

INTERNATIONAL COURT OF JUSTICE

GABČÍKOVO-NAGYMAROS PROJECT

(HUNGARY/SLOVAKIA)

MEMORIAL

SUBMITTED BY THE

SLOVAK REPUBLIC

VOLUME I

2 MAY 1994

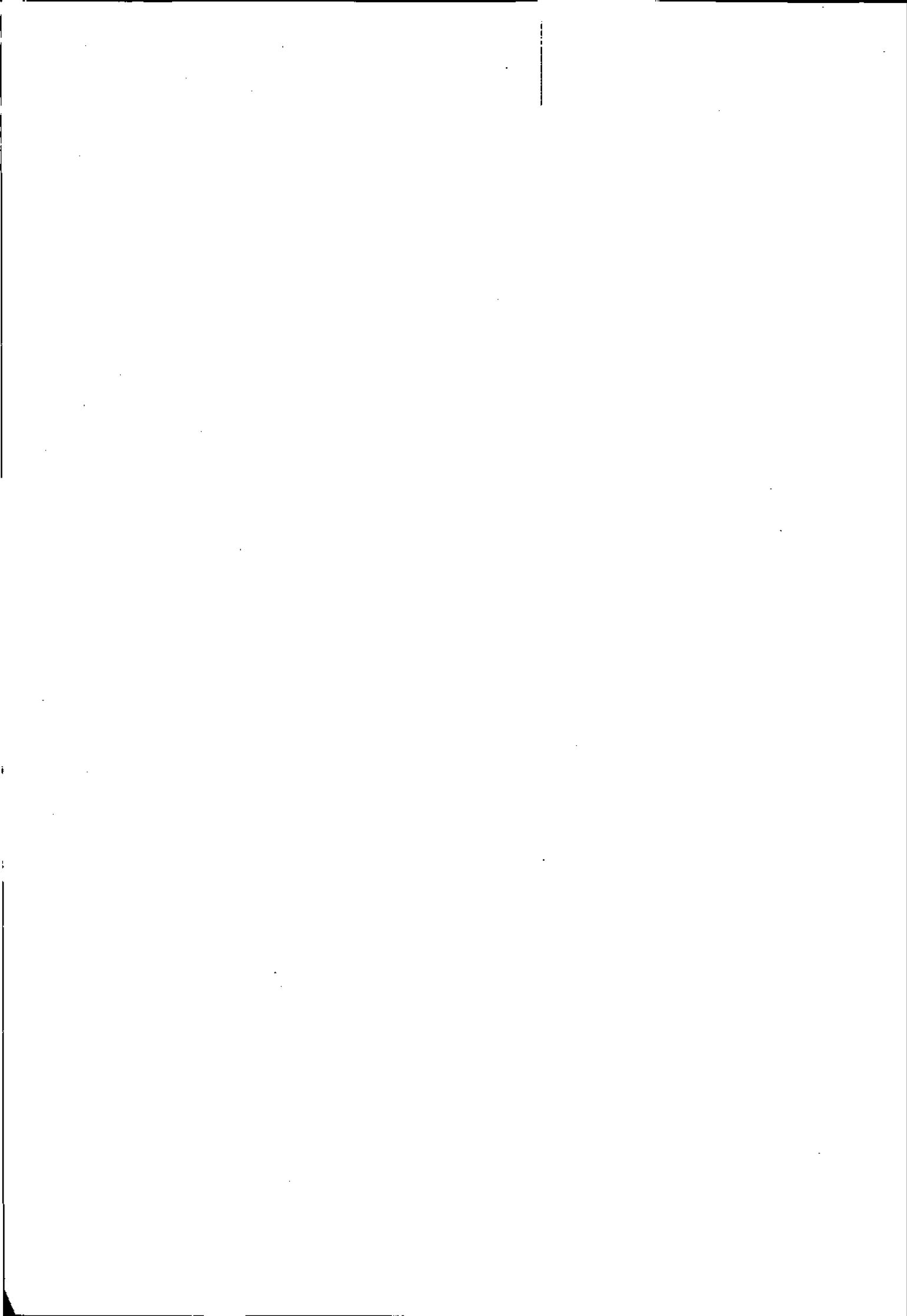


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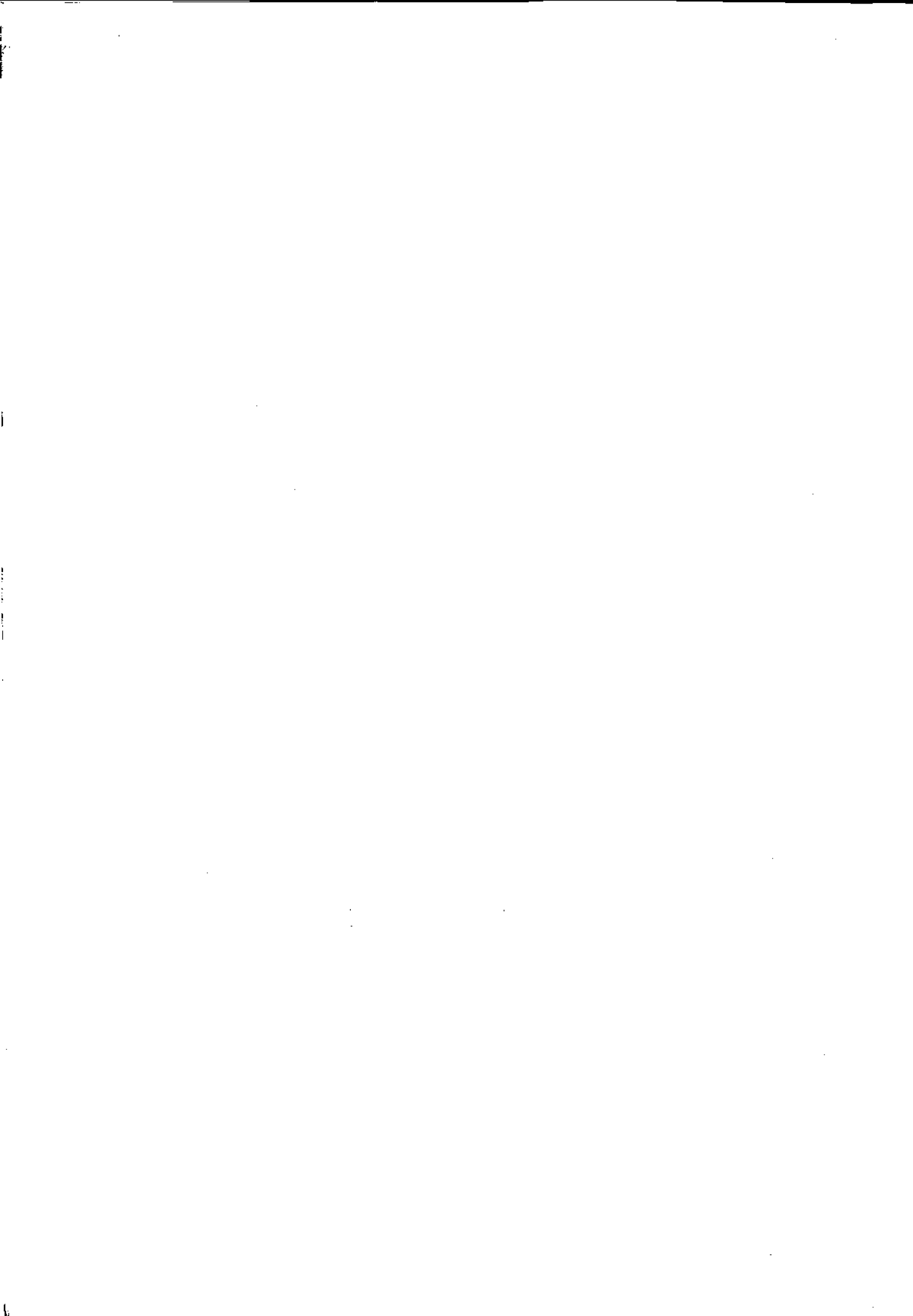
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INTRODUCTION

Initiation of Proceedings

1. The present case was submitted to the Court by the Slovak Republic ("Slovakia") and the Republic of Hungary ("Hungary")¹ by the joint notification on 2 July 1993 of a Special Agreement², pursuant to Article 40, paragraph 1, of the Statute of the Court. The Special Agreement, signed on 7 April 1993, entered into force on 28 June 1993 upon the exchange of instruments of ratification³.

2. This Memorial is filed by Slovakia in accordance with the Court's Order of 14 July 1993 fixing 2 May 1994 for the filing by each of the Parties of a Memorial.

The Special Agreement; the Role of the Court

3. At least at this stage in the proceedings there appears to be no need for an extensive analysis of the Special Agreement or of the role of the Court under it. Slovakia will therefore draw attention here to only a few of the terms of this Agreement.

4. As to the preamble of the Special Agreement, three points are particularly to be noted. First, the term "Treaty" is defined to refer not only to the Treaty between Hungary and Czechoslovakia Concerning the Construction and Operation of the Gabčíkovo-Nagymaros System of Locks, signed in Budapest on September 16, 1977⁴, but also to its "related instruments". As will be fully discussed below in Chapter VI, the 1977 Treaty comprises an ensemble of inextricably linked agreements that include, besides the 1977 Treaty itself, the following agreements, listed here in chronological order:

¹ Hereinafter referred to jointly as the "Parties".

² Hereinafter referred to as the "Special Agreement". Annex 1.

³ The task of the Court under the provisions of the Special Agreement is discussed immediately below.

⁴ Hereinafter referred to as the "1977 Treaty". Annex 2. The Gabčíkovo-Nagymaros System of Locks is hereinafter referred to as the "G/N System" or the "G/N Project".

- Agreement between Czechoslovakia and Hungary on Drafting of a Joint Contractual Plan of the Gabčíkovo-Nagymaros System of Locks, entered into in Bratislava on 6 May 1976⁵;
- Agreement between Czechoslovakia and Hungary on the Regulation of Water Management on Boundary Waters, entered into in Budapest on 31 May 1976⁶;
- Agreement between Czechoslovakia and Hungary Concerning Mutual Assistance in the Construction of the Gabčíkovo-Nagymaros System of Locks, entered into in Budapest, on 16 September 1977⁷;
- The Joint Contractual Plan agreed to by Czechoslovakia and Hungary pursuant to the 1976 Joint Contractual Plan Agreement, to which reference is made in Article 4 of the 1977 Treaty⁸;
- Agreement between Czechoslovakia and Hungary on the Joint Statute of the Government Plenipotentiaries Which Regulates Their Activities in the Construction and Operation of the Gabčíkovo-Nagymaros System of Locks, entered into in Bratislava on 11 October 1979⁹;
- The Protocol of 10 October 1983 amending the 1977 Treaty¹⁰;
- The Protocol of 10 October 1983 amending the 1977 Mutual Assistance Agreement¹¹;

⁵ Hereinafter referred to as the "1976 Joint Contractual Plan Agreement". Annex 3.

⁶ Hereinafter referred to as the "1976 Boundary Waters Management Agreement". Annex 4.

⁷ Hereinafter referred to as the "1977 Mutual Assistance Agreement". Annex 5.

⁸ Annex 3. Summary only, prepared in 1978.

⁹ Hereinafter referred to as the "1979 Joint Statute Agreement". Annex 6.

¹⁰ Annex 7.

¹¹ Annex 8.

- The Protocol of 6 February 1989 further amending the 1977 Mutual Assistance Agreement and also terminating the 1983 Protocol amending the same Agreement¹²;
- In addition, the 1977 Treaty specifically links the carrying out of its terms to the provisions of two multilateral treaties, the Convention Concerning the Regime of Navigation on the Danube, concluded at Belgrade on 18 August 1948¹³, and the Danube Fisheries Agreement, concluded at Bucharest on 29 January 1958¹⁴.

5. The second important point relating to the text of the preamble is that the Parties recognized Slovakia to be the sole successor State to Czechoslovakia in respect of rights and obligations relating to the G/N Project.

6. The third point is that the preamble recalls the Parties':

"... commitment to apply, pending the Judgment of the International Court of Justice, such a temporary water management regime of the Danube as shall be agreed between the Parties."

The Temporary Water Management Regime (hereinafter referred to as the "TWMR") is again addressed in Article 4 of the Special Agreement, which makes it clear that the establishment of the TWMR and the resolution of problems arising under it are matters that have not been submitted to the Court. Thus, the determination of the TWMR falls outside the scope of the task of the Court in this case, although certain factual findings of the Slovak, Hungarian and European Communities' experts charged with submitting a proposal for the TWMR are of some relevance to the case and will be discussed where appropriate in this Memorial.

¹² Annex 9.

¹³ Hereinafter referred to as the "1948 Danube Convention". Annex 10.

¹⁴ Hereinafter referred to as the "Danube Fisheries Agreement". Annex 11.

7. Article 2 of the Special Agreement requests the Court to decide - on the basis of the 1977 Treaty and "rules and principles of general international law, as well as such other treaties as the Court may find applicable" - these four questions:

"whether [Hungary] was entitled to suspend and subsequently abandon, in 1989, the works on the Nagymaros Project and on the part of the Gabčikovo Project for which the Treaty attributed responsibility to Hungary;

whether [Czechoslovakia] was entitled to proceed, in November 1991, to the "provisional solution" and to put into operation from October 1992 this system [as more particularly described];

what are the legal effects of the notification, on May 19, 1992, of the termination of the Treaty by [Hungary];

[what are] the legal consequences, including the rights and obligations for the Parties, arising from [the Court's] Judgment on the [three] questions [set out above]."

8. Each of these questions concerns the interpretation and application of the 1977 Treaty and the performance of Czechoslovakia and Hungary in respect of their rights and obligations thereunder. This, then, is the focus of the present case before the Court. It is the position of Slovakia that the 1977 Treaty remains in full force and that the actions of the Parties with respect to the 1977 Treaty continue to be relevant.

Structure of the Memorial

9. Slovakia's Memorial has therefore been structured around the 1977 Treaty. It is divided into nine chapters, the first five of which form Part I and deal with the facts of the case.

- Chapter I addresses the particular problems and development needs in this region of the Danube that led to the decision of Czechoslovakia and Hungary to develop and to reach joint agreement on the G/N Project as set out in the 1977 Treaty.

- Chapter II then discusses the background of the G/N Project and describes in some detail how it was proposed under the Project to solve these problems and to meet these needs. This Chapter emphasises the extensive study and research during a period of more than 20 years that went into the formulation of the G/N Project and also examines the basic workings of the G/N System.

- Chapter III describes the performance of Czechoslovakia and Hungary under the 1977 Treaty up until 13 May 1989, the date when, as reflected in the first question put to the Court in the Special Agreement, this dispute began - with Hungary's suspension and subsequent abandonment of the performance of its obligations under the 1977 Treaty. This Chapter also considers the motives that led Hungary to seek to abort the G/N Project and to escape from its obligations under the 1977 Treaty.

- Chapter IV deals with pertinent events subsequent to May 1989. It is shown how Hungary succeeded in postponing for three years the damming of the Danube in breach of its obligations under the 1977 Treaty and that, during this period, Hungary sought only to obstruct the G/N Project, never undertaking to establish with scientific data its claim of impending ecological disaster. It is demonstrated how Czechoslovakia proceeded with new studies that failed to substantiate the Hungarian claim and that, at the same time, Czechoslovakia repeatedly sought to reach a compromise solution, attempts that Hungary continually rebuffed.

- Chapter V completes the factual part of the Memorial with an explanation of Czechoslovakia's limited implementation of the 1977 Treaty. This has been by means of the provisional solution called Variant "C". The extensive scientific study behind the adoption of Variant "C" and the need to put into effect a provisional solution are both considered in detail in Chapter V.

- Part II of the Memorial contains a legal analysis of the actions of Czechoslovakia and Hungary under the 1977 Treaty, examining Hungary's breaches (Chapter VI), the lawfulness of Variant "C" (Chapter VII), and the total inadequacy of the legal justifications offered by Hungary for suspending, abandoning the performance of its obligations and then purportedly terminating the 1977 Treaty (Chapter VIII).

- Chapter IX, which concludes the legal part of the Memorial, explains the remedies sought by Slovakia.

- The Memorial ends with Slovakia's Submissions.

10. In bringing to a close the discussion of the structure of this Memorial, a few words about the documentary evidence furnished by Slovakia are in order. This Memorial, Volume I, is accompanied by three Volumes of Annexes (Volumes II - IV). Volume II (Annexes 1 - 22) contains, inter alia, the international agreements that bear directly on this case, including the Special Agreement and the 1977 Treaty. The cover of each volume of annexes indicates by annex number the annexes included within.

