affairs,

Mr. Takaaki Sakamoto, Assistant Director, International Affairs Division, Fisheries Agency,

Mr. Shigeki Takaya, Assistant Director, Fisheries Management Improvement Division, Fisheries Agency,

Mr. Toshinori Uoya, Assistant Director, Fisheries Management Division, Fisheries Agency,

Mr. Shinji Hiruma, Assistant Director, International Management Division, Fisheries Agency,

Mr. Sadaharu Kodama, Legal Adviser, Embassy of Japan in the Kingdom of the Netherlands,

Mr. Nobuyuki Murai, LL.D., First Secretary, Embassy of Japan in the Kingdom of the Netherlands,

- M. Takane Sugihara, professeur émérite de droit international de l'Université de Kyoto,
- Mme Atsuko Kanehara, professeur de droit international à l'Université Sophia (Tokyo),
- M. Masafumi Ishii, directeur général du bureau des affaires juridiques internationales, ministère des affaires étrangères,
- Mme Alina Miron, chercheur, Centre de droit international de Nanterre (CEDIN), Université Paris Ouest, Nanterre-La Défense,

comme conseils ;

- M. Kenji Kagawa, directeur général du département de la promotion de la valorisation des ressources, agence des pêcheries,
- M. Noriyuki Shikata, ministre à l'ambassade du Japon au Royaume-Uni de Grande-Bretagne et d'Irlande du Nord,
- M. Kenichi Kobayashi, directeur à la division des affaires juridiques internationales, ministère des affaires étrangères,
- M. Joji Morishita, directeur général de l'Institut national de recherche sur les pêcheries en eaux lointaines,
- M. Akima Umezawa, Ph.D., directeur à la division des pêcheries, ministère des affaires étrangères,
- Mme Yoko Yanagisawa, directeur à la division chargée de l'affaire de la chasse à la baleine devant la CIJ, ministère des affaires étrangères,
- M. Naohisa Shibuya, directeur adjoint à la division chargée de l'affaire de la chasse à la baleine devant la CIJ, ministère des affaires étrangères,
- M. Ken Sakaguchi, division chargée de l'affaire de la chasse à la baleine devant la CIJ, ministère des affaires étrangères,
- Mme Akiko Muramoto, division chargée de l'affaire de la chasse à la baleine devant la CIJ, ministère des affaires étrangères,
- M. Masahiro Kato, division chargée de l'affaire de la chasse à la baleine devant la CIJ, ministère des affaires étrangères,
- M. Takaaki Sakamoto, sous-directeur à la division des affaires internationales, agence des pêcheries,
- M. Shigeki Takaya, sous-directeur à la division de l'amélioration de la gestion des pêcheries, agence des pêcheries,
- M. Toshinori Uoya, sous-directeur à la division de la gestion des pêcheries, agence des pêcheries,
- M. Shinji Hiruma, sous-directeur à la division de la gestion internationale, agence des pêcheries,
- M. Sadaharu Kodama, conseiller juridique à l'ambassade du Japon au Royaume des Pays-Bas,
- M. Nobuyuki Murai, LL.D., premier secrétaire de l'ambassade du Japon au Royaume des Pays-Bas,

Ms Risa Saijo, LL.M., Researcher, Embassy of Japan in the Kingdom of the Netherlands,

Ms Héloïse Bajer-Pellet, member of the Paris Bar,

as Advisers;

Mr. Douglas Butterworth, Emeritus Professor, University of Cape Town,

Ms Judith E. Zeh, Ph.D., Researcher Professor Emeritus, University of Washington,

Mr. Dan Goodman, National Research Institute of Far Seas Fisheries,

Mr. Luis Alberto Pastene Perez, Ph.D., Director, Survey and Research Division, Institute of Cetacean Research,

as Scientific Advisers and Experts;

Mr. Martin Pratt, Professor, Department of Geography, Durham University,

as Expert Adviser;

Mr. James Harrison, Ph.D., Lecturer in International Law, University of Edinburgh,

Ms Amy Sander, member of the English Bar,

Mr. Jay Butler, Visiting Associate Professor of Law, George Washington University Law School, member of the New York Bar,

as Legal Advisers.

The Government of New Zealand is represented by:

The Honourable Christopher Finlayson Q.C., M.P., Attorney-General of New Zealand,

as Counsel and Advocate;

Dr. Penelope Ridings, International Legal Adviser, Ministry of Foreign Affairs and Trade,

as Agent, Counsel and Advocate;

H.E. Mr. George Troup, Ambassador of New Zealand to the Kingdom of the Netherlands,

as Co-Agent;

Ms Cheryl Gwyn, Deputy Solicitor-General, Crown Law Office,

Ms Elana Geddis, Barrister, Harbour Chambers, Wellington,

as Counsel;

Mr. Andrew Williams, Legal Adviser, Ministry of Foreign Affairs and Trade,

Mme Risa Saijo, LL.M., chercheur à l'ambassade du Japon au Royaume des Pays-Bas,

Mme Héloïse Bajer-Pellet, membre du barreau de Paris,

comme conseillers ;

M. Douglas Butterworth, professeur émérite de l'Université de Cape Town,

Mme Judith E. Zeh, Ph.D., chercheur, professeur émérite de l'Université de Washington,

M. Dan Goodman, Institut national de recherche sur les pêcheries en eaux lointaines,

M. Luis Alberto Pastene Perez, Ph.D., directeur à la division des enquêtes et de la recherche,
Institut de recherche sur les cétacés,

comme conseillers et experts scientifiques ;

M. Martin Pratt, professeur au département de géographie de l'Université de Durham,

comme conseiller expert ;

M. James Harrison, Ph.D., chargé de cours en droit international à l'Université d'Edimbourg,

Mme Amy Sander, membre du barreau d'Angleterre,

M. Jay Butler, professeur associé invité de droit à la faculté de droit de l'Université George
Washington, membre du barreau de New York,

comme conseillers juridiques.

Le Gouvernement de la Nouvelle-Zélande est représenté par :

L'honorable Christopher Finlayson, Q.C., M.P., *Attorney-General* de Nouvelle-Zélande,

comme conseil et avocat ;

Mme Penelope Ridings, conseiller juridique pour le droit international, ministère des affaires
étrangères et du commerce,

comme agent, conseil et avocat ;

S. Exc. M. George Troup, ambassadeur de Nouvelle-Zélande auprès du Royaume des Pays-Bas,

comme coagent ;

Mme Cheryl Gwyn, *Solicitor-General* adjoint, Crown Law Office,

Mme Elana Geddis, avocat, Harbour Chambers (Wellington),

comme conseils ;

M. Andrew Williams, conseiller juridique, ministère des affaires étrangères et du commerce,

Mr. James Christmas, Private Secretary, Attorney-General's Office,

Mr. James Walker, Deputy Head of Mission, Embassy of New Zealand in the Kingdom of the Netherlands,

Mr. Paul Vinkenvleugel, Policy Adviser, Embassy of New Zealand in the Kingdom of the Netherlands,

as Advisers.

M. James Christmas, chef de cabinet, services de l'*Attorney-General*,

M. James Walker, chef de mission adjoint, ambassade de Nouvelle-Zélande au Royaume des Pays-Bas,

M. Paul Vinkenvleugel, conseiller politique, ambassade de Nouvelle-Zélande au Royaume des Pays-Bas,

comme conseillers.

The PRESIDENT: Good afternoon. Please be seated. The sitting is open. This afternoon the Court will hear the evidence of the second expert called by Australia, Dr. Nick Gales. The procedure for the examination of Dr. Gales is the same as for the examination of Australia's first expert, so I will not repeat it. I understand that Dr. Gales is already in the Great Hall of Justice. Welcome, Sir, and I give the floor to the Agent of Australia.

Mr. CAMPBELL: Thank you, Mr. President. Australia now calls as an expert
× Dr. Nick Gales, who is Chief Scientist of the Australian Antarctic Program and he will be examined by the Solicitor-General, Mr. Justin Gleeson. Thank you, Mr. President.

The PRESIDENT: Thank you very much. So may I invite Dr. Gales to take his place at the rostrum. Good afternoon. I call upon you to make the solemn declaration for experts as set down in Article 64, subparagraph (b), of Rules of Court.

Mr. GALES: I solemnly declare upon my honour and conscience that I will speak the truth, the whole truth and nothing but the truth and that my statement will be in accordance with my sincere belief.

The PRESIDENT: Thank you. I now give the floor to the Solicitor-General who will begin the examination. Mr. Gleeson, you have the floor.

Mr. GLEESON: Thank you, Mr. President. Dr. Gales, could you state your full name and your occupation please for the Court?

Mr. GALES: My name is Nicholas John Gales and I am the Chief Scientist of the Australian
× Antarctic Program.

Mr. GLEESON: Could you briefly outline for the Court what are your duties as the Chief
× Scientist for the Australian Antarctic Program?

Mr. GALES: My duties are to lead the scientific component of the Australian Antarctic
× Program to deliver the strategic science against major Australian public policy needs in the area of climate science, fishery science and conservation science. I have a group of about 140 people

based at the Antarctic division, who undertake the science work, as well as scientists from 35 institutions around Australia and some 70^{institutions} from 23 other nations around the world who participate in our polar program.

Mr. GLEESON: Could you briefly expand on that last matter you mentioned, namely the inter-relationship between scientists of Australia and scientists of other countries in our program in the Antarctic?

Mr. GALES: Certainly. We have a broad strategic plan that outlines our science priorities. We invite and collaborate with most other polar program countries, especially those operating in the area of East Antarctica, which is the large area beneath Australia and New Zealand and South Africa. Programs are approved through a process of normal science review and we undertake those programs with our own resources^{and} as I mentioned, in collaboration with other nations.

Mr. GLEESON: Thank you. Could you turn to the folder in front of you and identify, if you would, at tab 4, that you are the author of the statement of 15 April 2013?

Mr. GALES: Yes.

Mr. GLEESON: And you are also the author of the statement at tab 5 of the 31 May 2013, is that correct?

Mr. GALES: Yes, that is correct.

Mr. GLEESON: If you could turn to the first of those two statements, the 15 April statement. I might ask you to elaborate on three or four matters. Could you first go to paragraphs 3.19 through to 3.21. In those paragraphs you refer first of all to Annex P from the Scientific Committee and you have that in front of you in the Court book, in Volume I at tab 12. And you then make some comments as to whether JARPA II, particularly with reference to its first objective, matches Annex P. Could you indicate to the Court your opinion as to the relationship between JARPA II and its objectives and Annex P?

Mr. GALES: Certainly. Well, starting at the top of the issues listed under Annex P, it discusses the objectives of the study and what they should be and I (a) talks about the fact that they need to be quantified to the extent possible. And I think this is the first point at which I would take issue with the objectives of the JARPA II program whereby the objectives as they are stated in the proposal are very broad and it is very difficult to quantify them in a manner that would enable you to assess the likelihood of success, of achieving them, or indeed just what it is they are intending to achieve.

Mr. GLEESON: Thank you. And in the list of objectives in Annex P are there any other paragraphs there that you regard as relevant in an assessment of JARPA II?

Mr. GALES: I think all of the criteria are relevant. The difficulty, though, is that they are not independent, so without an initial objective that is clear at least in what it is trying to achieve, it is then very difficult to, for example, assess the degree to which the methods will then be able to successfully address those types of objectives.

Mr. GLEESON: Thank you. And could you then turn back to tab 9 please of this folder, where we see Resolution 1995-9. Do you understand that that was the predecessor resolution which was in force at the time that JARPA II was adopted?

Mr. GALES: Yes, that is my understanding.

Mr. GLEESON: And, by reference to that document, what is your opinion as to whether the objectives in JARPA II enable the Resolution to be satisfied?

Mr. GALES: The criteria, as worded in this resolution, are, of course, slightly different, but in many ways get at the same issues. The second recommendation is perhaps the most relevant to JARPA II, where it specifies that the scientific research involving the killing of cetaceans should only be permitted in exceptional circumstances, where the questions address critically important issues that cannot be answered ^{with non-lethal techniques} and, against that criteria, I would argue that JARPA II falls well short.

Mr. GLEESON: Thank you. Could I just ask you more generally, you are aware that Professor. Walløe has expressed an opinion that we are here dealing with a field of knowledge which is very immature and that that provides a justification for either having no hypotheses to start with or having more general or vague hypotheses to start with. In other words, that the scientific method needs to adjust to the degree of knowledge we have in the field. Could you indicate your opinion as to whether you agree or disagree with that approach of Professor Walløe?

Mr. GALES: Well, I disagree with the approach. I agree with the starting premise that we often know very little about these large and complicated ecosystems, but explicitly because of that we have to be really structured in the way we go about studying it. And science is iterative, we often, well we learn as we go, that's the whole point and purpose, so an initially framed question will start to be addressed and we'll evolve as we go. But the question still needs to be clear as to what we're doing. If it is vague from the outset, we do not know where we are going and it is difficult to make progress. So I think in highly complex systems, like ecosystems, it is even more important than anywhere else to be quite clear about the elements you are trying to understand and the question you are posing about it.

Mr. GLEESON: Just taking that a little further, if you were considering the possibility of a large-scale fieldwork programme, including perhaps lethal sampling, what are the steps that you regard as essential before one commences upon such a project, if one is observing the scientific method?

Mr. GALES: Well typically you would have reviewed the body of literature available on the subject so that you would be familiar with the current understanding. Most scientists would then try and collaborate or link to people or organizations that have great understanding. So, an example in the Southern Ocean would be the Commission for the Conservation of Antarctic Marine Living Resources (CCMLR), but within the science process itself you would then frame your question carefully and especially with complex systems, you would typically start with some models, using all available data that you would use to lead you to an improved understanding of what parts of the system might be amenable to measurement and what parts are likely to influence

the other components of the system. Then you move to your carefully designed experiment and collect the data.

Mr. GLEESON: Thank you. A question was raised this morning concerning the human genome project, is that a matter about which you have knowledge?

Mr. GALES: I am not a geneticist but we have genetics groups in my program and certainly it is a program of such enormous science significance that I am aware of it, yes.

Mr. GLEESON: And are you able to express an opinion from that knowledge as to whether with the human genome project there are questions or hypotheses which are relevant?

Mr. GALES: Certainly. The genome project is, was, a massively ambitious and expensive program, so programs like that do not emerge for no good reason, so there were many projects, especially around human health that posed questions that could only be answered most effectively if we better understood the genome. So, already there were many projects with explicit questions and hypotheses, such as which gene regulates a particular disease, or cancer, and so it was from a wealth of questions that the need for a genome project emerged and the project itself effectively pulls all of those data together and makes them available globally for the kind of questions that will then be asked of it, again, with carefully formulated questions around mechanisms of how the genome works.

Mr. GLEESON: You mentioned earlier the word "iterative". Do you accept that there may be an iterative element in the development and refinement of hypotheses in the course of science?

Mr. GALES: Absolutely.

Mr. GLEESON: Could you explain how you understand that to occur?

Mr. GALES: Well your proposals for study, your hypotheses and questions, are developed on the state of knowledge at the time and as you learn more and address a particular question you will refine your hypotheses. You may even reject the idea of where you were going with that

question and change to another one, as you learn more and it is the core component of science to be self-correcting in that mechanism.

Mr. GLEESON: Yes. Could you go forward then, please, to paragraph 3.46, which contains some discussion about earplugs and you indicate that nearly 7,000 earplug samples from dead whales were collected from the first JARPA project. What has been the scientific output, if any, from that collection of earplugs?

Mr. GALES: So, the primary objective of JARPA, when it began, was to estimate the mortality rates of Antarctic minke whales at different ages through their lives. There were papers at the time that indicated that trying to estimate that parameter would prove impossible but it was persisted with for a few years until the Japanese scientists involved in the program recognized they could not achieve that. So, they made it a less ambitious objective to measure the average mortality rate over the whole lifespan of these whales, a mean mortality rate through the age. At the IWC JARPA review meeting in 2006, this was examined and the estimates of mortality rates which are derived from the age estimates through a model were found, the conclusion effectively said that the uncertainty around the estimates — so there was an estimate — the size of the uncertainty around it, so the range, meant — and this is a direct quote from the report — that the “parameter remains effectively unknown”.

Mr. GLEESON: And, in your opinion, is a scientific case made in JARPA II for continuing to collect thousands of earplugs, year after year?⁹ x

Mr. GALES: So as I read JARPA II, they certainly discussed collecting earplugs for the purpose of estimating mortality rates, which, as we have mentioned, had failed in JARPA and also another parameter, MSYR, maximum sustainable yield rate, but there is no reference back to the failed aspect of the previous 18 years' attempts to use these.

Mr. GLEESON: And has the Scientific Committee come to a position as to whether JARPA II identifies a scientific case for lethal research?

Mr. GALES: No.

Mr. GLEESON: Now, could you just go forward please to paragraph 5.9. You express an opinion there that over 25 years of JARPA and JARPA II the contribution of information relevant to the conservation and management of minke whales is negligible, and you set out some reasons for that view. Do you apprehend from Professor Walløe's report that he says that there may be three areas where there may have been a contribution to knowledge?

Mr. GALES: Yes.

Mr. GLEESON: Can I take those in turn? The first area is from JARPA I, an advance in knowledge on stock structure. What is your opinion on that topic?

Mr. GALES: Prior to the commencement of JARPA, samples had been collected from Antarctic minke whales taken in the commercial whaling era of that time and some early genetic studies had shown that in the area in which the commercial whaling operated, which is the same as JARPA, there were at least two stocks with a division approximately south of Australia. JARPA has perhaps reinforced that view but has not provided new information on where the outside boundaries of these populations might be, so it has really just reinforced what was known before the commencement of JARPA.

Mr. GLEESON: Thank you. The second area is blubber thickness. What is your response to Professor Walløe on that topic?

Mr. GALES: For the past few years, the Scientific Committee has been discussing analyses looking at purported changes in the blubber thickness of Antarctic minke whales and at this stage there is no agreed evidence that there has been a change in the blubber thickness itself, that it remains an open question in terms of the statistical tools that have been used so far. It is a very small change so quite elaborate statistical models are being used to investigate it.

Mr. GLEESON: Yes. And the third area is stomach contents. Your opinion on that?

Mr. GALES: Well, the stomach content data has added, in similar ways to the earplugs, nothing to what we already knew. We know Antarctic minke whales eat Antarctic krill, almost

exclusively. They will eat another, smaller type of krill that lives up on the shelf and in the embayments but we know where those krill are so, when minke whales areas are in those areas, they eat that type of krill. We already knew that.

Mr. GLEESON: Thank you. Could you turn then to your second statement of 31 May and go first please to paragraph 4.3 where there is a reference to "pollutant loads"? And would you accept that if one wanted to know about the presence of pollutants in the stomachs of whales, one would need lethal sampling?

Mr. GALES: No I don't.

Mr. GLEESON: What do you understand to be the scientific approach to a question of measuring pollutant loads in the body tissues of whales?

Mr. GALES: Well, we know that pollutants affect animals around the globe in different ways. We know quite a lot about the way these different types of pollutants are transported around the globe in upper wind patterns and more directly in water systems. So we would already have an idea about which pollutants might be affecting Antarctic minke whales in general. We would know that that is an area in which animals would be expected to have quite low pollutant burdens. So a normal approach to the type of question would be to focus on a particular pollutant, to determine whether it can be measured but importantly to try and determine what else you need to measure to see if there is an effect. Because a measurement, even if it is in a body organ such as a liver, that could only be sampled from a dead whale, is only relevant if you understand its effects. The measurement itself, in isolation of that, takes you nowhere.

Mr. GLEESON: In your opinion, does JARPA II make a scientific case for measuring the pollutant loads in minke whale tissue?

Mr. GALES: No, not at all.

Mr. GLEESON: Now could I move to one perhaps final topic which is the difference between lethal and non-lethal methods of sampling, and what is feasible and practical in the world

today. We might just see on the screen, and you can explain to us what occurs when one uses a lethal method such as harpoon grenade. What do we see in the first slide, Dr. Gales?

Mr. GALES: This is an Antarctic minke whale that has just been struck with a penthrite grenade harpoon from one of the Japanese capture boats.

Mr. GLEESON: Thank you. And then, on the next slide, what do we see from the close-up angle?

Mr. GALES: You can see coming out from behind the minke whale's blowhole the harpoon head and it will be presumably bent as the rope comes through from the other side so the whale is being pulled to the bow of the ship, about two-thirds of the whales are not killed instantly, so they are then shot from the bow of the vessel, or killed otherwise.