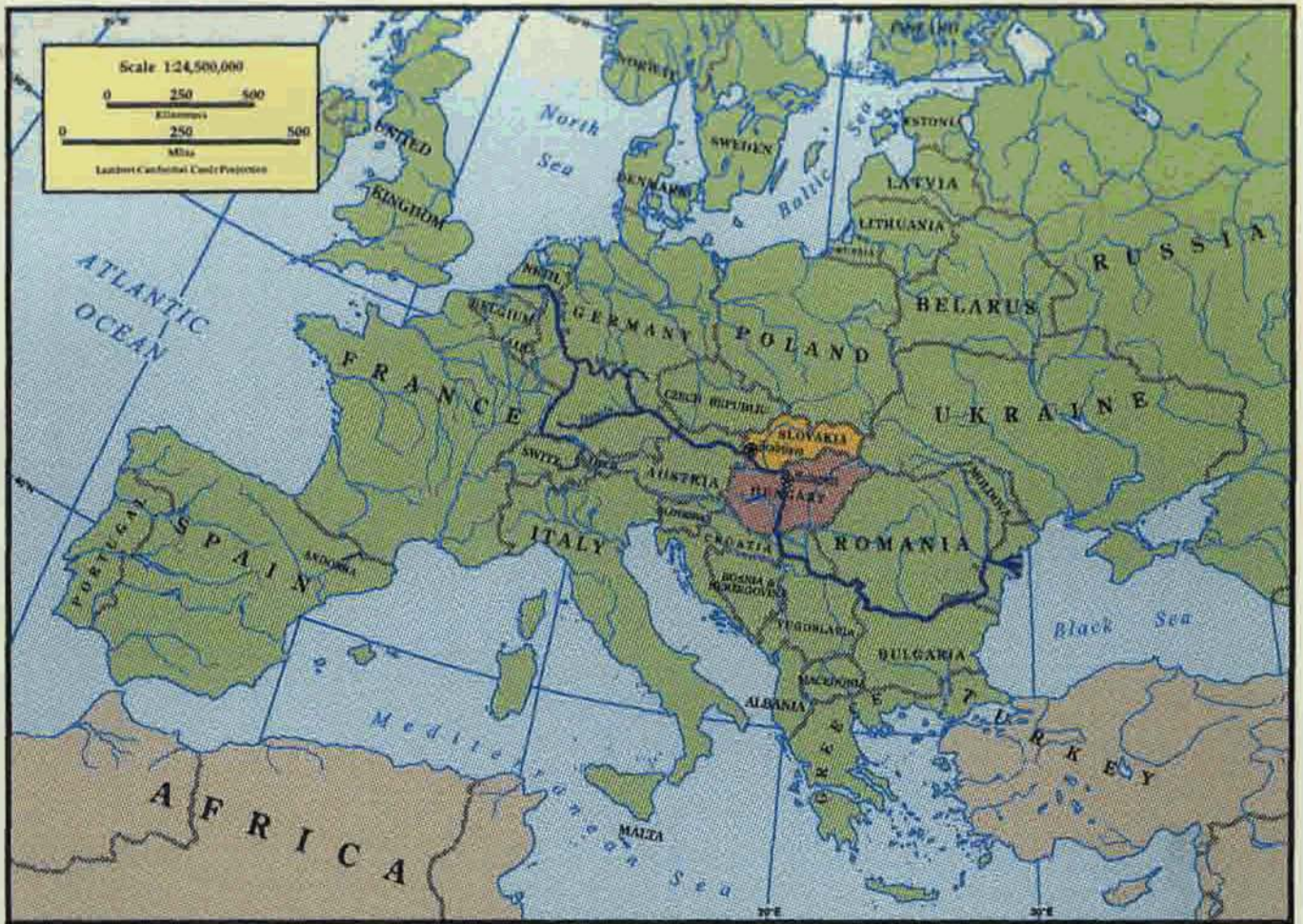
11. A large portion of the annexed evidence consists of extracted parts of longer documents that are neither published nor readily available and, except for the extracts, are not relevant. In order to spare the Court, Slovakia has taken full advantage of Article 50 (2) of the Rules of Court by annexing only a translation of the relevant part of each such document, while depositing the whole document in the Registry.

Certain Pertinent Geographical and Historical Facts Concerning Slovakia

12. The Slovak Republic came into being as one of the two successor States of former Czechoslovakia on 1 January 1993, becoming a member of the United Nations on 19 January 1993.

13. The geographical location of Slovakia is shown on Illus. No. 1; its principal cities and its rivers and lakes appear on Illus. No. 2; the topography of this region is shown on Illus. No. 3¹⁵. Slovakia includes an area of 49,035 square kilometres. Its boundaries on the west are with Austria (127.2 km) and the Czech Republic (265 km), on the south with Hungary (679 km), on the east with Ukraine (98 km), and on the north with Poland (598 km).

¹⁵ The Illustrations appearing in this Memorial have been prepared by Maryland Cartographics, Inc., Columbia, Maryland. International boundaries concerning other States that appear thereon, as well as the names and indicated limits of States, are based on the best available sources; they do not, however, reflect Slovakia's official position with respect thereto.



Specially prepared for presentation to the International Court of Justice.

ILLUSTRATION NO. 1



Specially prepared for presentation to the International Court of Justice.

ILLUSTRATION NO. 2



Specially prepared for presentation to the International Court of Justice.

ILLUSTRATION NO. 3

14. The population structure of Slovakia, separated into the different ethnic and national groups within the country according to the 1991 census, is portrayed on the following table:

<u>Nationality</u>	<u>Population</u>	<u>Percentage</u>
Slovak	4 511 679	85.63
Hungarian	566 741	10.76
Gypsy	80 627	1.53
Czech	53 422	1.01
Other ¹⁶	56 466	1.07
<u>Total</u>	<u>5 268 935</u>	<u>100.00</u>

Comparative population statistics of neighbouring countries are set out in the next table:

<u>Country</u>	<u>Millions</u>
Austria	7.770
Czech Republic	10.380
Hungary	10.588
Poland	38.389
Ukraine	52.700

15. It has been said of new States like Slovakia that they have no history. As the Slovak writer Vladimír Mináč put it in his 1968 essay, "Where Are Our Castles":

"We have no history ... if this is made up solely of kings, emperors, dukes, princes, victories, conquests, violence and pillage."

Of course, the Slovak peoples do indeed have an ancient history in Central Europe. As the Italian writer Claudio Magris wrote in his book, Danube¹⁷.

"Bratislava, capital of Slovakia, is one of the "hearts" of Mitteleuropa, with layer upon layer of centuries forever present, unresolved conflicts and lacerations, unhealed wounds and unreconciled contradictions.

¹⁶ "Other" includes Ruthenian, Ukrainian, German and Polish.

¹⁷ First published in Italian by Garzanti editore, Milan, under the title Danubio, 1986. English translation, Collins Harvill, London, 1990, p. 220.

* * *

The Central Europeans are ignorant of the science of forgetting, of filing away events ... [M]y friends and I used to discuss the city's name, which ones we liked best: Bratislava, the Slovak name, Pressberg [Pressburg], the German one, or Poszony, the Hungarian name derived from Posonium, the ancient Roman outpost on the Danube. The fascination of those three names bestowed a special glamour on a composite, multinational history, and someone's preference for one or the other was, in a childish way, a basic stance taken towards the Weltgeist. That is to say, we had to choose between the instinctive celebration of great, powerful cultures such as the German, the ones that make history, or our romantic admiration for the exploits of rebellious, chivalrous and adventurous peoples such as the Magyars, or else our fellow-feeling for what is more subdued and hidden, for the small peoples such as the Slovaks, who remain for a long time a patient, unregarded substratum, a humble, fertile soil waiting centuries for the moment of its flowering."

16. The region of Central Europe that includes Slovakia was first settled by the Celts, who came from the west in the 5th Century B.C. Shortly before the birth of Christ, the Roman Empire advanced to the Danube, and Roman garrisons were established in Slovakia. During the era of the migrations of peoples (5th - 6th Centuries A.D.), the Slavs arrived in large numbers from the east; and in the 9th Century A.D., out of the various principalities that had sprung up, the Great Moravian Empire was formed. During its brief existence, it dealt on virtually equal terms with the Holy Roman Empire. It was during this period that Christianity spread throughout the region of the Danube.

17. During the 9th and 10th Centuries, the Magyars penetrated the Danubian plains; and after unsuccessful military ventures into Western Europe, they settled by the Danube, creating the Hungarian Kingdom. For almost 1,000 years thereafter, starting with the reign of St. Stephen (967-1038), the Slovak peoples were ruled by Hungary. After the Ottoman invasion and the defeat of the Hungarian army in southern Hungary at Mohács on the Danube in 1526, and the subsequent Ottoman occupation of much of present-day Hungary, including Budapest, the capital of Hungary was moved to Bratislava, which became the seat of the Hungarian Parliament until 1848. For three centuries the Hapsburg kings of Hungary were crowned in Bratislava, where the central governmental offices of the kingdom had been established.

18. The long and difficult history of the rule over the Slovak peoples by the various kings and regimes of Hungary came to an end after World War I, when Czechoslovakia was established as one of the successor States to the Austro-Hungarian Empire. But the effects of such a history are seldom easily erased, the situation being aggravated here by the so-called Vienna Award of 2 November 1938. By this Award, Germany and Italy purported to transfer to Hungary a slice of territory that included a large part of the Slovak side of the Danube bordering the present G/N Project and towns such as Gabčíkovo. The area comprised one-fifth of Slovakia, and was inhabited by a quarter of its inhabitants.

19. In the Paris Peace Treaty of 1947, the pre-World War II frontiers of Czechoslovakia were reinstated. Shortly afterwards, in 1948, the name of the town of Gabčíkovo was changed from the previous name of Beš to the current name¹⁸. This was to honour one of the heroes of the resistance against the Nazis, the Slovak named Jozef Gabčík, who organised the assassination of the Reichsprotektor in Prague, R. Heydrich, the highest representative of the German Nazi regime in the country. It is from the name of Jozef Gabčík that Gabčíkovo is derived.

20. It is not surprising, therefore, that Slovakia finds offensive the persistent use today by Hungary, even in official diplomatic correspondence, of the name Bös for the town of Gabčíkovo. For example, the Hungarian Government frequently refers to the G/N Project as the "Bös/Nagymaros Project" even though the 1977 Treaty refers to the Project as the "Gabčíkovo-Nagymaros System of Locks" and the official title of the present case before the Court is "Gabčíkovo-Nagymaros Project (Hungary/Slovakia)". By using the name "Bös", Hungarian officials and media seem to imply that the town is in some sense still Hungarian, manifesting a surprising degree of insensitivity to the feelings of their northern neighbours.

21. After the change of the political regime in Czechoslovakia in November 1989, the process of transforming the centrally controlled economy into a market economy began - and was continued by Slovakia upon achieving separate statehood. But the new State was faced with serious problems: a decline in overall production, a steep increase in unemployment, and an annual inflation rate of over 19%. Slovakia had also to

¹⁸ During periods of Hungarian rule of the territory, this town was called Bös.

struggle with a large trade deficit (for 1993, SK 26,7 billion)¹⁹. These economic factors relate directly to the measures taken by Slovakia to complete the G/N Project in spite of Hungary's refusal, for Slovakia needs to derive what benefit it can from this major investment in such areas as improved flood protection, navigation, tourism, electric power generation and the reduction of energy imports from abroad.

¹⁹ A billion is 1,000 million. 1 US\$ = 32.68 Slovak Koruna (crowns); rate as of 10 February 1994.

PART I

THE FACTS



Specially prepared for presentation to the International Court of Justice.

ILLUSTRATION NO. 4



Specially prepared for presentation to the International Court of Justice.

ILLUSTRATION NO. 5



Devin Gate at the Confluence of the Danube and Morava Rivers, where the Danube enters Slovak Territory.

CHAPTER I. THE G/N PROJECT IN PERSPECTIVE: THE SLOVAK/HUNGARIAN SECTION OF THE DANUBE, ITS PROBLEMS AND THE NEED FOR OPTIMAL UTILISATION

1.01 The purpose of this first Chapter is to explain, in the simplest of terms, why Czechoslovakia and Hungary decided to invest in the construction of the system of weirs, locks and hydroelectric power plants at Gabčíkovo and Nagymaros - the G/N Project. In Section 1, a general background picture of the region of the Danube River and, in particular, the Slovakia/Hungary section is provided. The Danube's geographical position and importance is briefly examined as is the previous usage by man that has transformed a system of constantly changing meanders into a fast-flowing and uniform channel, leading to specific and harmful impacts within the river basin. In Section 2, Slovakia explains the significance of this transformation, the specific problems that have been created and the need both to remedy them and to obtain the optimum, sustainable utilisation of this section of the Danube. In so doing, the individual problems of flooding, navigation, energy production, water resources and the environment are examined.

SECTION 1. The Danube - Background and Utilisation

A. General Description of the Region of the Danube

1.02 From its source in Germany's Black Forest (Schwarzwald) close to the source of the Rhine River, the Danube River - second in size among European rivers only to the Volga - flows eastwards to the Black Sea (Illus. No 4). It is the principal east/west waterway across the countries of Central Europe, crossing the land-locked States of Austria, Slovakia and Hungary and linking them to the Black Sea on the east and, on the west, via the Rhine River, to the North Sea.

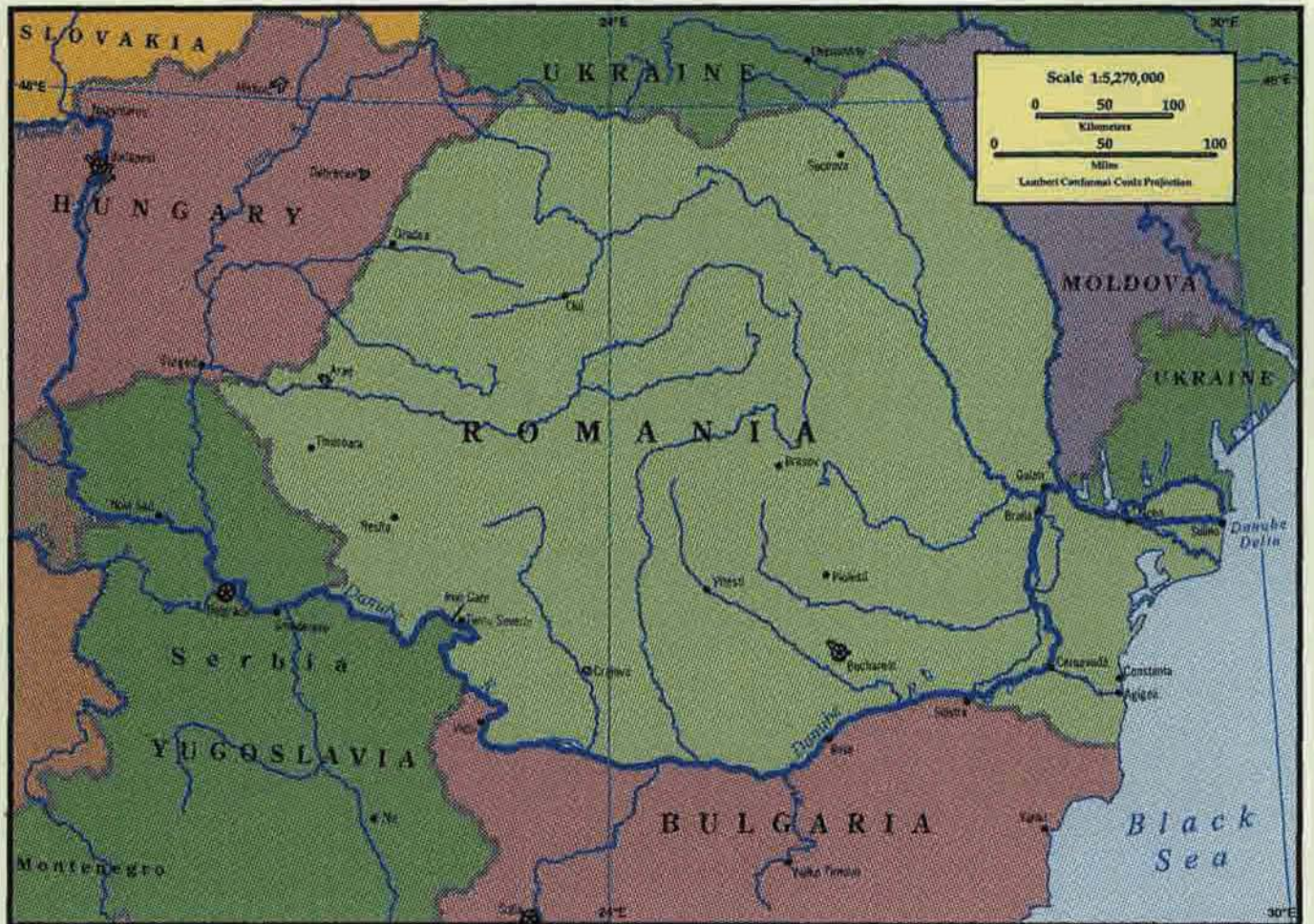
1.03 From the Black Forest, the Danube, known by its German name, the "Donau", passes eastward through Ulm and Regensburg. Just west of Regensburg, at Kelheim, the Main - Danube Canal, completed in September 1992, meets the Danube, linking the waterways of the Rhine and the Danube (Illus. No. 5). From there, the Danube crosses Austria, flowing through Linz and Vienna, and enters Slovakia at the

Devin Gate, the point where the Morava River flows into the Danube from the north (Illus. No. 6). For a distance of 7.5 km, the Danube forms the boundary between Austria and Slovakia. It then traverses southern Slovakia (where it is known as the "Dunaj") for a distance of 22.5 km, to the point where the Hungarian boundary with Slovakia intersects the Danube southeast of Bratislava.