Mr. GLEESON: Thank you. And then if we could move to the next slide, you might identify for us the first of three non-lethal techniques, namely satellite tagging? Can you explain who we see shooting the little implement and what we are seeing?

Mr. GALES: Certainly. Well, that's me on the bow of a small rigid-hulled inflatable boat. I am holding above my shoulders an airgun that has fired a projectile. You can see the projectile just above the water. It hasn't yet hit the minke whale. It has a satellite tag on the front of a little rocket that delivers it, and it bounces off the whale once the tag is implanted on the whale.

Mr. GLEESON: And with that satellite tagging, a signal will then be sent from the tag via a satellite and information can be collected over a period of time?

Mr. GALES: That's correct. We can follow the location of that whale for periods of weeks and months.

Mr. GLEESON: What are the benefits of being able to follow the location of the whale?

Mr. GALES: Well, it's the only way now that we can really get a good understanding about how whales, in this case, utilize all of the different types of habitats they have available to them.

So the degree to which they feed within the ice zone or offshore so we can track their movements in quite fine scales over those sort of ranges.

Mr. GLEESON: Thank you. Now a second method of non-lethal research involves short-term tags. Could you explain that for us, please?

Mr. GALES: Certainly. So, apart from the blubber and ~~plantable~~^{implantable} tags such as the ones on ~~the~~ ^{the} screen now, we are also able to deploy a small tag that has suction cups on it that stays on the whale for less than 24 hours, but it records all of the information. So it records depth of water, pitch and roll, acceleration and deceleration. We are able to get extraordinarily fine details of how the whale moves through the water column, how it feeds, when it lunges for food and, while we have that tag on the whale, we follow it with two small boats such as the one that was on an earlier photograph and we measure the krill in the area and get an idea about how that whale is feeding on the krill in the area that we are measuring.

Mr. GLEESON: Thank you. And is the third broad non-lethal research method the taking of biopsies?

Mr. GALES: Yes. That's correct. It is now a very standard method used on dolphins and whales throughout the world and requires firing a projectile from a crossbow or a rifle that bounces off the animal and collects a little plug of tissue about the size of a little fingernail from which DNA and other tissues can be extracted and different things measured.

Mr. GLEESON: To the extent one is seeking genetic information, does the biopsy collection enable you to obtain the same information as you can by the harpoon grenade death of the whale?

Mr. GALES: It certainly does. For genetics you only require a very very tiny piece of tissue; additional tissue adds no advantage.

Mr. GLEESON: And in paragraph 2.8 of your second report, have you recorded information as to the time per sample and the distance of the shot for biopsy collection, including with minke whales?

Mr. GALES: Yes, I have.

Mr. GLEESON: And on the basis of that material, and perhaps other material, is it your opinion that the use of biopsy collection is at least as effective as lethal sampling if one is seeking genetic material?

Mr. GALES: Absolutely.

Mr. GLEESON: Have there been advances in these non-lethal techniques over the last 20 years?

Mr. GALES: Yes, enormous advances in a wide range of techniques. We are talking about a couple specific to Antarctic minke whales, but in many areas, techniques have evolved very rapidly.

Mr. GLEESON: Is there a broad sharing of information between the scientific community as to the availability of non-lethal techniques?

Mr. GALES: Yes, there is. We have workshops and share it widely.

Mr. GLEESON: Are each of the techniques you have described available to, and practised by, Japan?

Mr. GALES: Yes, they are.

Mr. GLEESON: And are they also available to, and practised by, such other countries around the globe who are interested in whale research?

Mr. GALES: Yes, they are the tools of the trade.

Mr. GLEESON: That is the examination achieved, Mr. President.

The PRESIDENT: Thank you very much. And now it is time for counsel for Japan to start the cross-examination. Professor Lowe, you have the floor.

Mr. LOWE: Thank you, Mr. President, Members of the Court. Dr. Gales, my name is Vaughan Lowe. I am one of the counsel for Japan and there are a few questions which we have to clarify in the evidence which you have given. Thank you very much, both for your reports and for coming along here to give testimony today.

The first question is this: in paragraph 1.4 of your first report, you list three factors that you say have prevented any real progress in the Scientific Committee's attempts to conduct its mandated scientific role of review and advice on these special permit whaling programs. And the first of those is what you call the "ongoing and indefinite nature and lack of clear objectives" of the program. My question is this: are not many marine science programs ongoing — the measurement of Antarctic ice and solidity of the ozone layer; in particular fisheries analysis with the ongoing series of monitoring data that are regularly updated and refined to provide annual estimates of sustainable catches? And are the scientists in these exercises not engaged in scientific research?

Mr. GALES: There are certainly very many projects that have long timelines on them. Those projects, though, specify very clearly what it is they are intending to measure, down to the precision they need, and they give a clear determination as to why the period of time they need to measure it is set as it is. They show the rates of change within the parameter and then it is easily understood, so they are not so much ongoing, they are long-term but they are defined terms.

Mr. LOWE: So, your criticism is really the lack of justification for the long-term and ongoing nature of JARPA rather than the fact that no science project should be ongoing as such?

Mr. GALES: No science project should be indefinite. Without clearly-stated objectives it is difficult to assess the term it needs to go; that needs to be explicitly described.

Mr. LOWE: Thank you. You criticize JARPA II for its lack of timelines, but what about the six-year timeline for review that was set out in the JARPA II research plan?

Mr. GALES: The Scientific Committee has been grappling for many years on how to review these programs. The timeline itself has been set because the program is ongoing. If you were starting from scratch, you would have undertaken a complete review — in the case of JARPA II at

the very start — and that would have enabled you to get some empirical basis, some way of knowing when you then need to next measure progress. Ideally you would have, in the proposal, some articulated defined milestones — by year two, five, six, we would have hoped to have achieved this — by which you can do it. It is arbitrary, the six-year period, but it is far from a perfect process of the review, it has been quite a difficult process, within the Scientific Committee.

Mr. LOWE: Thank you. Can I turn to something else: it is suggested that within the International Whaling Commission Scientific Committee there is a clear polarization between those who believe whales should not be killed, and those who believe that sustainable whaling is appropriate and permissible. Is that an impression which matches your experience of the IWC?

Mr. GALES: That, perhaps, could be characterized in the Commission. I do not believe that characterizes the Scientific Committee, it is not for the scientists to have those determinations.

Mr. LOWE: How would you characterize the handling of that question within the Scientific Committee?

Mr. GALES: I would say that it is critically important that the Scientific Committee provide to the Commission clear, scientific views on matters that relate to the business of the Commission. A philosophical view of whether or not a whale should be killed, should be kept to the business of the Commission. I believe that a lot of scientific criticism from myself and from other members there have gone at JARPA and JARPA II because of the science. That has been characterized by some as being motivated by a view that whales should not be killed. In my case — and I think in many peoples' cases — that is not the case.

Mr. LOWE: Is it true to say that although JARPA and JARPA II may have been the most divisive components of the Scientific Committee activities — which is a point you make I think in the very beginning of your first report— there have also been other controversial matters in the Scientific Committee, such as the establishment of the moratorium and the issue of the sanctuaries, including the proposals of Australia and New Zealand around the period from 1999 up to 2005. Have these issues also been divisive within the Scientific Committee?

Mr. GALES: There has been a number of divisive issues in the Scientific Committee. Most of them revolve around the normal process of difference in scientific views that are explored and resolved sometimes over a long period of time through scientific argument. That is a good thing, and a good example of the way the Scientific Committee works. I was not in the Scientific Committee at the time of the moratorium being established, but I have read the documents and there was clearly a difference in view on how to deal with that.

Mr. LOWE: If the Scientific Committee is in a position where it has one group of scientists taking one view and another group takes a different view, and neither group is persuaded that there are good grounds for changing its views, in your view is it necessary to try to impose a uniform view across the Committee? And why can the Committee not fulfil its role of reviewing and commenting on proposals by saying some scientists think this, other scientists think that?

Mr. GALES: There are certainly times when there is quite legitimate disagreement in the Scientific Committee and one example was around how to estimate the abundance of Antarctic minke whales. There were a range of models put, and it took a very long time for those scientists to finally arrive at one model they both agreed with and some estimates; indeed, it was not until 2012. But that was an entirely appropriate scientific process because the views of both groups were supported by the science they were doing. They had a very sound, empirical basis on ~~x~~ simulations, statistics and study, and we explained that to the Commission. We cannot resolve the differences but we explained where the scientific differences lie. In the case of special permit whaling, the debate stops when somebody makes a criticism and the answer comes back, “we disagree”. The next fundamentally important step of exploring the basis of the criticism — how scientifically justified is that criticism, and how scientifically justified is the response to that criticism — has never been able to advance within the Scientific Committee and we are left with, what I view, as grossly inadequate advice to the Commission — as you phrased it — that “some said this and others said that”, but without any scientific insight as to how the Commission should understand that difference of view.

Mr. LOWE: I am sure that is a matter we will come back to next week. Could I turn now to the question of lethal whaling. You have described the experiments in the use of non-lethal biopsies and we heard from Professor Mangel this morning that some of the data — the collection of stomach contents and earplugs, for example — cannot be collected in that way. Putting those to one side and focussing on those items of data that can be obtained by biopsies, Professor Sands says that you have been congratulated by the Commission who concluded that your research would contribute substantially to the work of the Scientific Committee. We congratulate you on being the first, I think, to achieve satellite tagging successfully for Antarctic minke whales. From the photographs and the video material that we have seen, it looks as though this was achieved in fairly calm sea conditions. Can you tell us the range of sea conditions in Beaufort scale terms, during the periods when the experiments took place?

Mr. GALES: Certainly. It is generally characterized when you see photographs of Antarctica that it is either extremely wild or extremely calm. The conditions of working with the minke whales, with the small boats that we saw, were calm and they were in embayments. We also do small boat work on the high seas in East Antarctica, from ships in exactly the same model, we have not attempted to work with minke whales yet in eastern Antarctica. Generally, the weather conditions are sufficient on about two out of every three days, on average. We can operate up to a particular "sea state": it is called "sea state three", which is about less than fifteen knots of wind, relatively calm waters. It is quite common to work in those conditions when you are sufficiently far south close to the ice edge because you are below the polar lows that cause the dreadful weather in the mid-latitudes.

Mr. LOWE: You spoke earlier about the enormous advances over the past 20 years, and the rapid evolution in non-lethal techniques, and is it fair to infer from that, that we are still in the process of developing these new techniques for tagging and taking biopsies from minke whales?

Mr. GALES: Absolutely, as with all scientific techniques they continue to evolve, yes.

Mr. LOWE: I have one final question. In your judgment, as a scientist, would it be possible to conduct sustainable commercial whaling for a certain number of minke whales in the Antarctic now, without endangering the minke population?

Mr. GALES: I think the careful answer for that is, that the Scientific Committee has developed the Revised Management Procedure — the RMP — and I believe that procedure to be as robust a mechanism as we can currently develop. So, before I answered ^{your question} it, I would like to see an RMP run with all of the information, and on the basis of that, get an idea. I think it is tempting to give a "back of the envelope" which would indicate the "back of the envelope" calculation that would indicate it is probably fine at certain numbers. But we have a good mechanism, and in all likelihood, the RMP would deliver catch limits for abundant species.

Mr. LOWE: If you would just excuse me a moment. Thank you very much, Dr. Gales, I have no further questions. Thank you.

The PRESIDENT: Thank you, Professor Lowe. Would you like to re-examine, Mr. Gleeson? Please, you have the floor.

Mr. GLEESON: Thank you, Mr. President. There were just three matters. Firstly, Dr. Gales, you were asked some questions as to whether the Scientific Committee is simply a case of some saying this, and others saying that, and it being appropriate to simply record that dispute to the IWC. Could I ask you to open your first statement please? At paragraph 3.16, in addition to the oral answers you gave to that question to Professor Lowe, may we take it that in 3.16 you identify four detailed matters that are relevant to that question, and you then expand on those four matters in the following paragraphs. Is that accurate?

Mr. GALES: Yes, that is correct.

Mr. GLEESON: Thank you. You were asked a question which appeared to include some praise for you, being a world leader in satellite tagging of minke whales — and praise is always appropriate — could I ask you to explain a little more to the Court as to how it came about that

satellite tagging has recently been extended to minke whales as compared with satellite tagging of other whales?

Mr. GALES: Yes, I am perhaps receiving the praise because we were fortunate to be the first to really attempt to deploy the tags. With colleagues from the United States we deployed tags on Antarctic minke whales in the Ross Sea and in the Western Antarctic peninsula. But tagging of whales has been a relatively routine procedure for well over a decade now.

Mr. GLEESON: Including by Japan?

Mr. GALES: Including by Japan.

Mr. GLEESON: Thank you. And finally, you were asked a question concerning the enormous advances in non-lethal methods and you agreed that these methods continued to evolve. What do you see within JARPA II itself, by way of an attempt to include within JARPA II, an appropriate recognition for these developing non-lethal techniques?

Mr. GALES: I see no evidence at all.

Mr. GLEESON: That is the re-examination, Mr. President.

The PRESIDENT: Thank you very much, Mr. Gleeson. Dr. Gales, I understand some of my colleagues would like to put questions to you. I first call on Judge Donoghue. You have the floor.

Judge DONOGHUE: Thank you, Mr. President. Dr. Gales, my questions relate to age data. And, I wanted to understand a few things. The first is, are age data important, or relevant to the RMP? That is my first question. And my second is, if not, why is age data important, or is it not important? And then last, just to understand whether you share the view that was reflected in Professor Mangel's statement that, at present there is no non-lethal method to determine the age of minke whales. Thank you.

Mr. GALES: Thank you for the question.

The PRESIDENT: Please.

Mr. GALES: In relation to the RMP, the manner in which the RMP was designed and put together, took into account the history the Scientific Committee had had in using biological parameters such as age, for management models. The procedure before the revised management procedure — the new management procedure — used those data and demonstrated that the precision with which you could estimate mortality, which is the primarily derived output from the age data, were insufficiently precise to be useful in management. So the RMP explicitly made sure that it only needed information that could be gathered in a sufficiently precise manner. And that information is the abundance of the whales, how many animals are there in the area in which we intend to go whaling, and how many animals from that area have been taken previously in earlier whaling activities. From that alone, without age data, the RMP can function.

If I can go to your second question, if I can recall it correctly? Age data can be a very important parameter for some particular questions, but it will only answer those questions if it can be measured quite precisely. There are some animals for which age can be measured very precisely. And those can be done with both non-lethal and lethal techniques. So, lethal techniques can be similar to looking at earplugs — measuring layers in the bony ears of fish, what are called otoliths — there can be a variety of other techniques used as well. Non-lethal techniques basically involve tracking animals that have been identified with either DNA, or as photographs of recognizable features through their lifetime. So, indeed, in the RMP calculations of some things, those data from photo identifications have been used to inform a lot of the basis for the RMP.

And I think your last question was on the non-lethal techniques. There have been some interesting developments in looking at the ratio of fatty acids — which are the molecules that make up the blubber. ~~The ratio of those,~~ In the bottom layer of blubber, for some reason, gives a signal ~~×~~ about age. We do not know why, do not understand the mechanism, but it is relatively imprecise. It will give you an age to within a decade, ~~into the decade~~. So, it is interesting, but it is not yet very ~~x~~ evolved.

The PRESIDENT: Thank you very much. Now Judge Greenwood has a question for you. Judge Greenwood, please.

Judge GREENWOOD: Thank you, President. Dr. Gales, I would like to ask you the question that I put to Professor Mangel this morning, I think you were in the Court when I put it.

Mr. GALES: Yes.

Judge GREENWOOD: Let me make it slightly more general than I did then. Has there been an evolution in what the Scientific Committee regards as “proper scientific research” in the area of whaling since the start of JARPA II?

Mr. GALES: No, I do not believe so. I believe that the essential discussions around the up to 200 papers that are received annually in the scientific committee for consideration — which are papers about scientific activities — I think in the period of eight years, peoples’ understanding of the objectives, and the methods, and the type of principals that Professor Mangel provided to the Court earlier, have not changed. What has changed is the Scientific Committee and the IWC, the Commission itself, attempting to move to a review process that works better than it has in the past. Because it has been a difficult process.

Judge GREENWOOD: Thank you. Mr. President, may I just ask a follow-up question, please?

The PRESIDENT: Certainly, please proceed.

Judge GREENWOOD: To what extent would you regard the findings of the Scientific Committee in respect of this process of review and the standards to be applied, to what extent would you regard that as reflecting a consensus within the Committee or is there a division between different groups of scientists on this point?

Mr. GALES: The Annex P, in particular, was negotiated within the Scientific Committee and was agreed by the Committee as the most appropriate step we could go to. I believe — and I put myself in this category — there are many of us in the Scientific Committee, who would prefer that we could go to a truly separate and independent process whereby people not associated with the Scientific Committee, with the relevant expertise, could undertake a review and write the report

as a proper peer review process, I guess, rather than repeating Professor Mangel's criteria, anonymous and thorough peer review. I do not believe we are there. Annex P is a step towards there but until such time as a review process can in a practical way alter the activities of the program itself, there is little incentive for scientists to invest effort in such a review.

Judge GREENWOOD: Thank you very much, Dr. Gales.

The PRESIDENT: Thank you. The next judge to put a question is Judge Hilary Charlesworth. You have the floor.

Judge CHARLESWORTH: Dr. Gales, this is just a question of scientific information for me. How does one get from earplugs or age of whales to mortality rates? Can you just explain that for a lay person?

Mr. GALES: I will try. It is effectively through the use of population models. So, you construct a model for a population, you have to make quite a number of assumptions, but if you are truly able to collect a representative sample of age from a population, which JARPA II we know underrepresents young animals, for example, but if you were really able to get samples of the age of the animals through that population, you can build a model that would then say, to have that distribution of ages in the population, what would the mortality rates have to be to derive that distribution of ages? And so, it is through a model process. Is that clear? You are basically fitting your model to the data you measure.

The PRESIDENT: Thank you. If no other judge would like to ask a question then this brings to an end the examination of Dr. Gales. The Court thanks you very much for appearing before us. You can take your seat, thank you very much.

If counsel for Australia is ready to continue in the presentation of the case by Australia, then I will call on Professor Philippe Sands. You have the floor, Sir.

Mr. SANDS: Thank you, Mr. President. I wonder actually whether we could ask for a short pause now, if that is convenient, to allow us just to have a brief consultation, which we expected to

have if the process had gone on longer and rather than have it in 15 or 20 minutes, we would be grateful for that, with your permission.

The PRESIDENT: We can make a break now for 15 minutes and then we will continue until the end of this afternoon's hearings.

Mr. SANDS: Thank you very much, we are very grateful, Mr. President.

The PRESIDENT: So, the sitting is adjourned for 15 minutes. We resume at ten past four.

The Court adjourned from 3.55 p.m. to 4.10 p.m.

The PRESIDENT: Please be seated. The hearing is resumed and the floor is yours, Professor Sands.

Mr. SANDS: Mr. President, thank you for your forbearance in giving us a few minutes, we very much appreciated that opportunity to just have a short conversation. I will not detain the Court for too long. The purpose of this speech was originally intended to provide a wrap-up on the basis of the scientific issues that had been heard during the course of today. You will have seen for yourself the two expert witnesses and formed your own view. You will see that they are both individuals with obvious expertise in the subject area and with obvious authority.

I am just going to deal with six points, relatively briefly to respond to those issues which have come up during the course of this morning.

Firstly, can I make a general point in relation to the criteria that have emerged as the basis for exchanges, both in examination, cross-examination and re-examination? You will recall well and easily by now that there are four criteria identified at the heart of the report offered by Professor Mangel. The first criteria related to defined and achievable objectives in relation also to the question of the need for a hypothesis, the second objective related to the appropriateness of methods, the third objective related to the issue of peer review and the fourth criteria related to the need to avoid adverse effects on stocks that are being studied.

I am really going to focus my comments mostly on the first criterion. On the second criterion, methods, the view of Australia is that that is essentially untouched by what happened

today in cross-examination and we express also our appreciation of the questions from the Court and from individual Members in relation to all of the issues.

The third criterion, peer review, similarly in relation to cross-examination did not form the subject of any issues that require any attention from me in the course of this afternoon because it appears that the approach stands unscathed. The fourth issue really is not highly material it seems for the purposes of this case at this stage. It is really the first criterion that generated a significant number of questions from the Bench and we want to refer back to these in dealing with some of our comments now.