1.04 For the next 142 km, the Danube forms the boundary between Slovakia and Hungary until its junction with the Ipef River, where the boundary then abandons the river and turns north. The Danube (now known by its Hungarian name, the "Duna") continues east into Hungarian territory for a short distance and then makes a sudden bend to the south passing through Budapest and following a north/south course through Hungary (450 km) to the frontier with Croatia. Unlike that of either Austria or Hungary, the geographical situation of Slovakia means that, except for the short distance that the Danube passes solely through Slovak territory, its opportunity to put the waters of the Danube to optimum use is essentially dependent on joint projects with one or both of these two States.

1.05 The international character of the Danube is retained as it flows on to the Black sea (Illus. No. 7). Continuing southwards from Hungary, the Danube forms for a short distance the Croatia-Yugoslavia boundary. Then it turns eastwards once more, passing through Novi Sad and Belgrade, to the point where it becomes the boundary between Yugoslavia and Romania. After passing the Iron Gate, the Danube zigzags southward to the tripoint of the boundaries between Yugoslavia, Bulgaria and Romania and then bends eastward (the spelling of its name changing from country to country) where it forms the boundary between Romania and Bulgaria as far as Silistra. The Danube then enters the lowlands section of Romania. A navigation canal was recently completed connecting the Danube with the Black Sea, but the River itself flows northward on to Galati and then finally to the east again, forming three branches that cross the Danube Delta. The northern branch becomes the boundary between the Ukraine and Romania and the middle branch reaches the Black Sea at Sulina, which is generally designated as the mouth of the Danube.

1.06 What this geographical description brings out is that nine States today share the river basin of the Danube - a river that begins its 2,875 km journey eastwards to the Black Sea from an altitude of 1,078 metres above sea level (measured from the Baltic Sea). The sharing of the Danube among these States creates an interdependent relationship that runs in both directions, upstream and downstream. Pollution caused by an upstream State may harm a downstream State; a downstream



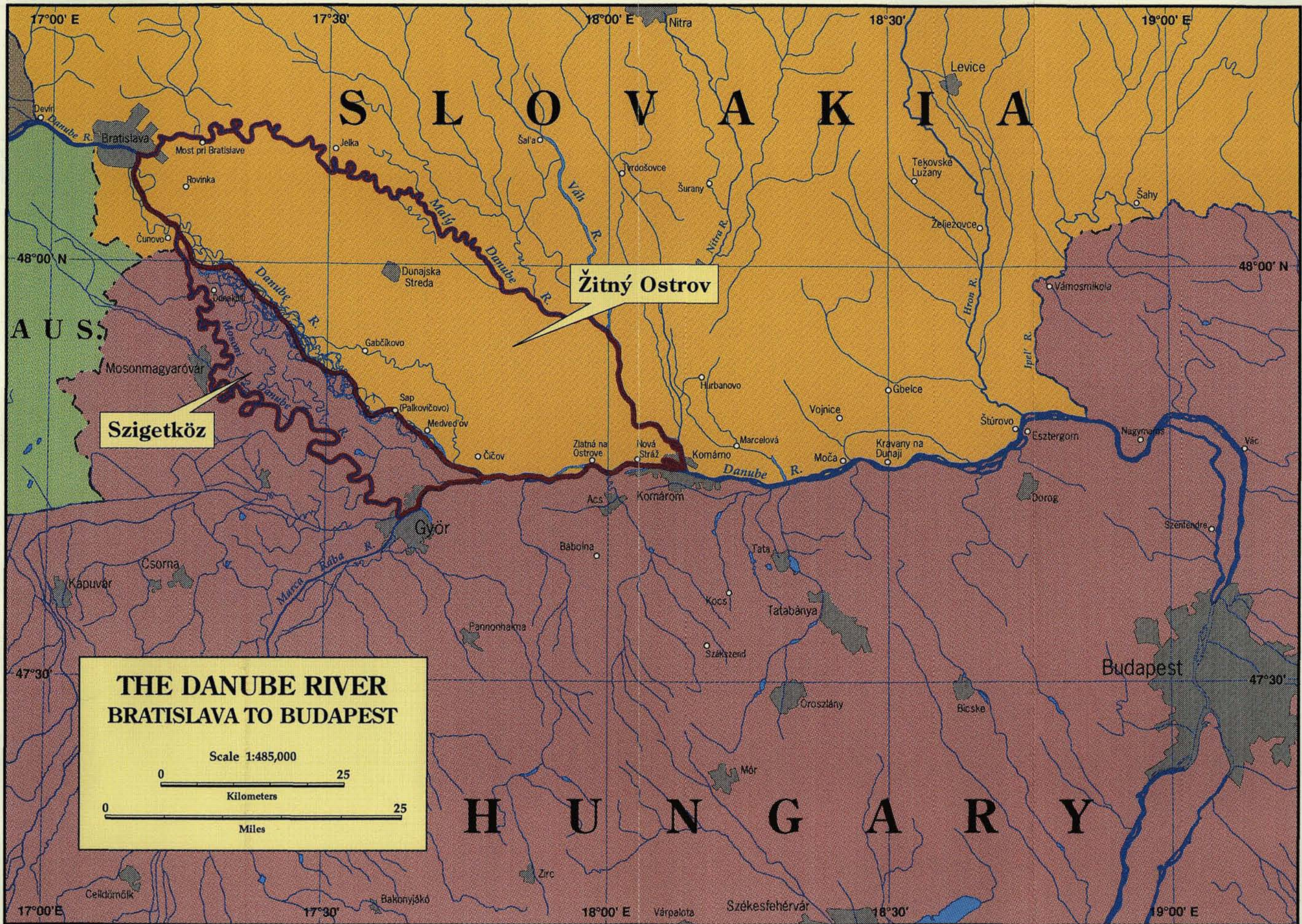
Specially prepared for presentation to the International Court of Justice.

ILLUSTRATION NO. 7



Specially prepared for presentation to the International Court of Justice.

ILLUSTRATION NO. 8

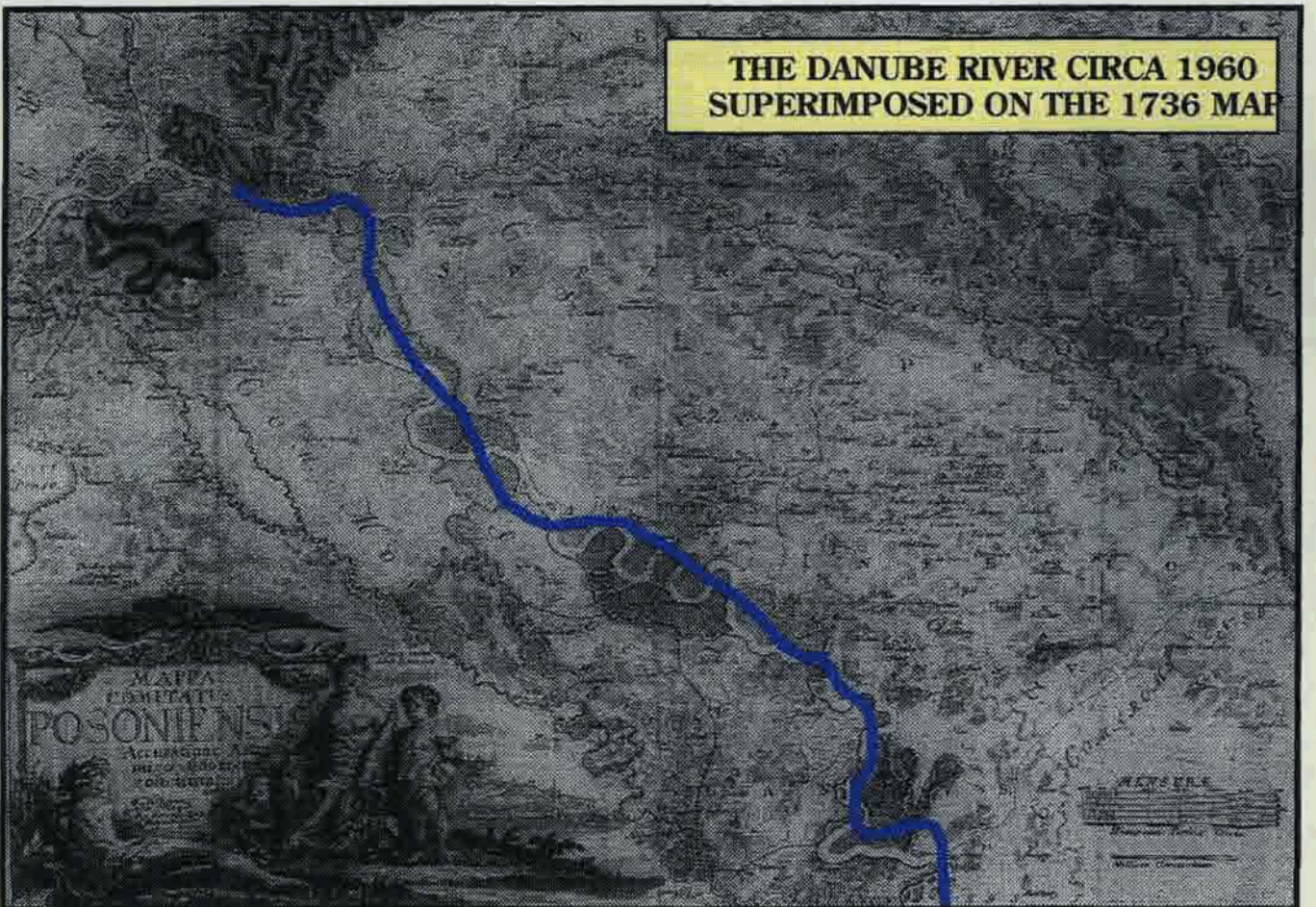


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**1736 MAP OF
SAMUEL MIKOVÍNI**



**THE DANUBE RIVER CIRCA 1960
SUPERIMPOSED ON THE 1736 MAP**



State's failure to remove navigational obstacles may cause damage to both upstream and downstream States by interfering with or limiting the use of this trans-European water artery that, together with the Rhine and the Main Rivers, extends from Rotterdam to Sulina.

1.07 The G/N Project, as conceived in the 1977 Treaty, is located less than halfway from the source of this international watercourse, encompassing the region of the Danube roughly between 1860 rkm (just south of Bratislava) and 1696 rkm (at Nagymaros)¹, a stretch of some 164 km (Illus. No 8). In the upstream part of the G/N Project region, at Sap (Palkovičovo)², located at 1810 rkm, the gradient of the Danube decreases suddenly as a result of the geological history of the region³. The flatter topography changes the Danube from a large but nonetheless torrential river with a steep gradient to a much slower flowing river. As will be shown in the next Section, this change in the Danube gradient has given rise to serious navigational difficulties and has created additional problems, especially with regard to the increased risk of severe flooding.

1.08 Just downstream of Bratislava, the Danube forms two branches on either side of the main channel: on the north, the Malý Danube in Slovakia; on the south, the Mosoni Danube in Hungary (Illus. No. 9). This effectively creates two large islands to the north and south of the main riverbed: Žitný Ostrov⁴ in Slovakia and Szigetköz in Hungary.

1.09 Between Bratislava and Sap (Palkovičovo), as a result of the change in gradient, the Danube formed a delta region through which it once meandered

¹ The Danube traditionally is measured in river kilometres ("rkm") starting from the mouth of the Danube at Sulina and measuring upstream to its source.

² Palkovičovo is the former name of the town officially renamed Sap. As the former name still appears on most maps and in documents, it is also given below in brackets after the name Sap.

³ In ancient geological times (the Tertiary era), the European continent ended in the area of today's Vienna and Bratislava. Although the sea retreated as the Alps and the Carpathian mountains were formed, a large depression was left in the Danubian lowland area. The gradual formation of the Danube led, effectively, to the filling up of this depression as sediments from the alpine source were carried down and deposited in this region. Eventually, so much sediment was deposited that the depression disappeared and the accumulated sediment began to act as a brake, slowing down the flow of the river. The impacts of this are considered in greater detail below. Briefly, the deposition of sediment has created a large gravel-based aquifer that varies from 5 to 300 m or more in depth. So much sediment has been deposited that the river came to flow above the surrounding terrain, creating a severe flooding tendency.

⁴ Meaning "Wheat Island".

along shallow branches. This can be seen clearly on early maps, such as reproduced in Illus. No. 10, a 1736 map. In the 250 years that have elapsed since then, the Slovak-Hungarian portion of the Danube in this delta region has changed radically. This has been caused by the intervention of man, who has sought to control flooding, to improve navigation, to farm the fertile land and to harvest the riverine forests. During this time, the region has also become populated⁵ and partially industrialised. The fundamental changes brought about by human intervention in this section of the Danube river basin long pre-dated the inception of the G/N Project. One of the central objectives of the Project was to address the main adverse consequences of these changes.

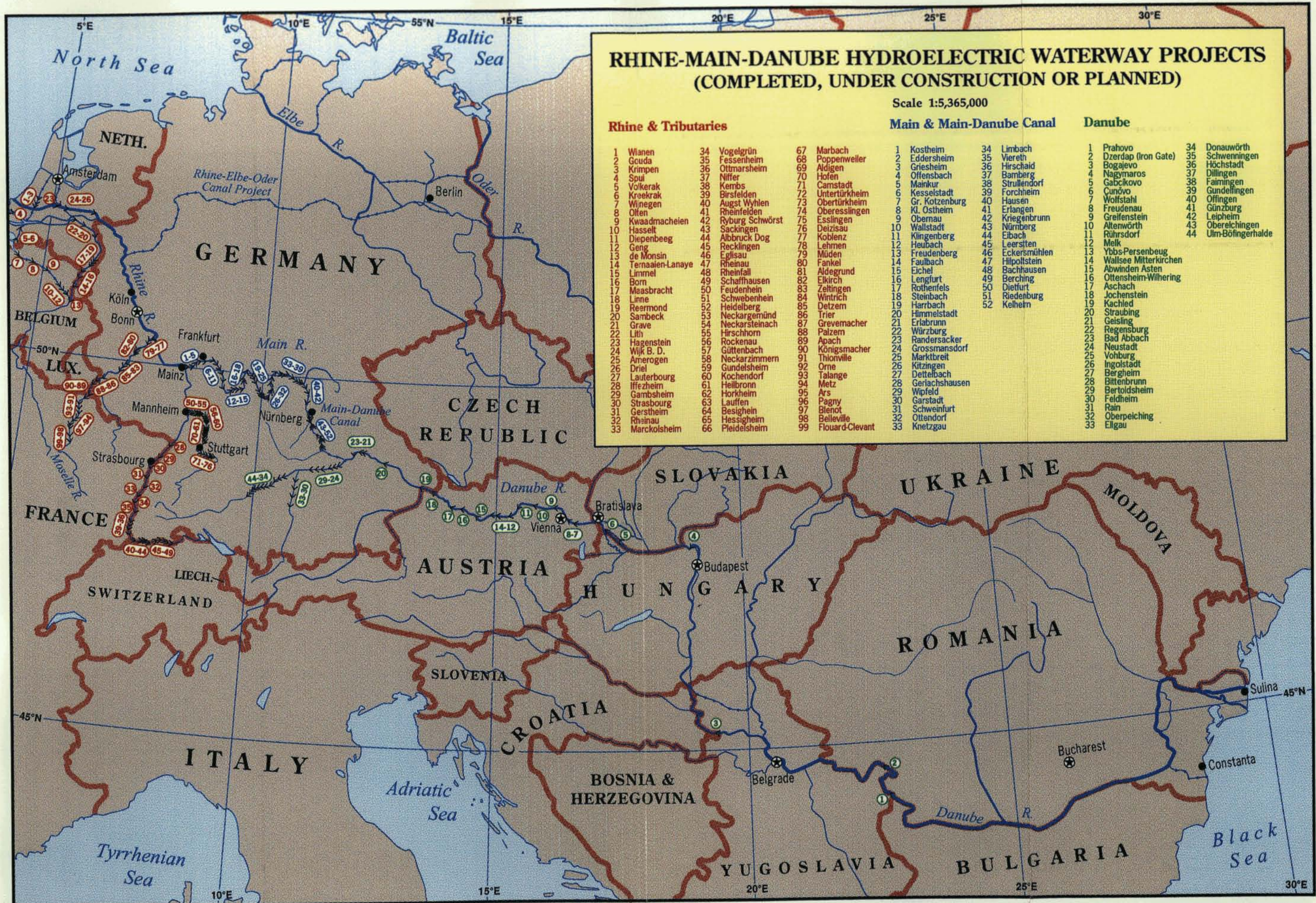
B. Utilisation of the Danube

1.10 The first construction works along the Danube were aimed at flood control and the improvement of navigation. Even as early as the 17th Century, organised work on the German sectors of the Danube was started. Regular water management operations commenced in the region of the Upper Danube, where improved conditions for navigation were first created. Similar works were started on the Rhine even earlier. These rivers and the transport means they offered were, even at that time, of fundamental economic importance to Central Europe. Indeed, the proposal to connect the Rhine and Danube rivers by a canal linking the Main River to the Danube has an ancient origin, dating back to the reign of Charlemagne.