I wonder if I can take you back to the question from Judge Greenwood, which was returned to during the course of the afternoon and I think, as it was put in the course of the morning, it concerned the question of the criteria which applied at the time where JARPA II was being proposed in 2005. And we can offer a relatively clear answer in terms of what the criteria were at that time. They are collected in a document which is known as Annex Y, approved by the Scientific Committee, which you will find at tab 11 of your folder. That is an effort to bring together all of the criteria that applied at that time. It is in a form prepared by an individual member of the Scientific Committee and so we reserve our position as to whether it is completely accurate and correct in all ways but, generally, that is where you will find the criteria that were applied and, in effect, if you like, as at 2005.

However, that document, Annex Y, incorporates two resolutions that are particularly significant and which I want to take you to now, so that we can go back over them in a little more detail and, in particular, I want to take you to IWC Resolution 1995-9, which is at tab 9 of your folder and which will, hopefully, appear now on your screens.

This is the Resolution which sets forth the approach that is to be taken at the time that JARPA II was being proposed and which determines the conditions under which the program would be considered. You will see from that document — in fact this is an extract; you will have the full copy in your judges' folder at tab 9; the full thing did not appear in readable form on the screen — half way down the Resolution the Commission recommends, and then there are two indents:

“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 that of course refers to the part of the submissions we have made, explaining one of the reasons that Japan is unhappy with the RMP.

And then we go to the paragraph that is most significant:

“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”.

The Resolution then proceeds to request the Scientific Committee to undertake certain activities — I have highlighted that on the screen; you can read that for yourselves.

What I would like you to consider is the second paragraph that I have just read out to you, because if you go to that second paragraph, you will see that it essentially gives rise to five questions that need to be asked. The words “scientific research” is how it opens, so the first question is: does the proposal engage scientific research? That Resolution does not provide the criteria for determining what is “scientific research”, but it requires there to be scientific research; and that is the basis for the criteria that we have identified with the assistance of Professor Mangel who has taken account of all of the IWC Resolutions and the practice. So that is the first step. If it is not scientific research, you do not get past first base.

Secondly, is the proposal being made in an “exceptional circumstance”? If the answer to that is “no”, and again “exceptional circumstance” is not defined, you do not get past first base.

Third question: do the questions addressed in the scientific research programme address critically important issues? That, too, has to be established. Again it is not defined; it is a matter for assessment and determination.

Fourth question: can the questions be answered by analysis of existing data? In other words, assuming you can meet the first three questions, the fourth hurdle you have to get over is the existence of data which may enable you already to engage in the analysis.

And then the fifth question: can the questions be answered by non-lethal techniques? If the answer to that is “no”, you cannot proceed; if the answer to that is yes”, you are over the final hurdle.

Those are the five criteria that are reflected in Resolution 1995-9 which were effective at the time JARPA came forward as a proposal and, in the submission of Australia, you do not get past the first question, you do not get past the second question, you do not get past the third question, and you do not get past the fourth and fifth questions. So, it is a proposal that should never have got off the ground.

We appreciate, and we remind the Court that, a point that has come up in response to questions from the judges, that JARPA ran for a period of 18 years. It was then subject to a review process before the Scientific Committee, there was no pause before JARPA II was then proposed. That was the moment, we say, at which these issues should once again have been examined; they were not examined and that is the point at which Japan fell into error and that is the moment at which, if you like, Australia's claim comes into focus in relation to JARPA II, which is the object of relief in this particular case.

There is a further Resolution that is worth having a look at, but I will not take you to it now so as not to detain you too long and that is Resolution 1999-2, which is at tab 10. But, the bottom line is that if you take the tabs 9, 10 and 11 together, you get a clear sense of what was in place at the time JARPA II came forward for proposal.

To turn to the next point which concerns a point that arose in relation to a question put by Judge Donoghue in relation to mixed motives. She put to Professor Mangel a question concerning the possibility that a project might be motivated by two or more considerations. Professor Mangel is not a lawyer, he is a scientist, and he answered that question as a scientist. He did not purport to give a legal interpretation of the Convention. The position of Australia is, as it was stated yesterday in relation to that question, and articulated by Professor Crawford, at paragraph 89 of his submissions yesterday. What he said was:

“A good faith interpretation and application of Article VIII, requires that any special permit which authorizes whaling ‘for purposes of scientific research’ do so for that purpose *and not for any other purpose or purposes*. That is, special permit whaling must be genuinely motivated by the purpose of conducting scientific research, and not by any other purposes.” (Emphasis in the original.)

We felt that it was important to draw that to your attention because we did not want any confusion to arise as to what the view of a member of the scientific community might be as opposed to the issue concerning the interpretation of the Convention. Two distinct points.

May I take you to a fourth point which goes to method and the issue of lethal take and we have begun to hear quite a bit about earplugs. We noticed that Professor Lowe touched on it and then it came up again in part of the questions from Judges Donoghue and Charlesworth. And we fear that some element of confusion may have crept in here in relation to the question that was put to Professor Mangel.

What I would like to do is take you to Professor Mangel's first report to clear up that matter. You will find it in the witness folder at tab 1, and I would like to take you to paragraphs 5.28 to 5.30. This is Professor Mangel's first report and it deals specifically with this issue:

"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." (Paragraph 5.28.)

He then goes on to write in paragraph 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."

And he cites to various references supporting of that principle:

"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)."

He then concludes, paragraph 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 as evaluation was done after only nearly 25 years of JARPA and JARPA II (Lockyer 2010) and ear plugs fail 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."

So the evidence before you there, clearly put, and it is not rebutted, is that it is a failure for determining what it purports to determine. That issue has been taken up also by Dr. Gales in both of his reports and I refer you to paragraphs 3.46 to 3.48 of his first report and to paragraphs 3.13 and 3.14 of his second report. And I will just read out to you the last line of paragraph 3.13, which is a reference to the JARPA review, which concluded that, and I quote, from the JARPA review: "the estimates of natural mortality estimated from the JARPA data alone span such a wide range

the parameter remains effectively unknown at present". In our submission the earplug issue is of no assistance to Japan, if it rests its case at all on that matter.

We're going to come back, I come now to a fifth point in relation to the issue of whether a hypothesis is indeed needed and whether certain activities conducted many decades, or even centuries ago, there was an important question by Judge Keith in relation to the work of Charles Darwin and the Beagle, we very much appreciated that question; you heard from Professor Mangel a response that on his understanding and in his opinion Charles Darwin did indeed seek to test hypotheses.

We also had a question from Judge Donoghue in relation to the human genome project and you heard, I think, carefully put both by Professor Mangel and Dr. Gales that neither of them are geneticists. The issue raised is, of course an important one. There is an interesting debate to be had as to whether the human genome project is to be characterized as a science program or a technology program, or an engineering program, and there is plenty of debate in that issue.

But the simple point is the nature, scale and timing of the human genome project, however it is characterized is entirely different from what we face today in this case, and what the Court faces today in this case. I don't think I have the time to give a lengthy history of how we got to the human genome project, the one book I would certainly recommend you to read is James Watson's book, *The Double Helix*, which explains the extraordinary period in the early 1950s in which competing groups, in competing research institutions and universities engaged in a race to unlock the key to understanding the nature of human life; what we now know to reside in DNA. That work of Crick and Watson, and I had the great privilege when I was a very young academic in 1984, of meeting Francis Crick, who was then teaching at the Salk Institute in La Jolla, was premised on a huge amount of work that tested a huge range of different hypotheses.

Since that period there have been tens of thousands, if not hundreds of thousands of peer-reviewed papers that have tested hypotheses in relation to the secrets unlocked by Crick and Watson and Rosalind Franklin and all of the colleagues with whom they worked.

The human genome project is simply another step in that process. It itself is premised on the need to test hypotheses as to various functions that DNA will have. And we will in due course provide a more detailed response in relation to the question. What we didn't want you to do at this

stage of the proceedings is leave this hearing imagining that there was somehow any analogy to be drawn between what Japan is doing under JARPA II in relation to whales in the Antarctic and the work that was being done by Francis Crick, James Watson, Rosalind Franklin and others in relation to the discovery of the double helix.

7. The sixth and final point I would like to make is simply in relation to a question that went to Dr. Gales in relation to the evolution of alternative technologies. He confirmed in response to that question, that technologies are evolving, of course they are evolving, they always do and I think that's what he said, but the simple point is, his evidence, and he didn't respond to that aspect of the question, which is in the materials that you have in his first and second report, is that the technology that exists today, is usable, and you saw that in the image of the effort to attach a dart to a minke whale. The technology exists, it is being used today and no doubt it will, as he said, continue to evolve.

8. Those are the brief points that Australia would like to make in relation to the day on science and with your permission, Mr. President, I would now invite you to call to the Bar Professor Crawford to conclude the day's presentation.

The PRESIDENT: Thank you, Professor Sands, for providing a summary of scientific evidence and a study if scientific cases. I now call on Professor Crawford. You have the floor, Sir.

Mr. CRAWFORD:

**JARPA II VIOLATES THE MORATORIA AND THE SOUTHERN OCEAN SANCTUARY
AND IS NOT WITHIN THE ARTICLE VIII EXCEPTION**

Introduction

1. Mr. President, Members of the Court, it has been a long and rather intense day and I propose, if I may, not to complete this speech this afternoon. We will have enough time tomorrow. I would suggest to you, Sir, when I reach an appropriate point for the break, even though it will be somewhat early, but I think we've all been working rather hard.

The PRESIDENT: I appreciate that, thank you.

Mr. CRAWFORD: Mr. President, Members of the Court, JARPA II is manifestly undertaken for purposes other than scientific research. Its core purpose, the reason for it, objectively, we are not talking about the subjective intention of individual scientists, we are talking about the reason for the program, is to enable the continuation of whaling on an indefinite basis, despite the ~~M~~oratorium. Its design and implementation make clear the real reasons: JARPA II is ~~x~~ whaling “for commercial purposes” or incidental thereto. It is “commercial whaling”, within the meaning of the Convention. It therefore contravenes the ~~M~~oratorium, the Sanctuary and the factory ~~x~~ ship prohibition.

2. I will establish these propositions in three steps.

- First, I will show that JARPA II is not a program “for purposes of scientific research” within the meaning of Article VIII. It satisfies neither the “scientific research requirement” nor the “purpose requirement” under that Article.
- Secondly, I will show that JARPA II is commercial whaling, pure and simple.
- Thirdly, I will establish Japan’s consequential breaches of the Convention.

1. JARPA II is not science

3. First, then, Mr. President, Members of the Court, JARPA II is not a scientific program capable of being justified by Article VIII. A program for purposes of scientific research must possess the four essential characteristics we have identified. These characteristics reflect modern scientific practice and the practice of the IWC, as embodied in the ^G~~x~~ guidelines, including the ~~x~~ guidelines in force at the time that JARPA II was commenced. JARPA II fails to satisfy even one of these requirements.

4. Mr. President, Members of the Court, what follows is to some extent a summary of what has already been demonstrated by my colleagues and by the witness testimony. In effect it is a synopsis of our case on breach, and the fact that I shall be short on various points should not be taken to suggest that these points are not important.

(a) *Japan’s methods in JARPA II are not dictated by scientific considerations*

5. First of all, Japan’s methods in JARPA II are not dictated by scientific consideration. There are five points here.

(i) Arbitrary catch limits

6. The first is arbitrary catch limits. The proposed catch limits have no scientific basis. Political concerns required Japan to reduce its proposed catch limits under JARPA¹. But when setting its sample sizes for JARPA II, Japan more than doubled the sample size for minke, up to 850 whales, with a 10 per cent allowance, a sort of a tip. In the JARPA II research plan, Japan also claimed that a sample size of 50 fin whales and 50 humpback whales was necessary to achieve its research objectives².

7. It is, as the evidence has demonstrated, impossible to understand the statistical basis for calculating lethal take in JARPA II³: I look forward to Japan's explanation of it next week. We say the reason is simple, because JARPA II sample sizes were not determined by any scientific method⁴, but by its need to create a commercially self-supporting program. The idea of science was subordinated to the need to supply Japanese restaurant menus. As one cartoonist put it, in a scene in a Tokyo diner, the waiter tells the chef, "Another serve of scientific research for Table 6!"

8. Statements by Japanese Ministers confirm this proposition. For example in 2010, the Minister for Fisheries said (tab 95): "we don't actually need 800 [whales]; I mean it's more than we need — we would have enough material for research with that or less than that number of whales."⁵

9. Japan contends that this statement must be understood in the context of 2010, during the Future of the IWC negotiations, and the concomitant need for "flexibility" in those negotiations⁶.

¹MA, Ann. 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/39/04 (*JARPA Proposal, 1987*); MA, Ann. 127, "Fisheries Agency Director-General Told by Prime Minister: Do Scientific Whaling that Won't be Criticised", *Asahi Shimbun*, 26 April 1987 (morning edition), p. 2; 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'", Oct. 1987, SC/D87/1, p. 10.

²MA, Ann. 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, pp. 1, 17-19.

³MA, App. 2, 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 (Original Expert Opinion)*, para. 5.38.

⁴Mangel, *Supplement to 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 (Supplementary Expert Opinion)*, paras. 3.11-3.22.

⁵MA, Ann. 107, Government of Japan, Minister for Agriculture, Forestry and Fisheries (H Akamatsu), Transcript of Press Conference, 9 March 2010.

⁶CMJ, para. 5.81.

But its meaning is clear: Japan does not need to take 850 whales to conduct its so-called “research” ×
in the Southern Ocean. A take of fewer whales would permit Japan to meet its research objectives,
whatever they may be — indeed, to achieve results, it does not need to take *any*. The truth of this
proposition was confirmed by the Minister for Fisheries at a press conference in March 2012 —
well after the Future of the IWC negotiations had ended. In response to a query as to the JARPA II
target for the 2011/12 season, during which the fleet had taken 267 whales, the Minister queried —
“should we call it a target? . . . Well, um, the sort of . . . *benchmark*, so to speak, was . . . I thought
it was a bit higher than that . . . [W]e did, that is, I did, have a *slightly higher number in mind than
the number caught this time.*”⁷ (Emphasis added) Science is hereby reduced to a “number in mind”
(tab 96).

10. These statements belie Japan’s claims that its sample size of 850 minke whales is
scientifically derived as the minimum number required to achieve its alleged “research” objectives.
They contradict the contention that JARPA II research methods are limited to what is
“scientifically necessary”⁸.

(ii) Actual catch dictated by commercial considerations

11. Second point: the actual catch under JARPA II is dictated by commercial considerations.
Japan’s action takes in most years have been significantly less than its stated targets and they have
been dictated by commercial considerations. This can be seen from the graphic on the screen
(tab 87). [Screen on] The number of minke whales taken under JARPA II has been significantly
lower than the annual maximum catch target of 935. The average catch across eight seasons is less
than half that: it is 454. Japan has yet to provide an explanation as to how these smaller numbers
affect its alleged “research” objectives and results. If 267 minke whales are enough to achieve the
results, why propose 850 in the permit? The number in the permit has not changed. The permit is a
mere piece of bureaucratic routine. It is not a consideration of what is required on a year-by-year
basis. It bears no relationship to what happens on a year-by-year basis. [Screen off]

⁷Press Conference by Michihiko Kano, Minister for Agriculture, Forestry and Fisheries, 9 March 2012,
8.32 a.m.-8.46 a.m.

⁸CMJ, para. 5.141.

12. In its Counter-Memorial, Japan attempts to dodge this issue on the basis that the effect of the smaller catches on its research “output” is still being evaluated⁹. But this amounts to saying that, eight seasons into JARPA II, 3,651 dead whales later, Japan still has no answer but continues to press on with whaling nonetheless. During the 2012/13 Southern Ocean whaling season, Japan took its lowest recorded catch — only 103 minke whales. A spokesman for the Institute for Cetacean Research conceded that he could not estimate the loss resulting from the reduced take of minke whales during that season. He said: “obviously there is a research value as well as a monetary one” that was negatively impacted¹⁰. But that negative impact in terms of research value has never been articulated, it is entirely speculative, it is completely unreflected in the special permit.

(iii) Treatment of humpback and fin whales

13. The third point is the treatment of humpback and fin whales. Despite claiming in the JARPA II research plan that killing 50 humpback whales was required to meet its research objectives, and despite continuing to annually list in its special permits 50 humpback whales, Japan has not killed a single humpback whale under JARPA II. Their inclusion in the program, their continued inclusion in the special permits, year after year, demonstrates how ill-conceived and unscientific the “research” design is. The humpbacks are not necessary after all and yet they continue to be included in the special permits!

14. As to the third species listed in the research plan, Japan has killed 18 fin whales in eight years — a twentieth of its purportedly “scientifically derived” minimum sample size for this period.

15. In short there is a vast discrepancy between Japan’s actual killings under JARPA II, and the sample sizes calculated as being “scientifically necessary” to achieve its research objectives and reflected annually in the special permits. Japan does not even attempt to suggest that its reduced

⁹CMJ, paras. 5.73 and 5.80.

¹⁰Gavin Carter, spokesman for the ICR, quoted in D. Kirby, “Sea Shepherd’s Win is Japan’s Loss: Whalers have Worst Season Ever”, *TakePart*, 8 April 2013, *TakePart* website, <<http://www.takepart.com/article/2013/04/07/whaling-season-worst-ever-Sea-Shepherd>> on 5 June 2013.

catch under JARPA II is dictated by scientific considerations. Rather, it points to “logistical reasons” and “violent sabotage activities” to explain the reductions¹¹.

16. With respect to fin whales, there is a logistical difficulty. The factory ship is not capable of taking fin whales over 18 metres in length¹². In the Southern Hemisphere, fin whales have an average length of 25 metres¹³. The female of the species is slightly more deadly than the male and is a metre longer on average. That is a serious impediment to the ability to conduct research into fin whales. It is like conducting research into giraffes in a shed of two metres high: the outcome of such a program would be to conclude that giraffes are adapted to feeding on shrubs. Catching a non-representative sample of fin whales because of the limitations of the factory ship will inevitably lead to skewed research results. This undermines any assertion that the killing of fin whales in the Southern Ocean is for a scientific purpose.

(iv) A prior assumption of lethal take

17. My fourth point is the prior assumption of lethal take. It is an accepted tenet of scientific practice that lethal methods should only be used if no non-lethal methods are available to achieve the research objectives. This is not a question of emotion, or custom, or distaste of the sight of blood— although that is one of the reasons why I am not a scientist. It is for the reason that Professor Mangel gave in response to the question asked by Judge Owada. It is because scientifically you do not intervene unless you have to. If you can achieve the result by less lethal means, you maintain the biosphere to that extent unaffected by your activity. You retain knowledge in the system; you retain the possibility of further information. By contrast, the presumption at the core of JARPA II is that killing whales is necessary. That is the basis on which the whole thing was designed. It is entirely at odds with this tenet. In JARPA II, non-lethal methods are presumed in advance not to be workable¹⁴.

¹¹CMJ, paras. 5.73 and 5.80.

¹²S. 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.

¹³MA, App. 1, de la Mare *et al.*, *Antarctic Baleen Whale Populations*, para. 4.1.

¹⁴Mangel, *Supplementary Expert Opinion*, paras. 5.1, 5.2.

18. A scientific process entails selecting appropriate objectives and then selecting methods which best suit the achievement of those objectives. Japan began with a pre-determined method of killing whales, large numbers of whales, and then “retrofitted” vague research objectives in an attempt to justify its use of those methods¹⁵. Despite all that should have been learned from × 6,774 dead whales under JARPA, JARPA II is exactly the same — except more whales. Japan has ignored the development of non-lethal methods — generally available — which might have been used to obtain the data obtained under JARPA II, including new tagging technologies, biopsy methods and photographic techniques¹⁶. You heard from Dr. Gales about them.

(v) JARPA II’s lack of scientific output

19. The fifth reason: JARPA II’s lack of a scientific output. This has been dealt with in the evidence, and by Professor Sands, and there is not much I need to add.

20. A program for purposes of scientific research must do much more than simply collect data; the collection of data alone is not a scientific activity¹⁷, any more than the collection of stones. The scientific enterprise may begin with a general enquiry, but it must soon establish a testable hypothesis which leads to a potential answer to that enquiry. We are all inquisitive, but we are not all scientists. The scientific method involves taking that question about the world and making it real, making it concrete by working out what we can test that could establish or disprove the proposition in question. The project has to be properly identified to address the question asked; it has to be capable of being answered with the technology available.