1.11 The importance of the Danube as part of a network of navigable rivers has appreciably increased now that the Rhine-Main-Danube link has become a reality. Agreement on the vast engineering project of the Main-Danube canal was reached in 1921, construction work began in 1962 and the Canal was opened on 25 September 1992. The 30 year project cost DM 4 billion (or DM 24 million per km)⁶. The Canal is 171 km in length, has a depth of 4m and a width of 55 m. An extended usage of the Danube as an economical and environmentally acceptable means of transport seems to be a certainty, subject to the removal of remaining navigational trouble spots.

⁵ On average, the Slovak side of the Danube has a population density of between 85 and 150 persons per square kilometre.

⁶ By comparison, 1 km of the new railway line Hannover - Würzburg cost 36 million DM; and 1 km of the new highway BAB Munich-North cost 49 million DM.



1.12 Upstream of Bratislava, navigation has been facilitated because it takes place largely through artificially created reservoirs or canals. Downstream of Bratislava, only the sector to Budapest continued to present navigational difficulties at the time of the opening of the Main-Danube canal. Resolving the navigational problems between Bratislava and Budapest was, in fact, one of the principal objectives of the 1977 Treaty establishing the G/N Project. The idea of achieving this aim partly by means of a bypass canal was not revolutionary. Today some 41.5% of the total navigable length of the Danube between Kelheim (Germany) and Sulina (Romania on the Black Sea) consists of artificially created reservoirs or canals.

1.13 But, of course, navigation is not the only way in which the Danube has contributed to the development of its riparian States. The Danube's waters are utilised for domestic purposes, as part of industrial processes and for the production of hydroelectric power. By the time the Main-Danube canal was completed, the Rhine and Danube rivers for much of their respective lengths formed a series of hydroelectric projects, as may be seen on Illus. No. 11. In the German sector of the Danube, some 26 such projects have been completed; in Austria, nine hydroelectric power plants with navigational locks are in operation on the Danube and a tenth (Freudenau) has been started on the outskirts of Vienna. A chart listing these Austrian plants and the year of construction appears below:

Jochenstein - (with Germany)	1956
Ybbs-Persenbeug	1959
Aschach	1964
Wallsee - Mitterkirchen	1969
Ottensheim-Wilhering	1974
Altenwörth	1978
Abwinden-Asten	1980
Melk	1983
Greifenstein	1985
Freudenau	under construction

The location of these plants together with their pictures appears as Illus. No. 12(A) and (B).

1.14 The water management projects along the Danube have been largely based on the principle of combining navigational improvements and flood control measures with the production of electrical energy. For countries such as Slovakia and Hungary, the accompanying production of electricity is especially important. With limited resources to pay for expensive navigational and flood control projects, the electricity produced permits them to repay the enormous investment. It may be noted in

this regard that the funds expended by Slovakia to date on the Project have come directly from its budget or from other domestic sources and not from borrowings abroad.

1.15 As mentioned above, Slovakia has had only a restricted ability to benefit from the Danube because the river flows wholly within its territory for a mere 22.5 km. Hungary has not been hampered in this way. Three specific uses which Hungary has already made of the Danube, may be mentioned here:

- As a coolant for its large nuclear pressurised water reactor (the VVER Soviet version) at Paks 115 km south of Budapest, which requires the use of large quantities of Danube water (Illus. No. 13).
- As a source of water for the operation of the large petroleum products refinery located at Almazfurito, east of Komárom.
- In connection with the two fossil fuel burning power stations at Dunamenti, 40 km south of Budapest.

1.16 Slovakia's primary utilisation, by contrast, was planned to be through the joint scheme with Hungary, that is the G/N Project. This is a hydroelectric project producing power in a similar way to any one of the many projects along the Rhine, the Rhone and the Danube, including several projects in the Danube downstream section between Hungary and the Black Sea⁷. As mentioned at paragraph 1.13 above, hydroelectric plant construction is still continuing on the Danube in other States: construction is now underway in Austria at Freudenu, and Austria currently appears to be considering afresh the possibility of building a plant just upstream of Bratislava, at Wolfstahl.

⁷ Insofar as the G/N structures may be particularly large, this results from the relatively large size of the Danube in the region of the G/N Project, compared to other European rivers and compared to upstream sections of the Danube itself. For example, the bypass canal that forms part of the G/N System is of substantial dimensions because it must be able to handle the Danube's flood waters safely. Such downstream Danube projects as at the Iron Gate involve large structures for the same reason.

AUSTRIA'S HYDROELECTRIC POWER PLANTS ON THE DANUBE

Scale 1:400,000

0 10 20

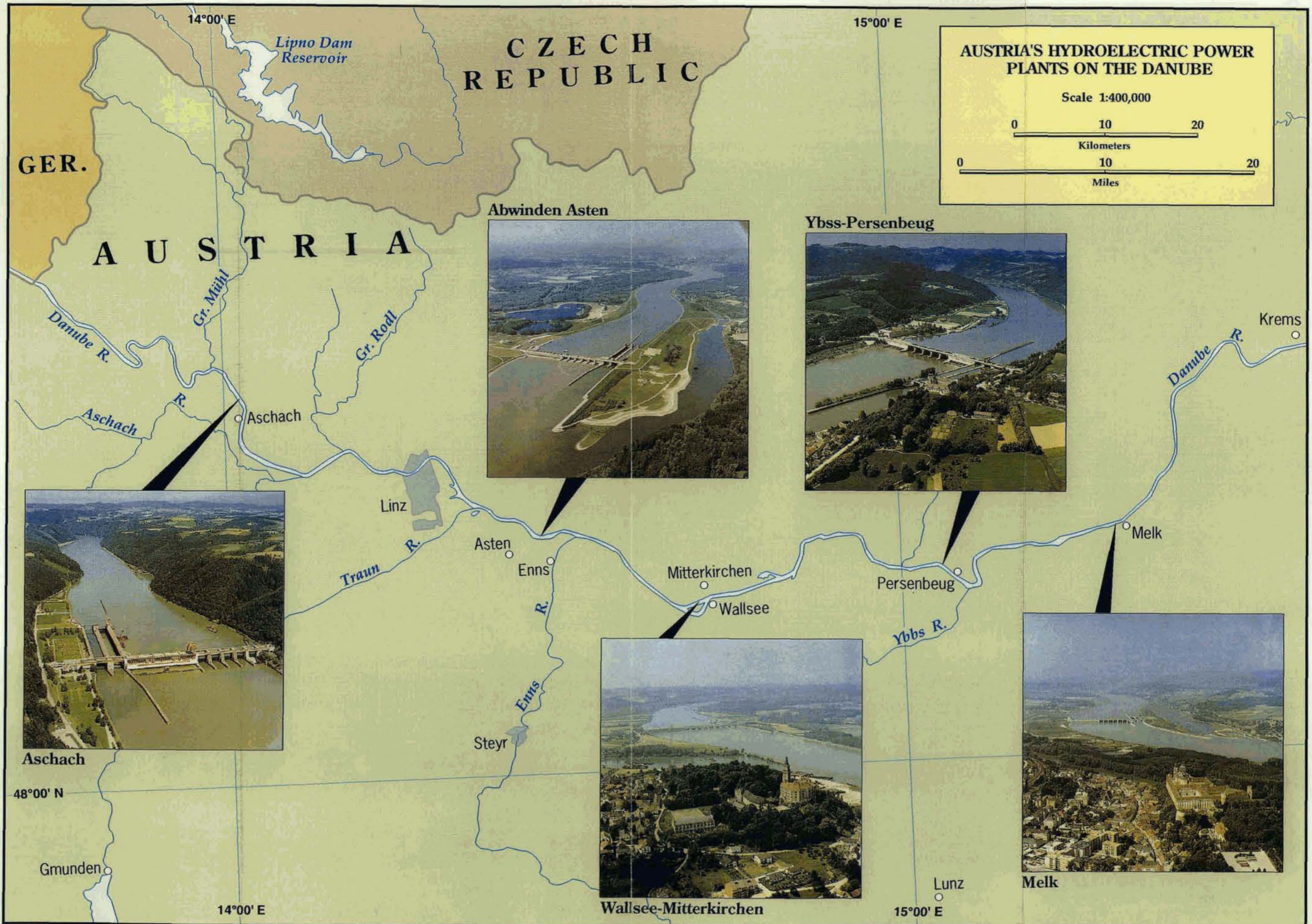
Kilometers

0 10 20

Miles



Freudenau Dam Model





**HUNGARIAN NUCLEAR POWER PLANT
ON THE DANUBE AT PAKS**



Specially prepared for presentation to the International Court of Justice.

ILLUSTRATION NO. 13

1.17 As a result of earlier developments along both the Rhine and the Danube, the G/N Project has benefited from the experiences encountered (and mistakes made) in other projects, particularly in relation to the effect of such projects on the environment. The G/N Project comes into being at a time when there is a heightened awareness of the importance of environmental protection. It is in the light of this increased concern for environmentally sound development that Slovak, Czech and Hungarian experts have questioned and studied every aspect of the environmental impact of the G/N Project. This, together with the impressive extent to which such environmental considerations have been taken into account, will be demonstrated in detail in Chapters II and V below.

1.18 Thus, the utilisation of the Danube contemplated in the G/N Project marks neither a radical nor an ill-considered move away from pre-existing or other ongoing river projects, but rather an evolution. For over 300 years, the Danube has served as an avenue for commerce and as the basis of the economic development of its riparian States. Its waters have been managed and extensively utilised by these States. The region of the Danube along the Slovak-Hungarian boundary has also become an increasingly developed area. It is intensively farmed, and the forests in the river basin between Bratislava and Budapest have long been managed so as to produce industrially useful wood, leading to the gradual replacement of the original species. This, along with the extensive navigation and flood protection works, both in this region and in upstream States, has created specific environmental effects that had to be addressed. These are discussed in the next Section, but may be summarised as follows:

- The threat of severe inundation caused by the extensive dyking of the river, which prevented a more natural dissipation of high river waters from occurring.
- The lowering of the riverbed caused both by the straightening of the river channel (which increased water flow rates and therefore erosion) and by reduced sedimentation due to upstream waterworks.
- The consequent lowering of the local ground water table, which is to a large degree governed by the water level in the Danube.

- The drying up of river branches as a result of the lowering of the level of the Danube as well as of flood and navigational control measures, which in turn has affected adversely the flora and fauna of the region.
- The introduction of new species of trees and the attendant changes this has caused in the fauna and flora of the region.
- River pollution resulting from population increase, from industrial activity and from the use of fertilisers on the adjoining agricultural land.

One of the main consequences of the G/N Project was that measures to halt or to mitigate these adverse environmental impacts could be put into effect. Insofar as the Project may be thought of as unique, it is so only to the extent it presents a unique opportunity to remedy the problems of a rapidly deteriorating and highly artificial river landscape.

1.19 This is not the opinion of Slovakia alone. It has been confirmed by the Working Group of Independent Experts on Variant "C" of the Gabčíkovo-Nagymaros Project. This Group consisted of independent experts, together with a representative from each of Czechoslovakia and Hungary, appointed in 1992 by the European Communities (EC) to study the impacts of Variant "C". In its Report of 23 November 1992, this EC Working Group concluded:

"In the past, the measures taken for the navigation constrained the possibilities for the development of the Danube and the floodplain area. Assuming the navigation will no longer use the main river over a length of 40 km a unique situation has arisen. Initiated by technical measures the river and the floodplain can develop more naturally⁸."

The means adopted to obtain this more natural development are considered in Chapters II and V below. Prior to this, there will be examined in Section 2 below the specific environmental and other problems caused by the utilisation of this stretch of the Danube

⁸ The EC Working Group of Independent Experts on Variant "C" of the Gabčíkovo-Nagymaros Project, Working Group Report, 23 November 1992 (the "EC Working Group report of 23 November 1992"), Annex 12, at p.58 (emphasis added).

prior to the inception of the G/N Project, alongside the general failure to utilise the water resources in an optimal manner.

SECTION 2. The Problems Requiring Remedial Action in the Slovak/Hungarian Section of the Danube and the Need to Optimise the Use of this Part of the River

1.20 As the previous Section has shown, the riparian States upstream and downstream of the Slovak-Hungarian sector of the Danube, particularly Germany and Austria, have made extensive use of the Danube river basin. In contrast, the sector between Bratislava and Budapest - though populated, farmed and industrialised - has been ineffectively managed and used almost solely for river transport. Yet this same sector still represents the Danube's only major remaining navigational bottleneck. After World War II, both Czechoslovakia and Hungary started to consider water schemes along their sections of the Danube, and in the early 1950s the two parties entered into negotiations to formulate a joint program to address the possibilities of development as well as to deal with the urgent problems requiring remedial action. During the more than 20 years of study that eventually led to the adoption of the G/N Project as the optimal solution, action to deal with these problems came to appear increasingly urgent, due in particular to two severe floods causing large scale destruction in 1954 and 1965.

A. The Problem of Floods

The Natural Flooding Phenomenon

1.21 The Danube is a dynamic river subject to extremely wide variations in its water flow rate. In Bratislava, the recorded flow rate varies from around 600 m³/s to twenty times this figure during flood conditions⁹. As such, flooding of the Danube lowlands used to be a normal summer and winter occurrence. Before this region became inhabited, these floods were beneficial or, to be more precise, they created a unique environment adapted and based on the floods of the Danube. The first human settlements were not endangered by such floods because they were established on higher ground and were largely unaffected by the unregulated river. But as these settlements expanded, the importance of the river and its tendency to flood grew in human terms.

⁹ The fluctuations in water volume in the Danube are extreme - ranging on average at Bratislava from 570 m³/s (low) to 2,025 m³/s (average) to 10,254 m³/s (maximum). The abbreviation "m³/s" means cubic metres per second.

Although exact measurements of flood levels have only been maintained at Bratislava since 1876, prior years of floods of particular importance are known from various sources.

Such floods occurred in the following years:

		1012	1118	1126	1172	1193	1235	1275	1280	1281
1284	1316	1342	1402	1405	1408	1439	1445	1446	1465	1480
1490	1501	1508	1516	1520	1527	1595	1614	1615	1617	1622
1640	1650	1661	1668	1708	1709	1716	1728	1729	1730	1732
1733	1740	1741	1744	1748	1753	1755	1757	1758	1760	1767
1768	1770	1771	1774	1775	1779	1781	1783	1784	1786	1787
1788	1789	1799	1803	1804	1809	1813	1820	1830	1838	1841
1848	1849	1850	1876							

Beyond this last date, the details of severe flood years have been carefully recorded, together with the steps necessary to combat the flood. The years in which different degrees of flood control activity are recorded in the archives of the hydrological office of the Slovak Hydrometeorological Institute in Bratislava are as follows¹⁰:

1897+	1899++	1902+	1920+++	1925++	1928+
1932	1948++	1949V++	1949VIII++	1951+	1952+
1954VII+++	1954VIII+	1955++	1957++	1958++	1959VI++
1959VII+	1959VIII+++	1961V+	1961XII++	1962+	1963+++
1964+	1965III+	1965IV++	1965V+++	1965VI+++	1965VII+++
1966VIII+	1967+	1968+	1970II+	1970V+	1970VII+
1970VIII++	1974I+	1974VII+	1974XII++	1975+++	1977+
1979+	1981III+	1981VII++	1982+	1985++	1988+
1991+++					

1.22 Before turning to the impact of the concerted attempts to restrict the Danube's natural flood patterns, it is essential to focus on another peculiarity of the

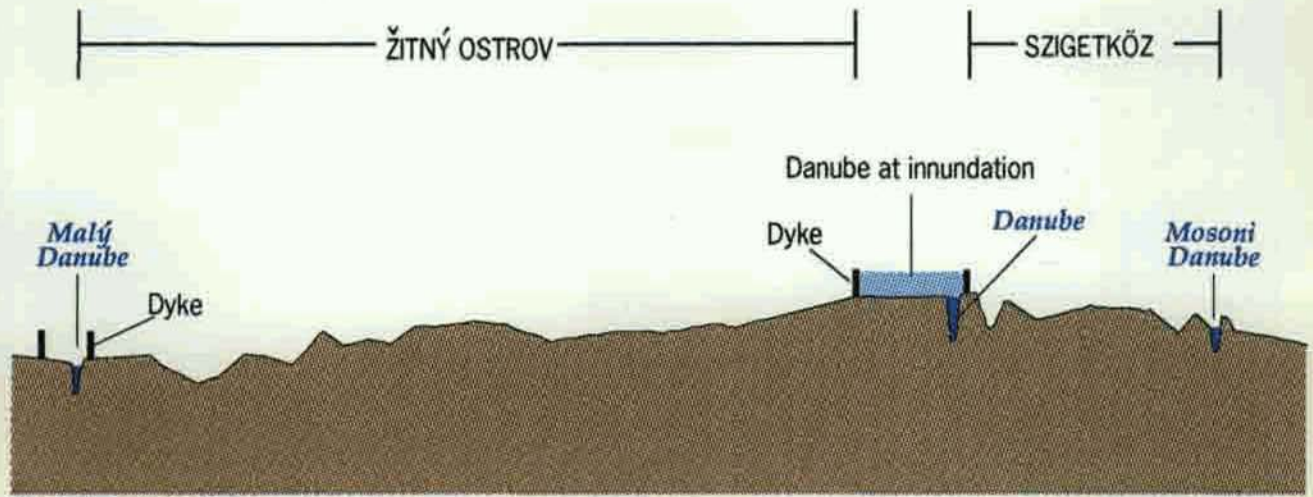
¹⁰

+ first degree of flood control activity
 ++ second degree of flood control activity
 +++ third degree of flood control activity

Bratislava water level
 650 cm
 750 cm
 850 cm

The month in which the flood occurred is indicated with a Roman numeral for those years in which more than one flood occurred.