21. For 18 years, despite the adoption of the RMP — which relies entirely on data that can be acquired non-lethally, and which was expressly designed to eliminate reliance on the biological parameters that Japan claims to have been seeking — JARPA was maintained. It was maintained in the face of clear evidence presented to the Scientific Committee that the primary objective of JARPA could not be attained¹⁸ by the methods chosen, and in disregard of repeated IWC

¹⁵Mangel, *Original Expert Opinion*, paras. 6.2, 6.5 [MA, Appendix 2].

¹⁶Mangel, *Supplementary Expert Opinion*, paras. 5.3-5.14.

¹⁷Mangel, *Original Expert Opinion*, para. 6.1.

¹⁸W 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; 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.

Resolutions urging Japan to reconsider JARPA or to use non-lethal means¹⁹. The Commission noted in 2007 that not one of the objectives of JARPA had been met and that the program was not required for management under the RMP²⁰. Yet JARPA II continues to collect the very same data that failed to produce results in its predecessor for 18 years, and apparently it intends to do so forever. When Japan submitted its proposal for JARPA II in 2005, the IWC formally called on Japan to withdraw its proposal or revise it to use non-lethal means²¹. By 2007 the IWC had recorded its view that the aims of JARPA II did not address critically important research needs, and again called upon Japan for the second time to suspend indefinitely the lethal aspects of this program²².

22. After 25 years, neither JARPA nor JARPA II have enhanced our scientific knowledge as to the conservation and management of whale populations in the Southern Ocean²³. There is no suggestion that they have done anything else like, for example, produce a cure for the common cold. JARPA publications are generally irrelevant to the stated objectives of the program²⁴. The Counter-Memorial points to only two peer-reviewed publications from JARPA II since its commencement in 2006. Neither is relevant to the conservation and management of whales or to the stated objectives of JARPA II²⁵. Of the 15 papers that use data from JARPA, which were

¹⁹Resolution on Japanese Proposal for Special Permits, Appendix 4, Chairman's Report of the Thirty-Ninth Annual Meeting, *Rep. Int. Whal. Commn* 38, 1988, 29 [MA, 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 [MA, 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 [MA, 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 [MA, Annex 19]; Resolution on Special Permit Catches by Japan in the Southern Hemisphere, Appendix 5, Chairman's Report of the Forty-Fourth Meeting, *Rep. Int. Whal. Commn* 43, 1993, 71; 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 [MA, 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 [MA, Annex 25]; 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 [MA, Annex 28]; 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 [MA, Annex 29]; 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 [MA, Annex 31].

²⁰Resolution 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) [MA, Annex 41].

²¹Resolution 2005-1 [MA, Annex 40].

²²Resolution 2005-1 [MA, Annex 40]; Resolution 2007-1 [MA, Annex 41].

²³*Statement by Dr. Nick Gales*, para. 5.9.

²⁴Mangel, *Supplementary Expert Opinion*, para. 7.2.

²⁵Mangel, *Supplementary Expert Opinion*, para. 3.35.

published between 2010 and 2012, most are short papers in Japanese which do not contribute much; the three papers published in English could have been prepared using data gained entirely by non-lethal techniques²⁶.

(vi) Summary

23. Mr. President, Members of the Court, to summarize, JARPA II is not a program of science, it is a parody of science. The evidence shows that it is not designed on the basis of scientific considerations to achieve scientific objectives through scientific methods. It is designed to keep Japan in the whaling business, come what may.

(b) JARPA I is not conducted “for purposes of scientific research”

24. Mr. President, Members of the Court, that brings me to the question of Japan’s real purpose in conducting JARPA II, and thus to the second requirement under Article VIII. This is the requirement that Contracting Governments may only authorize special permits “for purposes of scientific research”, and not for any other purposes.

25. (Tab 19) [screen on] Before commencing these remarks, I should make an observation about mixed motives. Of course , as individuals we all have mixed motives for almost everything we do. But that is not the legal point. The question is whether JARPA II can be characterized as conducted for the purposes of scientific research That is an objective question. The question is whether JARPA II can be accounted for, can be explained on the basis that it is a scientific program. We say the answer to that question is most certainly “No”, whatever individual scientists may think they are doing. The reason for the design and implementation of JARPA II cannot be accounted for on the basis that it is a scientific program. There are quite a number of factors that point directly to that conclusion. In the 30-year period prior to the moratorium, Japan licensed the killing of approximately 840 whales under Article VIII²⁷. You can see this from tab 19. That figure is less than Japan’s *annual* target for minke whales under JARPA II. Japan conducted no

²⁶Mangel, *Supplementary Expert Opinion*, paras. 3.36-3.39.

²⁷Resolution 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) [MA, Annex 40].

special permit whaling at all between 1979 and the commencement of JARPA in 1987. The graphic on the screen shows that as well.

26. That Japan commenced its large-scale special permit whaling operations in the Southern Ocean in January 1988 is consistent with its true purpose of continuing commercial whaling to some extent, despite the moratorium. Scientific whaling was the guise adopted to enable Japan to continue whaling, thus at the same time circumventing the moratorium and avoiding the threat of United States sanctions on its fishing industry. [screen off]

(i) Japan commenced JARPA immediately after the Moratorium came into effect

27. This can be seen from a brief review of the history. Japan objected to the Moratorium in November 1982²⁸, but withdrew its objection on 1 July 1986²⁹. Its withdrawal was a result of pressure applied by the United States, which was concerned to achieve compliance with the Moratorium³⁰. The United States had made it clear that, should Japan continue commercial whaling, it would certify Japan's actions as "diminishing the effectiveness" of the Convention, with adverse consequences for Japan's fisheries allocation in the United States' EEZ³¹ and its fisheries exports to the United States³². The threat of certification was, in the words of the Director-General of the Japan Fisheries Agency, a "huge problem"³³.

28. Japan concluded an exchange of letters with the United States in November 1984. It agreed to withdraw its objection to the Moratorium if the United States agreed not to certify

²⁸IWC 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 [MA, Annex 53].

²⁹IWC 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 [MA, Annex 54].

³⁰United States IWC Commissioner Byrne confirmed the United States' intent to achieve compliance with the moratorium 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 [MA, Annex 73]. See also JCM para. 3.47.

³¹Government of the United States, 1979 Packwood-Magnuson Amendment to the *Fishery Conservation and Management Act of 1976*, 16 USC § 1821 [MA, Annex 72].

³²Government of the United States, 1971 Pelly Amendment to the *Fisherman's Protective Act of 1967*, 22 USC § 1978 [MA, Annex 71].

³³Government 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) [MA, Annex 89].

Japan's whaling activities³⁴. Japan withdrew its objection to the Moratorium on 1 July 1986. It is no coincidence that it waited until the United States Supreme Court handed down a judgment upholding the President's decision not to certify Japan's whaling³⁵. Japan withdrew its objection one day later.

29. Under the Exchange of Letters, commercial whaling would no longer be an option. Japan was forced to consider other means of continuing its whaling operations. These were identified by the Whaling Issues Study Group, which reported in July 1984. The relevant extract of this Report is at tab 97 of your folder. The Study Group recommended the following "policy response" to enable continued Southern Ocean whaling: "we should seek the understanding of relevant countries for Japan to undertake scientific whaling activities . . .".³⁶ The Study Group noted that "it will be necessary to *assert* [I emphasize *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"³⁷.

30. Japan expressly linked this recommendation — to commence "scientific" whaling in the Antarctic — with the Government's determination to preserve its whaling industry and continue whaling despite the Moratorium³⁸.

31. On 1 August 1984, the Head of the Ocean Fisheries Department at the JFA stated: "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*

³⁴*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) [MA, Annex 63].

³⁵*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. 221, 106 S.Ct. 2860 (1986).

³⁶Whaling 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*), para. 5 (i) [MA, Annex 98].

³⁷*Report of the Whaling Issues Study Group*, para. 5 (i) [MA, Annex 98].

³⁸Government 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) [MA, Annex 92]; 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), Speaker: 134/377, 121/377 and 130/377 (Hiroya Sano, Director-General, Japan Fisheries Agency) [MA, Annex 93].

*some form or another . . .*³⁹ (Emphasis added.) Japanese officials confirmed in the Diet that positioning Japan's Southern Ocean whaling as scientific research whaling was "the path to ensure the continuation of whaling"⁴⁰, and the method to "keep Japanese whaling alive under these very challenging circumstances"⁴¹. To "keep Japanese whaling alive . . .". You will find copies of these statements at tabs 98 to 100 of your folder.

32. The fact is that large-scale "scientific" whaling in the Southern Ocean began immediately after the entry into effect of the Moratorium for Japan. Since this time, Japanese Ministers and officials have repeatedly confirmed their determination to perpetuate the "research" program until the Moratorium is lifted. As stated by the Senior Vice-Minister of Fisheries, in May 2011 "we at MAFF are determined to continue [JARPA II] until commercial whaling is resumed"⁴² (tab 101).

(ii) Japan's conduct mirrored earlier misuse of Article VIII

33. JARPA is not the first example of the improper invocation of Article VIII by Japan. When a zero catch limit was established in respect of Southern Hemisphere Bryde's whales in 1976, Japan developed an alternative plan to prop up its whaling industry⁴³. On 6 July 1976, the Head of Ocean Fisheries stated (tab 102): "[a]nother option would be that of special catches (these

³⁹Government 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) [MA, Annex 91]. For further references to Japan's determination to continue whaling "in some form or another", see, e.g., Government of Japan, *National Diet Debates*, House of Representatives, Agriculture, Forestry and Fisheries Committee, No. 2, 11 October 1983, Speaker: 41/163 (Fumio Watanabe, Director-General, Fisheries Agency) [MA, Annex 90]; 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) and Speaker: 217/342 (Shinjirō Yamamura, Minister for Agriculture, Forestry and Fisheries) [MA, Annex 92]; Government of Japan, *National Diet Debates*, House of Representatives, Agriculture, Forestry and Fisheries Committee, No. 2, 18 December 1984, Speaker: 206/234 (Hiroya Sano, Director-General, Fisheries Agency) [MA, Annex 95].

⁴⁰Government 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) [MA, Annex 92].