**CROSS-SECTION OF DANUBE REGION
VIEWED DOWNSTREAM FROM BRATISLAVA**



Specially prepared for presentation to the International Court of Justice.

ILLUSTRATION NO. 14

Slovak/Hungarian section : the river flows above the local terrain, as can be seen on Illus. No. 14. This results from the abrupt change in gradient near Sap (Palkovičovo), described earlier, where huge amounts of sediment, brought down from the Danube's alpine source, settled as the water flow velocity suddenly decreased. In this way, thick layers of sand and gravel were laid down above the bedrock. Thus, the Danube here flows along the top of a gravel cone that extends sideways and downwards as far as the Malý Danube to the north and the Mosoni Danube to the south.

1.23 The elevated riverbed tends in its natural state to wander, and a system of river branches is created with changing water levels, forming what is known as an "inland delta". In terms of flooding, the significance of this phenomenon is obvious. The effect of the river bursting its banks in this region is extreme as there is no natural raised terrain to contain the escaping water flow. There is also a secondary form of flooding. Because the Danube dominates the landscape the increased pressure of extra flows during high water levels effectively pushes ground water upward through the gravel aquifer. This can lead to flooding in lower lying areas that are at some distance from the river, although there are areas of dry ground in between. As will be seen below, this flooding by rising ground water can be severe and is possible even when a traditional dyke system is in place, because the water infiltrates the aquifer beneath the artificial structure.

1.24 Thus, this section of the Danube lowlands has become permanently exposed to the threat of floods, leading to protective measures against effects of high discharges in the Danube in the form of dykes (flood levees) and against flooding by rising ground waters through an extensive drainage system. The Slovak right and left river banks are enclosed in the form of dykes along almost their entire length. The enclosed sections on the right bank of the Danube on Hungarian territory are also significant. However, downstream of Győr the bank is formed by the higher ground of the nearby foothills and there is therefore no need for dykes since flood waters are contained by the natural terrain.

Man's Intervention

1.25 According to available early records, attempts to regulate the Danube by the construction of dykes, the closing of river branches and the straightening out of the main meanders of the river downstream of Bratislava can be traced back to the 13th Century when Queen Mary, the wife of Bela IV, sought to protect her Mosoni

estates from floods. Systematic flood protection did not however begin until the 17th Century.

1.26 It is one of the paradoxes of flood control along rivers such as the Danube that the flood protection measures taken, as well as those taken to improve navigation, have the effect of increasing the risk of flood downstream¹¹. Artificial works that channel the water into a uniform riverbed both increase the velocity of the water flow and the quantity of water descending since there is no natural dispersal. River regulatory measures taken in the 19th Century in the Danube above the Bratislava-Budapest region simply increased the danger of floods in this downstream section. Moreover, the management of the river in the Slovak-Hungarian region was carried out on a largely ad hoc basis at that time, and it was not until 1880 that the central authorities undertook a more concerted and unified approach to regulation, drawing on the experience in flood protection acquired on other European rivers by French, Dutch and German engineers.

1.27 Systematic observation of water conditions and discharge started in Bratislava in 1823, and records are available dating from 1876. These scientific observations show that even in the 19th Century, the extent and frequency of summer floods was beginning to increase. As a result, newly constructed dykes could not withstand increased water levels and further dyke reinforcements were required. At the time, the scientific understanding of river floods was limited and engineering skills in the construction of dykes were undeveloped. The effect of the dyke works was simply to retain more water in the main channel, with the result that during the floods of 1897 and 1899 record high water levels were measured and the inundation of 50,000 hectares at Čičov and 10,000 hectares at Lelpusza occurred. With floods came rising ground water, which flooded the plains along the river, requiring additional measures of great expense such as the construction of drainage canals, outlets and pumping stations over a large portion of Žitný Ostrov. By 1929 there were 15 such pumping stations and 435 km of canals in this area.

¹¹ De-forestation in the upper part of the Danube basin has had a similar effect since a reduction in trees reduces the topsoil's ability to retain precipitation.

1.28 The extensive re-inforcement of the dykes and their linkage into a continuous water impoundment structure had extremely significant hydraulic and environmental impacts that may be summarised as follows¹²:

- The prevention of the natural dispersal of water into the plain and the concentration of water flows into a single channel.
- Increased velocity of water flow, leading to erosion of the riverbed downstream of Bratislava and deposition of this sediment downstream of Sap (Palkovičovo).
- Raising the riverbed level at Sap (Palkovičovo), leading to increased river water levels and flooding risk.
- Transformation of flora and fauna due to changed water conditions.

1.29 The resulting phenomena are summarised by the EC Working Group of Independent Experts in its report of 23 November 1992:

"Before the multiple impoundments in the upper Danube catchment areas and the embankment and endikement in Austria, Slovakia and Hungary the Danube was still a free-flowing braided river with a wide floodplain that extended far beyond the present dikes. The floodplain absorbed much of the peak floods, which consequently were slowly rising and long-lasting in most years. Also flow velocities may have been lower than today.

With the past endikements, especially during the last century, flood peaks became steeper and higher, flooding more frequent but in general with a shorter duration. The original zonation in vegetation towards higher grounds and associated forests was largely 'diked' out of the system. Most of the higher, no longer flooded soils, were converted into agricultural lands. Although some remnants of these woods are still existing, especially on the Hungarian side the lands in between the dikes were consequently flooded more often and the river arms flushed and scoured more intensively¹³."

¹² These impacts also stemmed from navigational works and the intensification of agriculture and forestry production in this region of the Danube.

¹³ EC Working Group Report of 23 November 1992, Annex 12, at p.15.

The 1954 and 1965 Floods

1.30 In 1954, and again in 1965, devastating floods occurred that demonstrated that in this stretch of the Danube traditional methods of flood control were ineffectual. These two floods will be described here because they provided much of the impetus for the development of the scheme that became the G/N Project in the 1977 Treaty. Indeed, the design of the agreed Project resulted to a significant extent from the information derived from these floods.

1.31 The 1954 flood devastated the Hungarian side of the Danube, causing damage amounting to US\$ 1.5 billion, due to breaks in the dykes in three places along the right bank¹⁴. Although the fact that the breaks occurred on the Hungarian side spared the Slovak side from surface flood waters, the leakage of underground waters under the left bank dyke system, together with the trapping of internal waters that could not drain away into the Danube, led to the inundation of some 10,000 hectares in Slovakia, destroying the crops there (Illus. No.15).

1.32 The 1954 flood led to extensive reinforcement of the dykes along both banks of the Danube and along its tributaries. The heights of the dykes were increased allowing for a new safety margin of 1.2 - 1.5m, the existing dykes were reinforced and new dykes were constructed. The length of the new dyke system protecting Žitný Ostrov was some 195 km. Downstream of Komárno the dyke system was now 59 km long, whilst a further 40 km of dykes lined the left bank tributaries. Finally, 23 km of dykes stretched from Bratislava to the border with Hungary on the right bank. In all, some 145,000 hectares of land were protected in Žitný Ostrov, whilst 40,000 hectares were protected in other regions. In addition, new drainage canals were excavated where internal waters had caused flooding.

1.33 In the following years, inundation was largely controlled, although there was a severe flood in 1963. But, in June 1965, the territory of Slovakia was struck by a devastating flood. The combination of exceptionally high rainfall and the late melting of winter snows in the Alps created a catastrophic flood wave that led to breaks in the dykes near the Slovak villages of Čičovo and Patince. The extent of its effects are shown on Illus. No. 16 as well as on photographs appearing here at Illus. No.17(A-D). In the period March-July 1965 the flow of the river through Bratislava was almost equal to the total average flow of the Danube in a normal year. Some 65,000 hectares on the

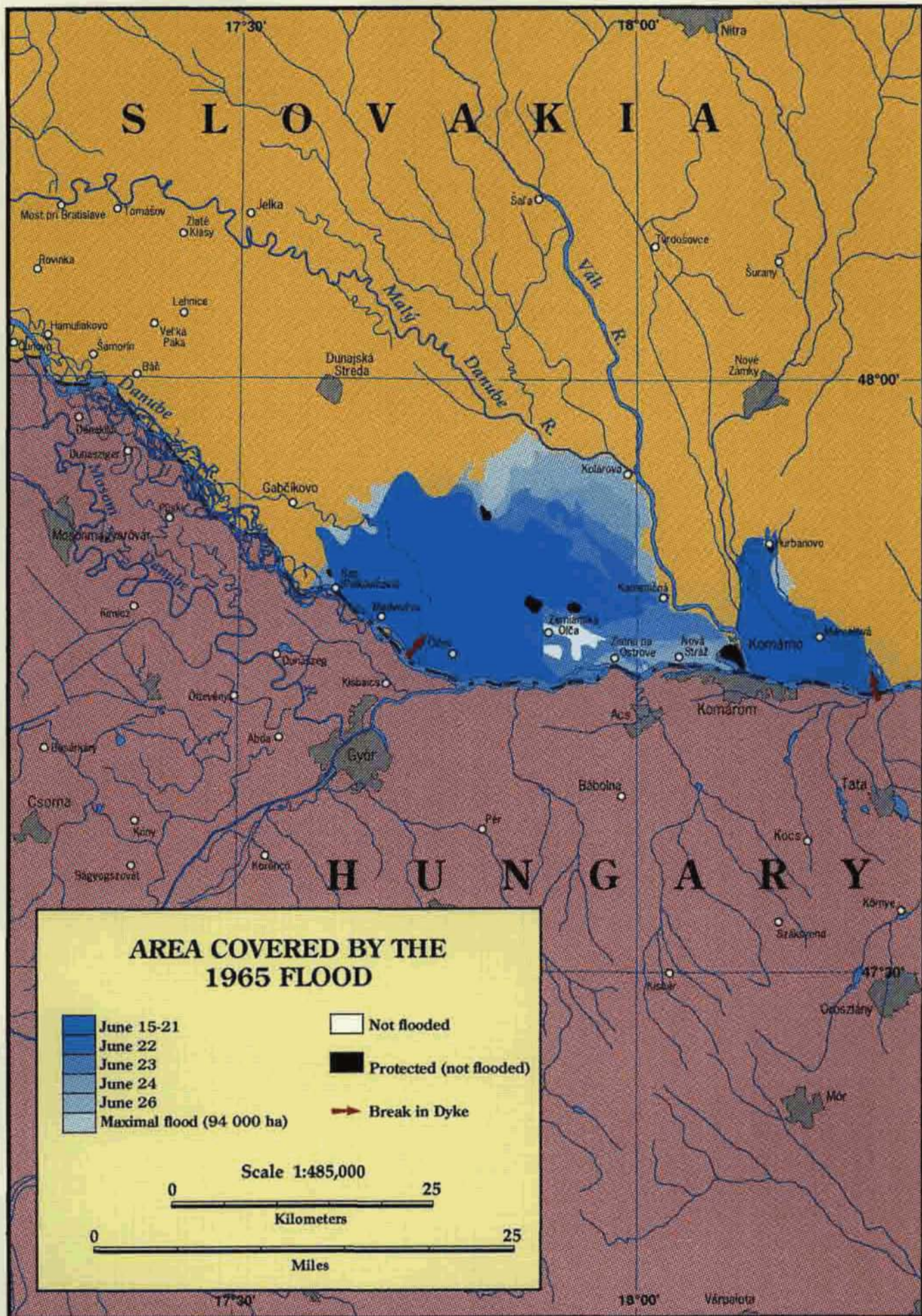
¹⁴ Ásványráró, Kísbodak and Dunakiliti.

**1954 FLOODING NEAR
BRATISLAVA**



Specially prepared for presentation to the International Court of Justice.

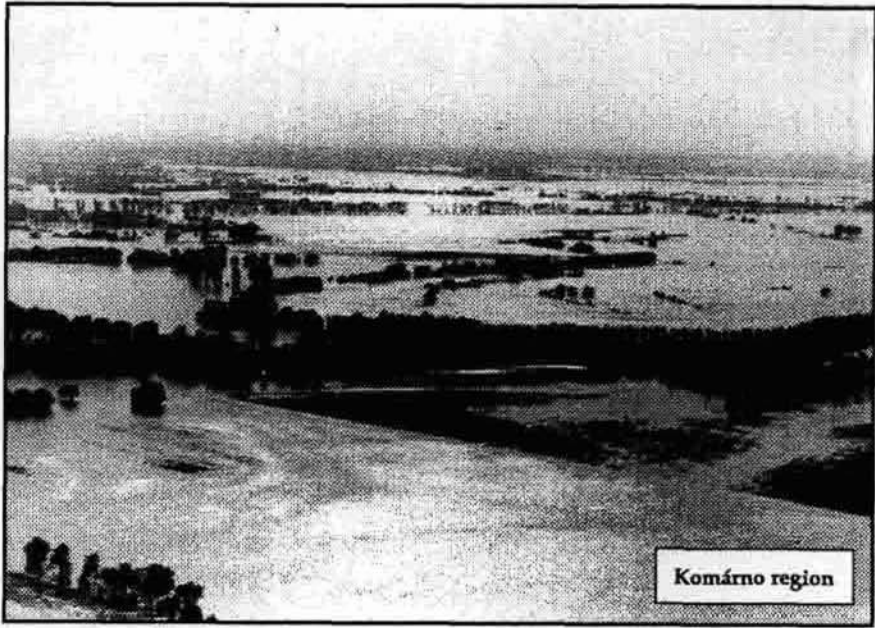
ILLUSTRATION NO. 15



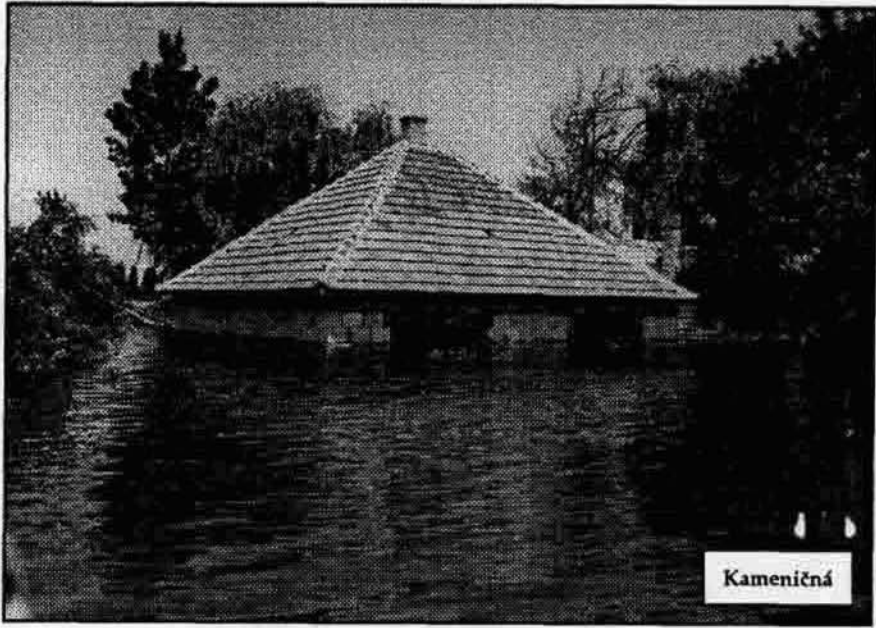
Specially prepared for presentation to the International Court of Justice.