⁴¹Government of Japan, *National Diet Debates*, House of Representatives - Agriculture, Forestry and Fisheries Committee, No. 2, 18 December 1984, Speaker: 206/234 (Hiroya Sano, Director-General, Fisheries Agency) [MA, Annex 95]. See also, *The Institute of Cetacean Research — The First Ten Years* (ICR, Tokyo, 30 October 1997), 85 (Tatsuo Saito, former Japanese Commissioner to the IWC), Whaling Library website, <http://luna.pos.to/whale/jpn_zadan1> and <http://luna.pos.to/whale/jpn_zadan2> on 5 June 2013.

⁴²Government of Japan, Minutes of the Second Meeting of the Committee on the Whale Research Program, 17 May 2011, Statement by Committee Chairman, Nobutaka Tsutsui, Senior Vice-Minister of Agriculture, Forestry and Fisheries, 9-10.

⁴³Government of Japan, Ministry of Foreign Affairs, "Re Outcomes of the Twenty-Eighth Annual Meeting of the International Whaling Commission (Matter of Lodging Objection)", 6 July 1976, MOFA in Sanada, "A Genealogy of Scientific Whaling: The Origin and Application of Article VIII of the ICRW", *Collection of Environmental Information Science Papers* 22 (2008), 363-368, 366.

are conducted under the provisions of the Convention, and are undertaken as necessary in order to obtain scientific data)”⁴⁴.

34. Fierce opposition was expressed in the Scientific Committee to this program⁴⁵. Scientists from South Africa, New Zealand and Canada protested that this research — so-called research on Bryde’s whales — was, in reality, *de facto* commercial whaling⁴⁶. Japan’s decision to issue these permits was the catalyst for the Scientific Committee to assume the role of reviewing special permits⁴⁷.

35. If the Commission had permitted continued commercial whaling on Southern Hemisphere Bryde’s whale stocks in 1976, there can be no doubt whatever that Japan would not have issued the special permits which collectively authorized the killing of nearly 500 Bryde’s whales in the name of “science” to no result. In fact these permits were issued as an emergency measure to assist in propping up the struggling whaling industry in face of falling commercial catch limits.

36. Japan’s actions in 1976 provided the blueprint for JARPA. Japan’s former Commissioner, Tatsuo Saito, confirmed this in 1997 when he said (tab 103): “[i]n 1977, Dr. Ohsumi had been conducting surveys on Bryde’s whales in the mid-latitude ranges of the Southern Pacific Ocean under Article VIII, Paragraph 1. We took a hint from this.”⁴⁸

⁴⁴Ministry of Foreign Affairs, “Re Outcomes of the Twenty-Eighth Annual Meeting of the International Whaling Commission (Matter of Lodging Objection)”, 6 July 1976, MOFA in Sanada, “A Genealogy of Scientific Whaling: The Origin and Application of Article VIII of the ICRW”, *Collection of Environmental Information Science Papers 22 (2008)*, 363-368, 366.

⁴⁵Scientific Committee Report, 1977, *Rep. Int. Whal. Commn 28*, 1978, 41.

⁴⁶Cable No. 801 from Japanese Ambassador to Australia Ohkawara to Minister of Foreign Affairs, 19 June 1977, Ministry of Foreign Affairs, “International Whaling Commission (029th), prepared 6 May 1977 in Sanada, “A Genealogy of Scientific Whaling: The Origin and Application of Article VIII of the ICRW”, *Collection of Environmental Information Science Papers 22 (2008)*, 363-368, 367.

⁴⁷E Mitchell & M Tillman, “Scientific Review of IWC Scientific Permits”, *SC/29/Doc 34. Rep. Int. Whal. Commn 28*, 1978, 269; Chairman’s Report of the Twenty-Ninth Meeting, *Rep. Int. Whal. Commn 28*, 1978, 23 and 32; Chairman’s Report of the Thirtieth Meeting, 1977, *Rep. Int. Whal. Commn 29*, 1979, 27.

⁴⁸*The Institute of Cetacean Research — The First Ten Years* (ICR, Tokyo, 30 October 1997), 85-86 (Tatsuo Saito, former Japanese Commissioner to the IWC), Whaling Library website, <http://luna.pos.to/whale/jpn_zadan1> and <http://luna.pos.to/whale/jpn_zadan2> on 5 June 2013.

X

(iii) The decision to continue lethal research on an indefinite basis determines the design and structure of JARPA II

37. The real purpose of JARPA II is to continue commercial whaling on an indefinite basis. This is confirmed by consistent statements of senior officials and Ministers, stating Japan's determination to continue whaling, "in some form or another". It is borne out by the design and implementation of JARPA II. At the heart of both programs is the presumption that killing whales is required.

38. The instructions given to the scientists tasked with the design of JARPA in 1984 were to plan a program of lethal research that was "self-sustainable" through the sale of whale meat⁴⁹. The programs of both JARPA and JARPA II reflect these instructions. The original JARPA plan had no specified end date⁵⁰. Japanese scientists expressly confirmed to the Scientific Committee their intention that it would be continued indefinitely⁵¹. When it eventually concluded after 18 years in 2005, nearly 7,000 dead whales later, Japan transitioned seamlessly, immediately and without any form of review, into JARPA II, which itself has no specified end date.

39. In fact the stated objectives of JARPA II are so broadly framed that they could be used to justify almost any activity that Japan wishes to pursue⁵². There is simply no identifiable endpoint at which these objectives may be achieved; JARPA II provides for the collection of data through large-scale whaling on an indefinite basis.

40. The sample sizes have been calculated to ensure self-sustainability of the operation through sale of whale meat. The original sample sizes were finalized only after officials confirmed that they would be capable of sustaining the operation through sale of whale meat "by-product"⁵³. Professor Walløe implicitly concedes that commercial considerations were a factor in determination of Japan's sample sizes. In particular, he notes: "Japan has chosen to cover part of

⁴⁹T. Kasuya, "Japanese Whaling and Other Cetacean Fisheries", (2007) 14(1) *Env Sci Pollut Res* 39, 45-6 [MA, Annex 77]; "Debate: Pros and Cons of Scientific Whaling", *Mainichi Shimbun*, 3 October 2005, 3 [column by T. Kasuya] [MA, Annex 129].

⁵⁰JARPA proposal, 1987 [Annex 156].

⁵¹Report of the Scientific Committee, *Rep. Int. Whal. Commn* 38, 1988, 55.

⁵²Mangel, *Original Expert Opinion*, paras. 5.10 and 6.5 [MA, Appendix 2].

⁵³T. Kasuya, "Japanese Whaling and Other Cetacean Fisheries", (2007) 14(1) *Env Sci Pollut Res* 39, 45-6 [MA, Annex 77].

the costs of its whale research programmes by selling whale products on the commercial market. To obtain sufficient income in this way, the yearly catch has to be of a certain magnitude.”⁵⁴

Now there are many valuable species in the world, the catching of which could meet the costs of a scientific program. But if the amount that is caught is calculated by reference to the income to be gained from the program, disconnected from the scientific purposes, there is a complete disjunction between the program and the science. And that is the case here.

41. [Screen on] On average, several thousand tonnes of whale meat are produced globally from Japan’s special permit whaling each year. In the highest year of production in 2005-2006, almost 3,500 tonnes of whale meat were produced. There is a complex system of market distribution and sale of whale meat pursuant to contractual arrangements with the ICR⁵⁵. Revenue from these sales constitutes the ICR’s predominant income. The ICR also generates the bulk of its revenue and largely covers the expenses of continued whaling operations through the commercial sale of whale meat. [Screen off]

42. Indeed, Japan does not deny this, nor could it⁵⁶. In a paper to the Scientific Committee in 2007, Japan made clear its view that “practical considerations” — the costs of conducting research, and the potential for recovery of costs — were determinative for its continued insistence on the use of lethal methods⁵⁷.

43. And yet, outside the IWC context, Japan accepts that economic or commercial interests should not influence the design or conduct of an activity conducted for the purpose of scientific research. Japan has a very large science budget, and very very good scientists. It was an active participant in the Drafting Group for the Assessment Framework for Scientific Research involving Ocean Fertilisation — as I mentioned yesterday — that drafting group identified four criteria for proposed activity in order to have “proper scientific attributes”. One of these criteria expressly provides — this is at tab 105 — this was Japanese involvement:

⁵⁴Walløe, *Scientific Review of Issues Raised by the Memorial of Australia including its two Appendices*, 9 April 2013, pp. 9-10.

⁵⁵Institute of Cetacean Research and Kyodo Senpaku Kaisha Ltd, *By-Product Consignment Sales Agreement* (5 June 2007), Article 7 [MA, Annex 118].

⁵⁶CMJ, para. 5.107.

⁵⁷S. 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; Report of the Scientific Committee, Ann. O, Report of the Standing Working Group on Scientific Permits, *J. Cetacean Res. Manage. 10 (Suppl.)*, 2008, 343.

“economic interests should not influence the design, conduct . . . or outcomes of the proposed activity. There should not be any financial and/or economic gain arising directly from the experiment or its outcomes.”⁵⁸

Japan does not apply this principle to its JARPA programs.

(c) *Conclusion*

44. Mr. President, Members of the Court, these factors all point to the same conclusion. ^{Japan's}
x JARPA's special permit whaling programs in the Southern Ocean cannot be justified under Article VIII. Japan commenced and continues these operations, not for the purpose of contributing new scientific knowledge, which it has significantly failed to do after 25 years. But to enable the continuation of whaling indefinitely, in spite of the moratorium, in which it has been to some degree successful. It has retrofitted a proposed program of “scientific” research to justify its purpose of continued whaling on an indefinite basis, “in some form or another”. That, and that alone, accounts for JARPA II. That is the reason which tells you what the purpose of the program is. JARPA II fails to satisfy the “purpose requirement” of Article VIII. Even if it could be said that it met the “scientific research requirement” — which it does not — JARPA II would not fall within the scope of Article VIII.

Mr. President, that would be a convenient moment to break.

The PRESIDENT: Thank you very much, Professor Crawford. The Court will meet again tomorrow at 10 a.m., to hear the continuation and completion of Australia’s first round of oral argument. The Court is adjourned.

The Court rose at 5.10 p.m.

⁵⁸Assessment Framework for Scientific Research involving Ocean Fertilization (adopted on 14 October 2010), Report of the Thirty-Second Consultative Meeting of Contracting Parties to the London Convention and the Fifth Meeting of Contracting Parties to the London Protocol, LC/32/15, Ann. 6, 5, para. 2.2.2.