ILLUSTRATION NO. 16

1965 FLOODING



Komárno region

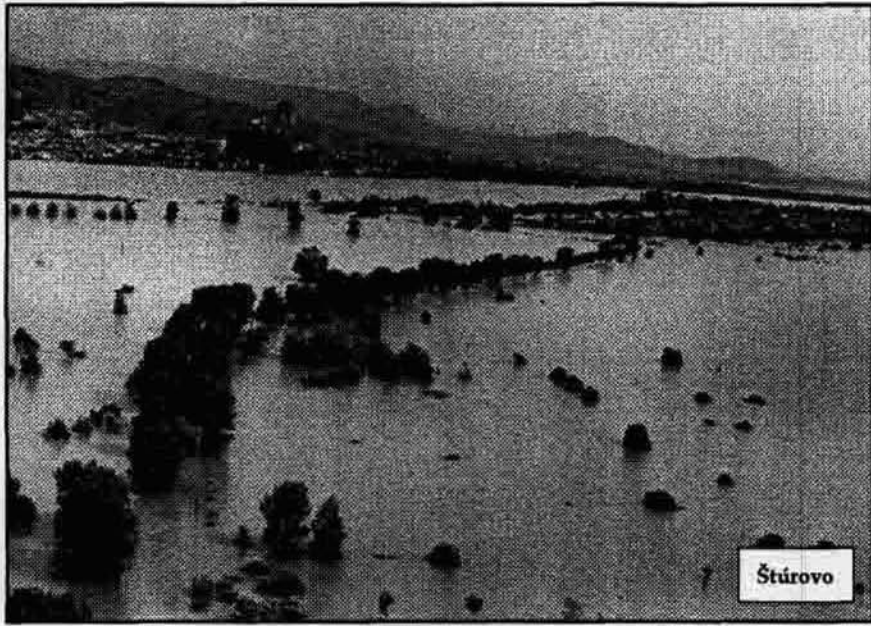


Kameničná

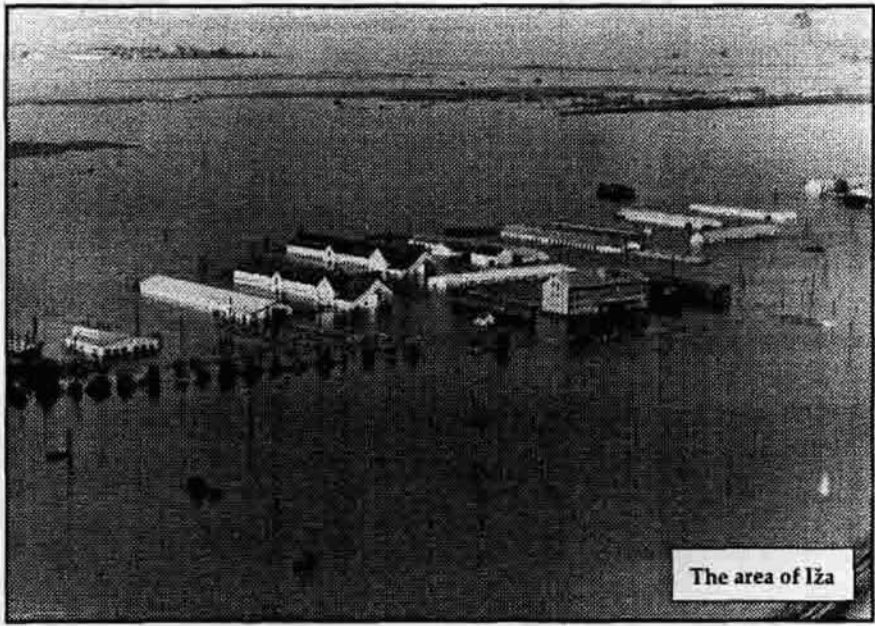


Kolárovo

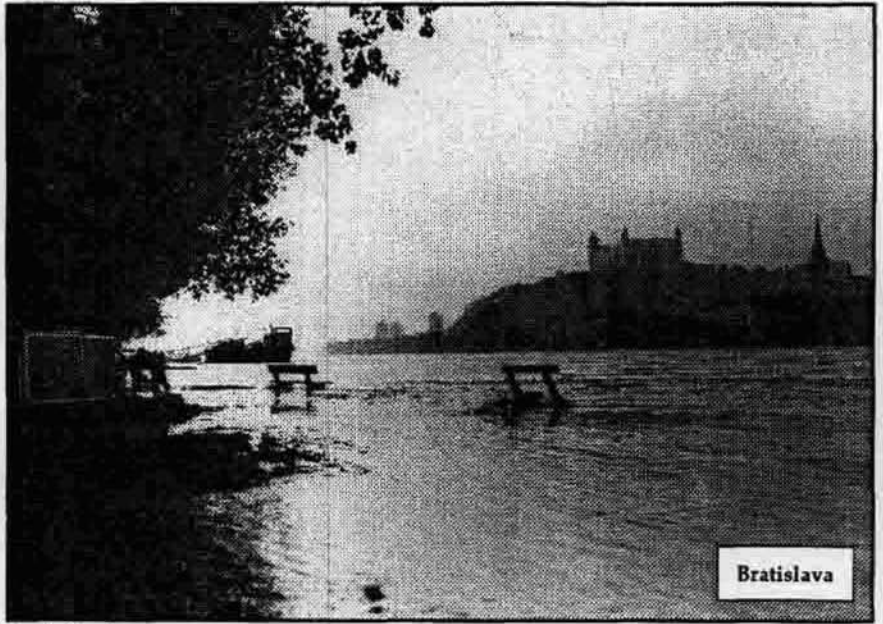
1965 FLOODING



Štúrovo



The area of Iža



Bratislava

1965 FLOODING



Broken dyke at Čičov



Kolárovo



Kolárovo



Slovak side of the river were flooded; 53,693 inhabitants of 49 villages and settlements were evacuated. The flood destroyed nearly 4,000 houses and damaged a further 6,000 or more. Some 66,000 farm animals were killed and another 200,000 evacuated¹⁵. The flood reached the streets of Bratislava. Total damage calculated was in the order of US\$ 833 million (Czechoslovak Crowns 6 billion)¹⁶. At the same time, serious damage to agricultural land resulted from flooding by ground and internal waters on both the Slovak and Hungarian sides. In Slovakia, 114,000 hectares of producing land were saturated. In Hungary, the damage amounted to US\$ 164 million (1.5 billion forints). In all, the 1965 flood is reckoned as the greatest natural disaster to affect Slovakia in modern times.

1.34 The 1954 and 1965 floods, together with experience gained during severe floods in 1929, 1947 and 1963, showed that traditional methods of flood control were insufficient in this region of the Danube. The geological composition of the substrata permitted rapid ground water flow through highly permeable gravel layers. Thus, at times of flooding, leakage even into those areas protected by dykes occurred, undermining the surfaces on which the dykes rested. In spite of the flood protection works carried out after the 1954 flood, the percentage of sections with leakage problems increased from 31% to 67%. All the previous experience showed that the improvement of dykes could not respond to the urgent need to protect the territory. New solutions were therefore required that did not depend solely on dyke protection and that addressed the particular problems of flood control in this section of the Danube. These solutions were incorporated into the G/N Project which, based on a great deal of study and extensive interpretation of previous flood events, provided *inter alia* for the dissipation of flood waters through a precise water regulation system and the construction of dykes with underwater sealing screens to prevent seepage¹⁷.

B. Navigation

1.35 A year before adoption of the G/N Project in the 1977 Treaty, Czechoslovakia and Hungary entered into the 1976 Boundary Waters Management Agreement. There, agreement was reached as to certain regulatory measures to be taken covering the water regime of the Danube and its tributaries in the region where these

¹⁵ The animals transported out of the region were as follows: 35,759 cows, 58,041 pigs, 83,000 chickens, 8,700 sheep, 654 goats and 394 horses.

¹⁶ See, Annex 13, explaining the method of calculation in US\$.

¹⁷ See, paras. 2.80-2.81, below.

form the boundary between the two States. In Article 13 (1) of the 1976 Agreement, the parties agreed to abide by the recommendations of the Danube Commission concerning navigation parameters adopted pursuant to the 1948 Danube Convention regarding the regime of navigation on the Danube. This Convention was concluded by seven Danubian States, including both Czechoslovakia and Hungary and ratified by them in 1949¹⁸.

1.36 In Article 3 of the 1948 Danube Convention, the signatories undertook the following obligations:

Article 3

"The Danubian States undertake to maintain their sections of the Danube in a navigable condition for river-going and, on the appropriate sections, for sea-going vessels, to carry out the works necessary for the maintenance and improvement of navigation conditions and not to obstruct or hinder navigation on the navigable channels of the Danube. The Danubian States shall consult the Danube Commission (art. 5) on matters referred to in this article.

The riparian States may within their own jurisdiction undertake works for the maintenance of navigation, the execution of which is necessitated by urgent and unforeseen circumstances. The States shall inform the Commission of the reasons which have necessitated the works, and shall furnish a summary description thereof."

Although recommendations issued by the Danube Commission were not, under the 1948 Danube Convention, mandatory for the Danubian States, the technical and economic impact of its recommendations, particularly in the area of navigation safety, was unquestioned; and, in the 1976 Agreement (Article 13), Czechoslovakia and Hungary specifically committed themselves to maintain and mark the waterway and to fix the navigation route in their sector of the Danube in accordance with the recommendations of the Danube Commission.

1.37 In its recommendations, the Danube Commission established parameters for the navigation channel in each particular section of the Danube according to varying conditions of discharge, the prevailing geomorphology and any engineering works¹⁹. The parameters recommended by the Danube Commission for the Slovak-

¹⁸ Germany and Austria subsequently acceded to the Convention.

¹⁹ See, *Recommandations Relatives à l'Établissement des Gabarits du Chenal, des Ouvrages Hydrotechniques et Autres sur le Danube*, Budapest, 1988, Annex 14. These recommendations were developed in stages and approved by the Commission at its XVIII, XX, XXI, XXIII, XXXVII and XLV sessions.

Hungarian sector are set out in the following table²⁰ :

Minimum parameters of navigation route	Sections with natural regime of flow at minimum discharge			Sections with artificially impounded water level at minimum discharge		
	depth m	width m	radius m	depth m	width m	radius m
Sect. Devín/rkm 1880/ -Kl.Nemá.rkm 1790/	2.5	150 a 100 b 120 c	1000 750 d	3.5	150	1000 750 d
Sect. Kl.Nemá/rkm 1790/- Ipeť/rkm 1708	2.5	180 a 100 b 150 c	1000 750 d	3.5	180 200 e	1000 750 d

The most important of the requirements set out above is that a minimum navigation depth of 2.5 metres had to be guaranteed during low navigable discharge in conditions of a natural flow regime, that is, where the river flow is not elevated by engineering structures.

1.38 Even though the length of the Slovak, Slovak-Austrian and Slovak-Hungarian Danube reach is relatively short, that is 172 km, it contains sections and localities with very different characteristics. The character of these sections is determined by both geomorphological peculiarities, *i.e.*, natural conditions which cannot be altered, and by human activities which have led to the modification of the riverbed. Prior to the G/N Project, this sector of the Danube contained some 15 shallows sections where the minimum required depth was not met by a shortfall of between 0.8 and 1.0 metres while in the dock basins the navigation depth failed by up to 1.5 metres.

1.39 During the design phase of the G/N Project and earlier, it had become clear that, as in the case of flood protection considered above, traditional methods of dealing with navigational hazards were insufficient and extraordinarily expensive. The history of modern attempts to regulate navigation in this region illustrates this. Between 1886 and 1896, important works were built along the river between rkm 1880 (Devín Gate) and rkm 1747 to assure safe navigation conditions at mean water levels. At the beginning of this Century, the riparian States sought to

²⁰

Note:

- a - section with easily degradable bottom of the riverbed
- b - section with rocky bottom
- c - ford section with easily degradable bottom
- d - sections with inconvenient geomorphology
- e - in the curves.

establish safe conditions at low water level, and a series of measures were taken to attempt to achieve this aim:

- Closing of river branches so as to direct the flow into one main straightened channel;
- Fortification of river banks with stone and concrete works;
- Dredging of gravel on the river bottom;
- Placing regulating dykes (or groynes) in the riverbed to concentrate the flow into the navigation channel;
- Dredging of moving sand banks.

1.40 Aside from their high cost, these measures were not effective to improve navigation on a long-term basis. By considerably altering the river's natural flow, they produced serious side effects on the surrounding environment, giving rise in particular to changes in ground water levels, as discussed in Section 2(D) below. In the meantime, technical progress and modernisation in river transport, tonnage increases and demands for greater profitability led to the continuous need to improve navigational conditions from the standpoint of both safety and economy.

1.41 The most important physical impediment to navigation was the decrease in the gradient in the Danube downstream of Bratislava to about one quarter of the upstream gradient. This led to the formation in this region of shallows or "ford sections" full of navigational hazards. The main riverbed becomes wider and the river starts to meander, depositing and re-siting large gravel islands as it flows. The actual navigation channel, however, was reduced: depths were less than the recommended 2.5 m at low discharge and navigation width less than 120 m. The Danube Commission classified this part of the Danube as one of the three most difficult sections to navigate along the entire Danube²¹.

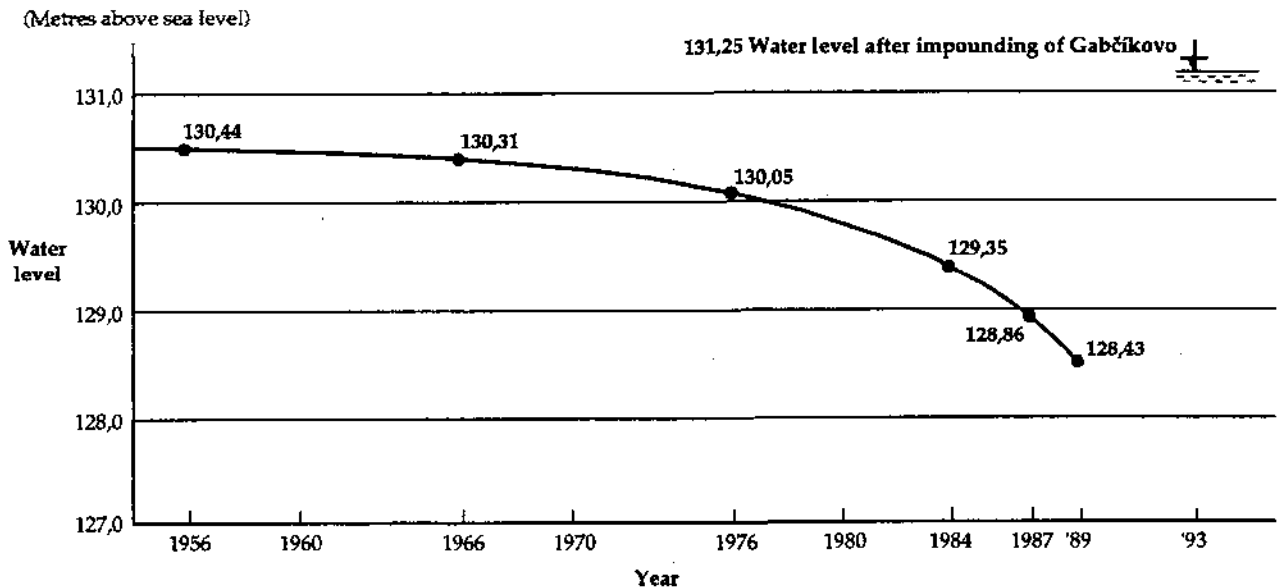
1.42 In the 1960s, gravel dredging was thought to be the solution to the problem of deposition (caused by the fact that more sediment settled in the

²¹ Since the signing of the 1977 Treaty, the difficulties at the other two sections (at Sulina-Braila in the Danube Delta bordering the Black Sea and in the Iron Gate sector between Yugoslavia and Romania) have been resolved.

Slovak/Hungarian section of the Danube than was transferred from this section to downstream). However, the construction of water projects and hydropower plants upstream in Germany and Austria had the effect of dramatically reducing the quantities of sediments transported downstream to the Slovak-Hungarian section. Dredging works nonetheless continued as these were still necessary in order to ensure a satisfactory navigation channel. Because such dredging coupled with erosion began to exceed the annual deposition of sediment from upstream, the Danube riverbed started to deteriorate in the region between Devin Gate and Sap (Palkovičovo) and the erosion processes caused by "hungry water" commenced²². Downstream of Sap (Palkovičovo) however, sediment continued to settle in large amounts.

1.43 Thus, while the traditional difficulty in maintaining a navigation channel continued to exist downstream of Sap (Palkovičovo), upstream the riverbed, quite simply, started to sink because the sediments formerly deposited in great quantities had been greatly reduced. This naturally meant that the level of the water in the river was reduced also. Measurements taken at the water-gauge station at Bratislava showed the low water level sinking from 130.44 metres²³ in 1956 to 128.43 in 1990, a change of around 2 metres, as shown by the following diagram (Illus. No. 18):

GRAPHIC REPRESENTATION OF THE DECLINE OF THE WATER LEVEL IN THE DANUBE AT BRATISLAVA OVER THE PAST 30 YEARS



Specially prepared for presentation to the International Court of Justice.

ILLUSTRATION NO. 18

²² In the 1970s and 1980s, the maximum annual dredging quotas necessary to ensure the correct navigation channel were 4 million m³, which was around 10 times more than the annual deposition of sediments in the region.

²³ Above sea level, measured from the Baltic Sea.

Several new ford sections appeared in the Bratislava region with low navigation depths and extremely narrow shipping channels (at rkm 1868, 1864 and 1862-1860). The degradation of the riverbed - and in places its destruction - continued at an accelerated pace. The resulting changes in flow together with dangerous cross currents threatened the safety of navigation in certain sections. In addition, navigation depths in Bratislava's port decreased. The port, built for a navigation depth of 2.5m was for most of the time without access for larger vessels. This was an irremedial problem as further excavation would simply undermine the docks' walls.

1.44 Due to the erosion of the riverbed bottom layer, rock outcrops started to appear in the riverbed near Nagymaros and had to be removed at great cost. Such removal simply prompted further erosion upstream of the thresholds and it was found that within just two years of the removal operations the navigation depth had been reduced to its former level.

1.45 In the short term, maintenance of navigation to attempt to meet the Danube Commission's parameters could only be accomplished at a very high cost both to Czechoslovakia and to Hungary. Regulation measures over the required distance in this region were significantly more costly than in other sections of the Danube. Traditional methods proved to be of no long-term effect and, as mentioned above, had harmful side effects.

1.46 The 1977 Treaty had as one of its central aims the adoption of the remedial measures necessary to eliminate the navigational hazards along the Slovak-Hungarian stretch of the Danube. These were measures that had to be taken to eliminate the impediments and dangers to navigation along this sector of the river. As shipping increased, the urgency of taking corrective steps increased. Obstacles to navigation adversely affected both upstream and downstream Danubian States, all of whom had expended great efforts and resources on improving the navigational regime of the Danube as part of the new waterway between the North Sea and the Black Sea. These measures also had to be taken in order to carry out the treaty commitments made by Czechoslovakia and Hungary to put into effect the recommendations of the Danube Commission. It was in the light of this that Article 18(1) of the 1977 Treaty provided:

"The Contracting Parties, in conformity with the obligations previously assumed by them, and in particular with article 3 of the Convention concerning the regime of navigation on the Danube, signed at Belgrade on 18 August 1948, shall ensure uninterrupted and safe navigation on the international fairway both during the construction and during the operation of the System of Locks."

1.47 The scope of the problem faced by the parties to the 1977 Treaty may be seen in the fact that in the Bratislava section of the river, the minimum navigation depth of 2.5 m was guaranteed in terms of navigable days for just 51% of 1984 and just 40% of 1991. The percentage availability for each year from 1980 to 1991 is shown in the following table²⁴:

Year	Percentage of days with full navigation possibility at Bratislava
1980	64
1981	88
1982	73
1983	61
1984	51
1985	65
1986	54
1987	66
1988	62
1989	50
1990	46
1991	40

1.48 The ongoing nature of the difficulty in maintaining serviceable navigation conditions was attested to at a meeting of the technical experts of the Danube Commission, held 7-15 December 1992. The experts noted not only the difficulty of navigation in the Bratislava-Nagymaros section of the river but also the heightened importance of maintaining an open waterway in the light of the Danube-Main-Rhine link:

"La réunion a noté que ces dernières années sur les secteurs non éclusés du Danube, surtout dans des conditions de basses-eaux dues à la sécheresse, les gabarits effectifs du chenal ne répondaient pas pendant 100 à 200 jours par an à ceux exigés par les "Recommandations relatives à l'établissement des gabarits du chenal, des ouvrages hydrotechniques et autres sur le Danube" de la Commission du Danube surtout en ce qui concerne les profondeurs.

Pendant la période de bas niveaux sur une série de seuils (y compris dans le secteur Bratislava - Nagymaros) les profondeurs minima étaient jusqu'à 13 - 14 dm.

La réunion attire l'attention de la Commission du Danube sur le fait que suite à l'ouverture du canal Main-Danube les profondeurs insuffisantes sur le Danube limiteront la navigation sur tout le parcours de la liaison Rhin - Main - Danube.

²⁴ The EC Working Group Report of 23 November 1992, at p. 22, Annex 12.

La réunion prie avec insistance la Cinquante-et-unième session de recommander aux autorités compétentes des pays danubiens de prendre les mesures nécessaires en vue d'une amélioration des conditions de la navigation sur le Danube en conformité avec l'article 3 de la Convention relative au régime de la navigation sur le Danube (Belgrade 1948) et avec les "Recommandations relatives à l'établissement des gabarits du chenal, des ouvrages hydrotechniques et autres sur le Danube" adoptées par la Commission du Danube²⁵."

Translation

"The meeting noted that, in recent years in the non-impounded sectors of the Danube and, particularly during periods of low water due to drought, the operable dimensions of the navigation channel did not comply for between 100 and 200 days per year with the requirements of the Danube Commission's "Recommendations relating to the establishment of the dimensions of the navigation channel, of hydrotechnical and other works on the Danube", particularly with regard to the depth requirements.

During periods of low water levels in a series of ford sections (including in the Bratislava/Nagymaros sector), the minimum depths were down to 1.3-1.4m.

The meeting draws the attention of the Danube Commission to the fact that, following the opening of the Main-Danube canal, the insufficient depths in the Danube will limit the navigation along all the length of the Rhine-Main-Danube network.

The meeting strongly requests the fifty-first session to recommend to the competent authorities of the Danube States to take the necessary steps with a view to improving conditions on the Danube in conformity with article 3 of the Convention regarding the regime of navigation on the Danube (Belgrade 1948) and with the "Recommendations relating to the establishment of the dimensions of the navigation channel, of hydrotechnical and other works on the Danube" adopted by the Danube Commission."

1.49 The poor navigation conditions along the Bratislava - Nagymaros stretch were tolerated by the Czechoslovak and Hungarian authorities only in the expectation of the implementation of the G/N Project, under which navigational obstacles would be completely removed. The impossibility of guaranteeing the recommended conditions for navigation by other means was also confirmed by the Danube Commission²⁶. Moreover, it must be remembered that throughout the period leading up to the planned implementation of the G/N Project the intensity of navigation

²⁵ Annex 15.

²⁶ See, para. 6.143 et seq., below.

on the Danube was increasing. This was partly because newly constructed ships had a substantially greater draught than earlier vessels (as a result of carrying a greater load) and partly, as already mentioned, because of the recent completion of the Main-Danube canal and the change in political climate in Central and Eastern Europe, which added a new dimension in terms of the Danube's importance as part of a trans-European waterway.

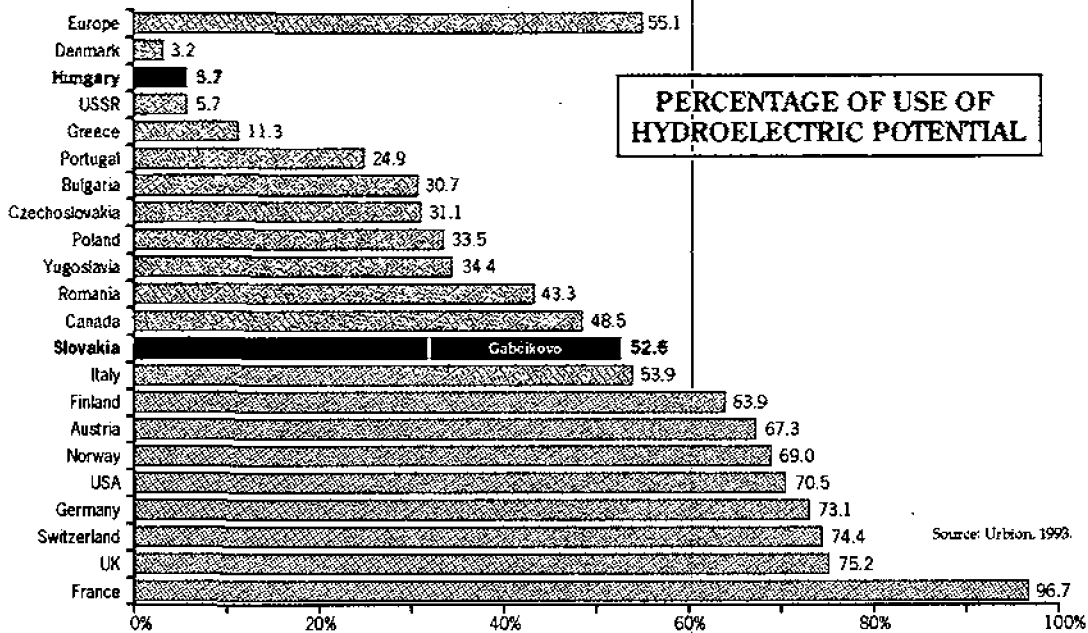
C. The Production of Hydroelectricity

1.50 Although construction of hydroelectric power stations on the Danube did not develop until the 1950s, the hydroelectric potential of this river is now extensively exploited by the Danubian States upstream of Slovakia and Hungary. As noted above, Germany has some 26 hydropower plants in operation on the Danube, and Austria is currently proceeding with its tenth such plant. The Danube will soon be providing Austria with nearly 13,000 GWh per year²⁷. The Danube is similarly utilised downstream of Slovakia and Hungary. The "Iron Gate" project put into operation in 1971 by Yugoslavia and Romania produces over 11,000 GWh, which capacity was increased by around 20% by the implementation of the "Iron Gate II" project in 1985. Romania has also completed a joint project with Bulgaria further downstream. By contrast, prior to the limited implementation of the G/N Project in the form of Variant "C", neither Slovakia nor Hungary made any use of the Danube's hydroelectric potential.

1.51 The Court has not been asked to weigh the advantages and disadvantages of different forms of energy production. Nor is it the purpose here to advocate the benefits of hydroelectric power. Nevertheless, it is self-evident that such power has the advantages of being produced without the consumption of a non-renewable resource such as oil, gas or nuclear fuels, of not having any emissions at all (let alone any that contribute to the "greenhouse effect" as is the case with fossil fuel plants), and of leaving behind no waste such as ash or spent nuclear fuel rods that constitute such a serious disposal problem²⁸.

²⁷ GWh stands for "Giga Watts per hour" or one billion watts per hour.

²⁸ In addition, a hydroelectric power plant has a considerably longer production life than a nuclear or fossil burning plant, *i.e.*, around double the life.



Specially prepared for presentation to the International Court of Justice.

ILLUSTRATION NO. 19

1.52 Hungary, exploits very little of its hydroelectric potential, whereas Switzerland exploits nearly 75% of such potential and Austria over 67%. The comparative use of hydroelectric potential by countries in Europe and elsewhere is shown on the graph appearing above as Illus. No. 19. The graph shows, first, that the relatively short section of the Danube, shared in part with Hungary, represents around one-quarter of Slovakia's overall hydroelectric potential. Second, it shows that through operation of the Gabčikovo facility Slovakia is brought up to about the average of European use of hydroelectric power potential. Third, it shows that Hungary has largely turned away from hydroelectric power. In fact, it appears from the International Energy Agency's latest report on Hungary that this country has moved towards nuclear power as its primary source of energy:

"Brown coal and lignite predominated in the 1950s and '60s. An important penetration of fuel oil and natural gas occurred in the '70s. Nuclear energy entered the system in the early '80s and to some extent has displaced all fuels, but especially fuel oil²⁹."

This shift is shown in percentage terms in the following table. The years 1975 and 1989 are considered, being the respective years in which Hungarian approval of the G/N Project was sanctioned and in which it suspended its performance of the 1977 Treaty:

²⁹ International Energy Agency, Energy Policies, Hungary, 1991 Survey, at p.63, Annex 16.

	<u>Lignite</u>	<u>Coal</u>	<u>Fuel Oil</u>	<u>Natural Gas</u>	<u>Nuclear</u>
1975(%)	15.6	41.1	23.8	19.6	0.0
1989(%)	9.4	24.2	5.4	21.5	39.6

The reason for the marked increase in nuclear power is the commissioning of four 440 MW pressurised water reactors of the Soviet VVER type between 1983 and 1987.

1.53 The relevance of this reference to Hungary's energy policies is simply that in 1977 it agreed to develop its hydroelectric potential in the joint G/N Project with Czechoslovakia. Since that date, it appears to have made political decisions to invest in other forms of energy production. Insofar as such allocation of resources did not impede the fulfilment of Hungary's 1977 Treaty obligations it cannot be the subject of comment. But this is not what has happened. It would appear from the Declaration by Hungary on 16 May 1992 (the "1992 Declaration")³⁰ that Hungary no longer needs the additional electrical power that the G/N Project would have provided; and in any event it spent its resources on other forms of energy production. It is anyway clear from the 1992 Declaration that, starting in the early 1980s, Hungary experienced financial difficulties in meeting its obligations under the 1977 Treaty.

1.54 In contrast, Slovakia has taken the decision to follow the lead of its neighbours and to exploit its hydroelectric potential. As of 1990 it employed over 30% of such potential. The addition of the Gabčíkovo hydroelectric plant has brought this figure up to 52.6%. In 1992, governmental approval was given to a scheme to build an extensive network of small hydroelectric plants on rivers in Slovakia's mountainous northern regions, to come into production before 2005. This will enable Slovakia to utilise almost 78% of its total hydroelectric potential. The reasons for this policy are simple: first, Slovakia considers such utilisation to be cost effective; second, Slovakia naturally wishes to benefit from natural renewable resources within its boundaries; and third, it wishes to reduce reliance on imported fuels and to optimise the use of clean energy resources³¹.

1.55 The equivalent consumption in coal of Slovakia's total hydroelectric potential is 9.8 million tonnes per annum. This represents almost double

³⁰ Declaration of the Government of the Hungarian Republic on the termination of the 1977 Treaty, 16 May 1992, Annex 17, at pp. 3 - 5.

³¹ See, the Declaration of the Energy Forum concerning the putting of the hydroelectric power plant Gabčíkovo into operation, 1990, Annex 18 (Translation by Hungary).

Slovakia's current coal production, which is expected to decline to 3.6 million tonnes per year in 2005. If Slovakia wished to replace this potential through its coal burning plants, it would not only be forced to exploit one of its few non-renewable resources but to import heavily also. Alternatively, to produce this hydroelectric potential, Slovakia would have to quadruple its production of electricity by means of imported natural gas or to import and process 25.27 tonnes of nuclear fuel per year.

1.56 Hydroelectricity by contrast represents Slovakia's greatest resource for energy production. Slovakia has a degree of self sufficiency in this area in that it has developed extensive technical experience and is in a position to employ its own specialists for the design, construction and operation of hydroelectric plants. Certain equipment is not manufactured locally, but this may be imported from neighbouring countries, in particular the Czech Republic and Austria, which is preferable to the importation of nuclear fuels, natural gas or coal from more distant locations. Finally, the move to hydroelectric power may facilitate the phasing out of old fossil fuel and other plants in order to contribute to a cleaner environment.

C. G.

D. Water Resources, Agriculture and the Environment

The Sinking of the Riverbed and Subsequent Lowering of the Ground Water Table

not
to

1.57 In terms of the problems existing prior to the G/N Project, the issues of water flow in the Danube and the environment are directly linked. As discussed above, flood control and navigation measures had led to the lowering of the river water level downstream of Bratislava, leading in turn to a reduction in the level of the ground water table and therefore to a harmful impact both on the riverine ecosystems and to agricultural and forestry production in Žitný Ostrov and Szigetköz. The causes of this decrease have been summarised by the EC Working Group of Monitoring and Water Management Experts in their report of 2 November 1993:

"The main channel has been significantly lowered due to erosion caused by a combination of several man made factors:

- dam construction in Austria in the last decades resulting in a sediment (in particular bed load) deficit;
- excavation of gravel;
- bed erosion due to the very high velocities in the straightened and narrowed navigation channel; and

- prevention of bank erosion due to fortification of river banks.

Until the damming of the Danube, erosion took place between Bratislava and Dunaremete. Similarly, sedimentation occurred downstream of Sap/Palkovičovo.

In some places the river bed has been lowered more than two meters since the 1960's, leading to lower ground water levels, occasional drying out of river branches (e.g. downstream of Bratislava) and less flushing of most river branches. The lowering of the riverbed during the past 30 years has been particularly large between Bratislava and Rajka [15 km to the south]. It is estimated to be about 0.8 meter at Gabčíkovo and near Bratislava about 1.5 meter³².

1.58 The lowering of the Danube's water level was accompanied by a declining ground water table which had a particularly severe impact in terms of the drying out of wetland wood areas. The conditions were no longer suitable for water supply through capillary rise from the low ground water tables, and more irrigation was needed throughout the western parts of both Žitný Ostrov and Szigetköz. The negative influence of ground water decrease can still be seen on the woods in areas close to Bratislava where around 500 hectares of forestry have dried up altogether. The disappearance of wetland woods on both sides of the Danube seemed to be unavoidable, a situation closely resembling what happened to the Rhine inland delta in the previous century. As a result of this ground water decrease, areas of soft alluvial forest were being replaced by hard alluvial forest or by cultivated poplar and white willow. Thus many natural forests were replaced by plantations, where introduced strains of poplar have been used.

1.59 The situation was commented on by the EC Fact Finding Mission on Variant "C" of the Gabčíkovo-Nagymaros Project in its report of 31 October 1992:

"Finally, it is important to emphasize that the environmental conditions in certain respects are deteriorating today due to river bed erosion and thus lower ground water tables (decline varying from approximately 2 m over the last 30 years near Bratislava to approximately status quo near Komárno). Thus, the riverside vegetation is slowly drying out resulting in significant changes in vegetation species etc, and the conditions for

³² This EC Working Group was formed of essentially the same personnel as the EC Working Group of Independent Experts referred to in para. 1.19, above. See, Assessment of Impacts of Gabčíkovo Project and Recommendations for Strengthening of Monitoring System, 2 November 1993 (the "EC Working Group report of 2 November 1993"), Annex 19, at pp. 24-25. Dunaremete is just upstream of Sap (Palkovičovo).

agricultural water supply through capillary rise from the low ground water tables are no longer good enough and hence more irrigation is required. It is realized that sudden changes as a consequence of e.g. the Gabčíkovo-Nagymaros project will occur immediately, and that it will take some time until a new ecological balance develops. However, the "status quo" situation (i.e. pre-dam conditions) is neither a stationary nor a natural situation, but rather a (slower) transition from one cultural landscape to another one with the inherent consequences of this on the ecological conditions³³.

1.60 This situation was also reflected in the result of the parties' research projects into the riverine ecosystem. Since the beginning of the 1950s, extensive research to compile an inventory of the biological diversity of the territory along the Danube (plant and animal species, communities and ecosystems) has been carried out. Results indicated that the natural floodplain forest of the Danube was being replaced by cultivated forests of introduced poplar subject to forest management. Other changes in wildlife and flora were caused by water management and man-made structures, preventing natural flooding, preventing the flow of water in the river branches and also changing the water quality there.

Drinking Water Supplies

1.61 The central depression of the Danube Lowland is made up of water bearing sediments which, in their deepest sections, reach thicknesses of 300 m or more. These sediments constitute one of the most important aquifer complexes in Central Europe. In terms of the recharge of this aquifer, the dominating factor is the Danube. It influences the intensity of aquifer recharge (by infiltration), the speed and direction of ground water flow and also the chemical composition of the water in the aquifer. Thus, in terms of the water quality in the aquifer, water quality in the Danube is the major factor.

1.62 As a result of the decrease in the level of the Danube's waters, the conditions for the recharge of the aquifer and its water supply wells were deteriorating. During the 1980s, it was recorded that the intensity of natural water infiltration from the Danube had decreased by as much as 20% in some areas. A reduction in the productivity of water supply wells was evident, particularly in the upper part of Žitný

³³ Again, this report was compiled by essentially the same personnel as the EC Group of Independent Experts referred to in para. 1.19, above. See, EC Fact Finding Mission Report on Variant "C" of the Gabčíkovo-Nagymaros Project (Mission Report), 31 October 1992 (the "EC Fact Finding Mission report of 31 October 1992"), Annex 20, at p. 13 (emphasis added).

Ostrov where ground water levels had decreased by up to 2 m in the 30 years since 1960. The quality of ground water was influenced by many factors, the principal being human pollution³⁴. In recent decades, the penetration of pollution from the surface has caused the increase of chlorides, sulphates and nitrates in the uppermost zone of the aquifer. Further pollution has been caused by nitrates, coming especially from the use of agricultural fertilisers.

Agriculture

1.63 In terms of its agriculture, the territory of Žitný Ostrov has remained one of the most productive regions of Slovakia. But sinking water levels have also had a significance here due to ground water levels dropping in places below the topsoil layer. Szigetköz (in Hungary) is also an agriculturally productive region, but it, too, has been affected negatively by the reduction in the level of the water table in the last three decades. In any event, the upper parts of Žitný Ostrov and Szigetköz are characterised by the scarcity of moisture over the growing season, caused by insufficient natural precipitation, which is unevenly distributed during the year. Over long periods without precipitation and at lower discharges in the Danube, crops were often affected by insufficient moisture, resulting in crop yields decreasing sometimes by as much as 80%.

1.64 It was therefore necessary to develop extensive irrigation systems. A comprehensive scheme was laid down in 1950, when it was decided that about 75,000 hectares in Slovakia had to be irrigated. However, it was found that there were no existing water resources to meet this goal. Further irrigation schemes were developed in 1964, 1967, 1976 and 1980, the aim being to provide irrigation systems for 24,000 hectares by 1980 and for 51,000 hectares thereafter.

1.65 The importance of providing new supplies of water to agricultural areas in this region was also increased by predictions of climatic change contained in the forecast for hydroclimatic developments over the next decades. A decrease in atmospheric precipitation has been predicted in this region and confirmed by analyses of the trend of temperatures and precipitation recorded at meteorological stations in Žitný Ostrov. Thus, in order to maintain agricultural production, it was all the more necessary

³⁴ See, para. 3.13, et seq., below, for a discussion of the attempts to address the problems of water pollution within the Project.

to address the problems of sinking ground water levels and insufficient water resources for irrigation needs.

The Danube Branches and the Side Arm System

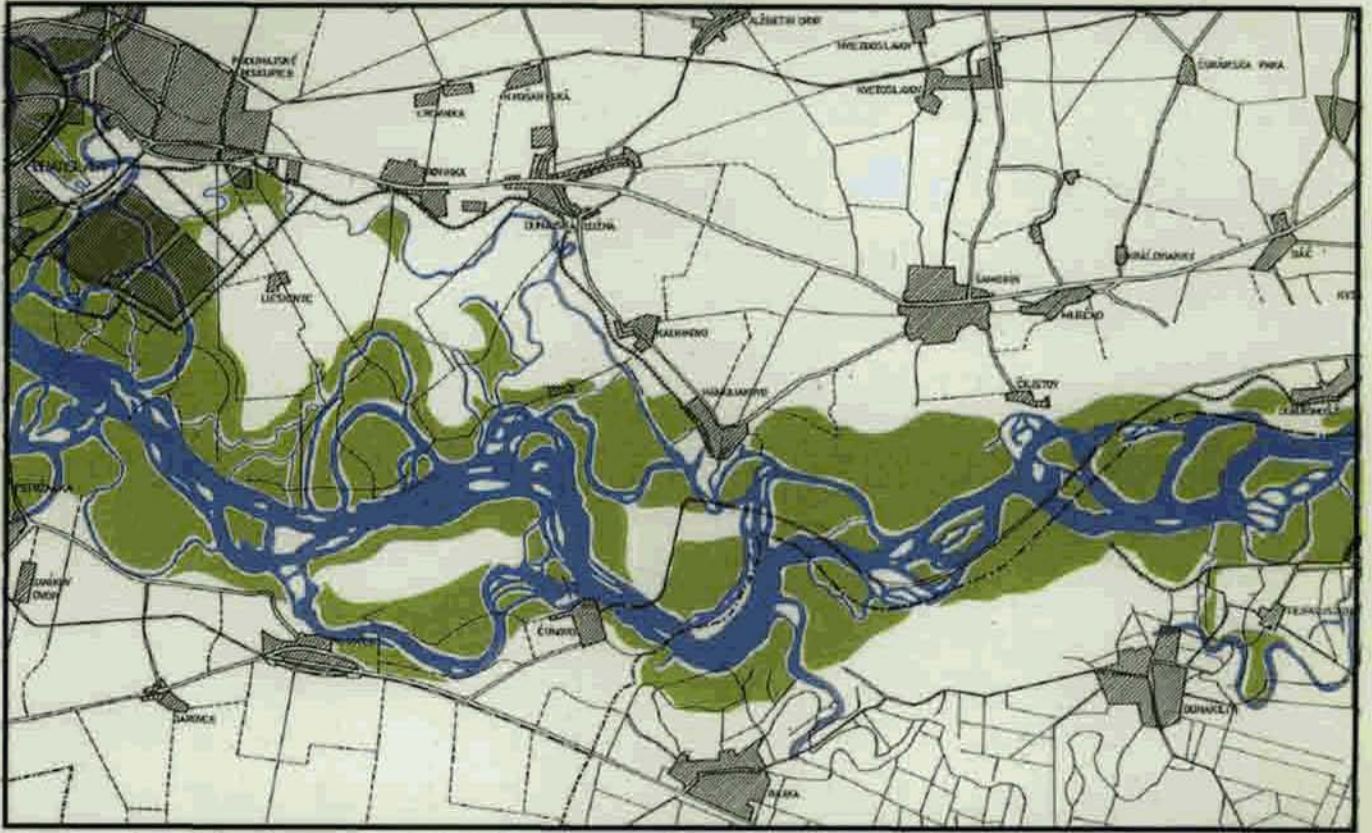
1.66 Due to the lowering of the riverbed south of Bratislava, water flow into both the Mosoni Danube and the Malý Danube was gradually curtailed. These branches take their flow from the Danube and, as the level of water in the Danube fell, the entry points into the branches came only to receive flow during high discharges. From the mid 1970s, the Malý Danube showed a clear, decreasing trend and the Mosoni Danube was receiving no flow from the main channel for approximately 300 days per year - i.e., only when near flood levels were reached in the Danube. In each river branch this led to a marked drop in water flow rates and therefore water quality.

1.67 A similar impact was felt in the side arm system where the water flow was reduced to such a level that the river branches were slowly disappearing in the same manner as had occurred in the branch systems of the River Rhine³⁵. The Rhine delta and its branches originally followed a pattern similar to that of the Danube. Its branches began to disappear at least half a century before a similar process began on the Danube since works to create a "united" riverbed in the Rhine had started earlier. The similarity of the pattern followed by each of these rivers is shown in Illus. Nos. 20(A) and (B).

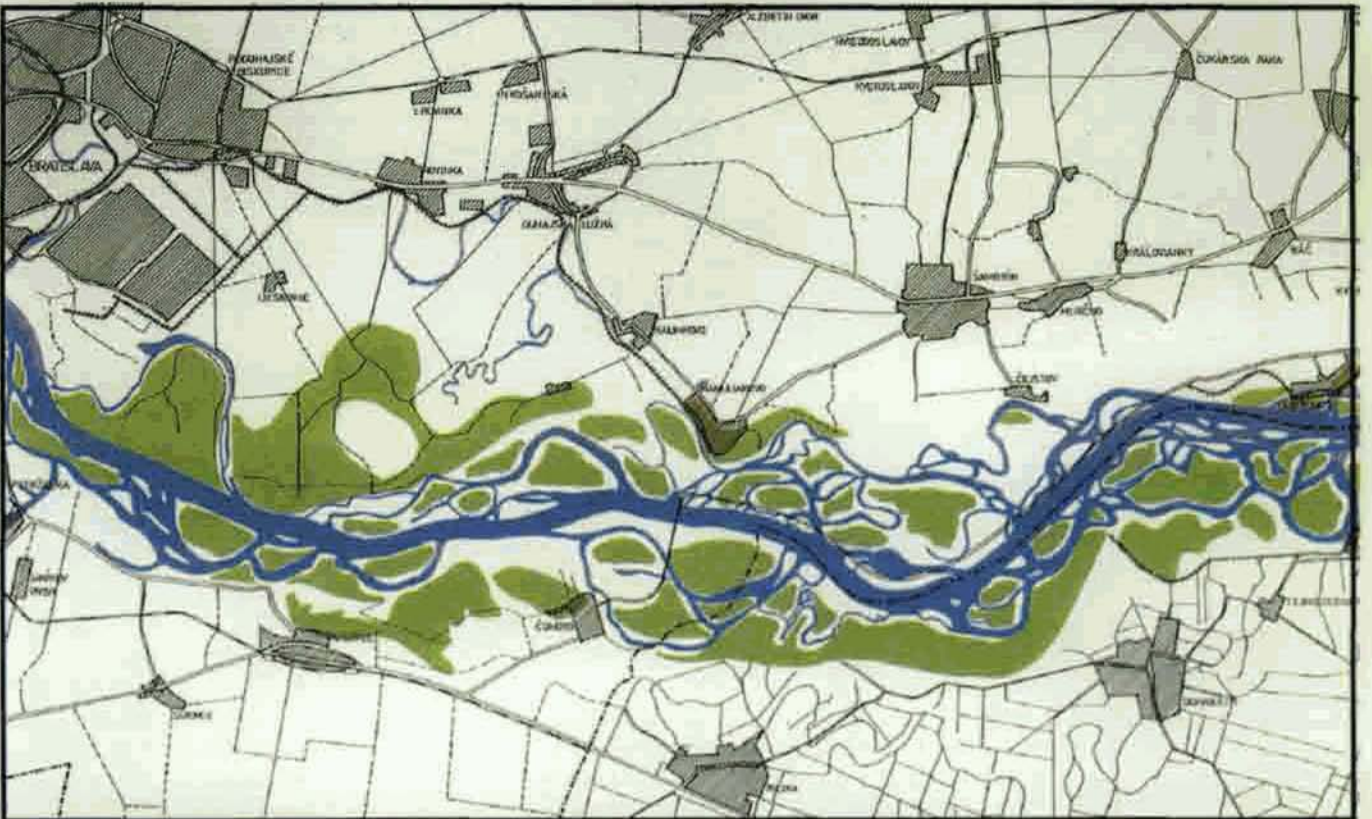
1.68 In its natural state, the Rhine, like the Danube, did not have a stable riverbed and the bed changed after each flood. This presented a major problem for international navigation. The narrowing of the riverbed carried out to improve navigation in the 19th Century increased the flow gradient on the Rhine and triggered erosion activity. The bed became substantially deeper, bringing about the gradual isolation and disappearance of most branches. This development is shown in Illus. 20(B), which shows the branches of one section of the Rhine in 1780 and again in 1935. Although the same pattern appears in Illus. No. 20(A), showing a section of the Danube, as the G/N Project developed, Slovakia and Hungary were able to benefit from the knowledge and experience acquired in relation to the Rhine. One of the objectives of the G/N Project as it has evolved is to reverse the trend that was causing the Danube

³⁵

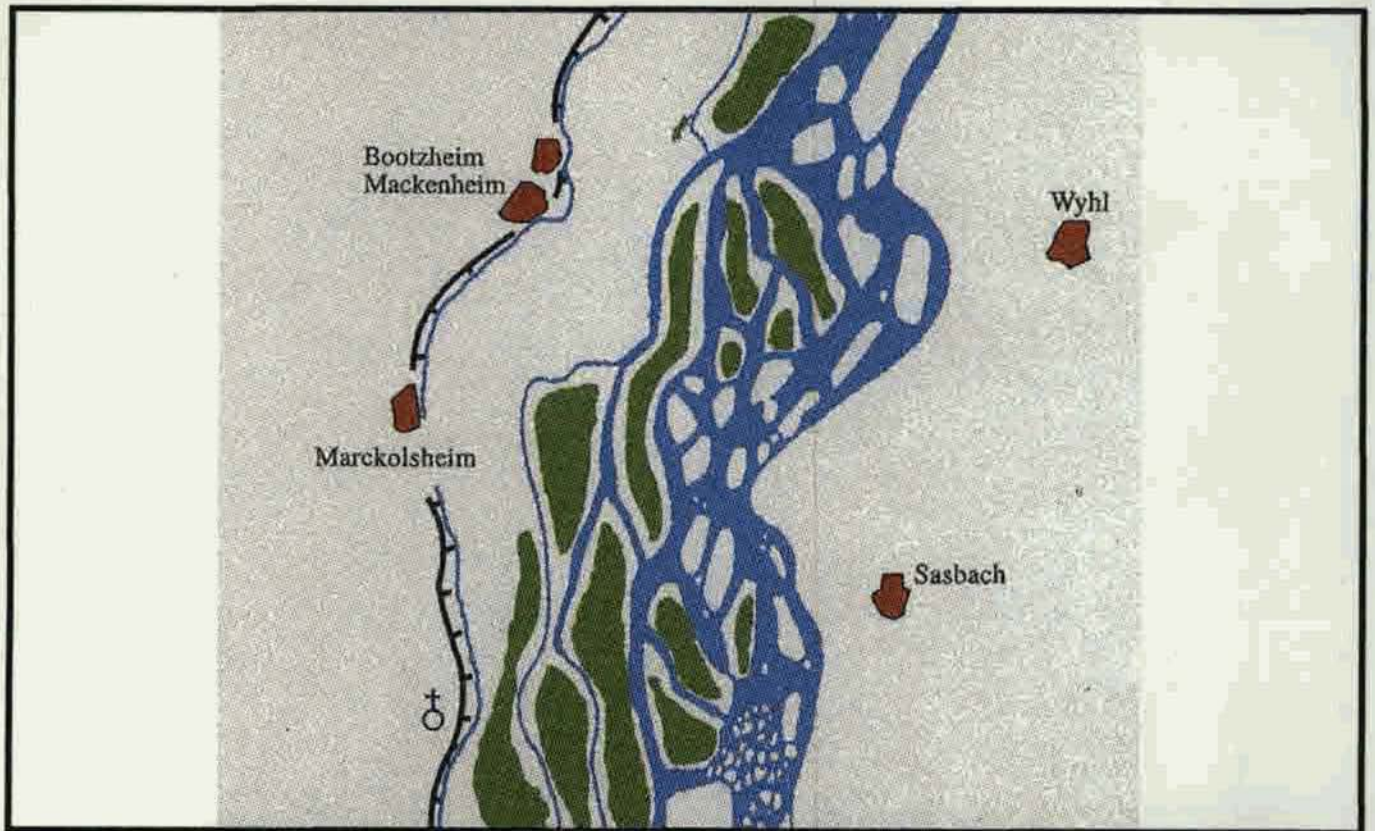
The Danube has two main branches in this region: the Malý Danube and the Mosoni Danube. The side arm system is formed of smaller branches, located in the immediate floodplain of the main river. In the description of these, the terms "side arms" and "branches" are used interchangeably.



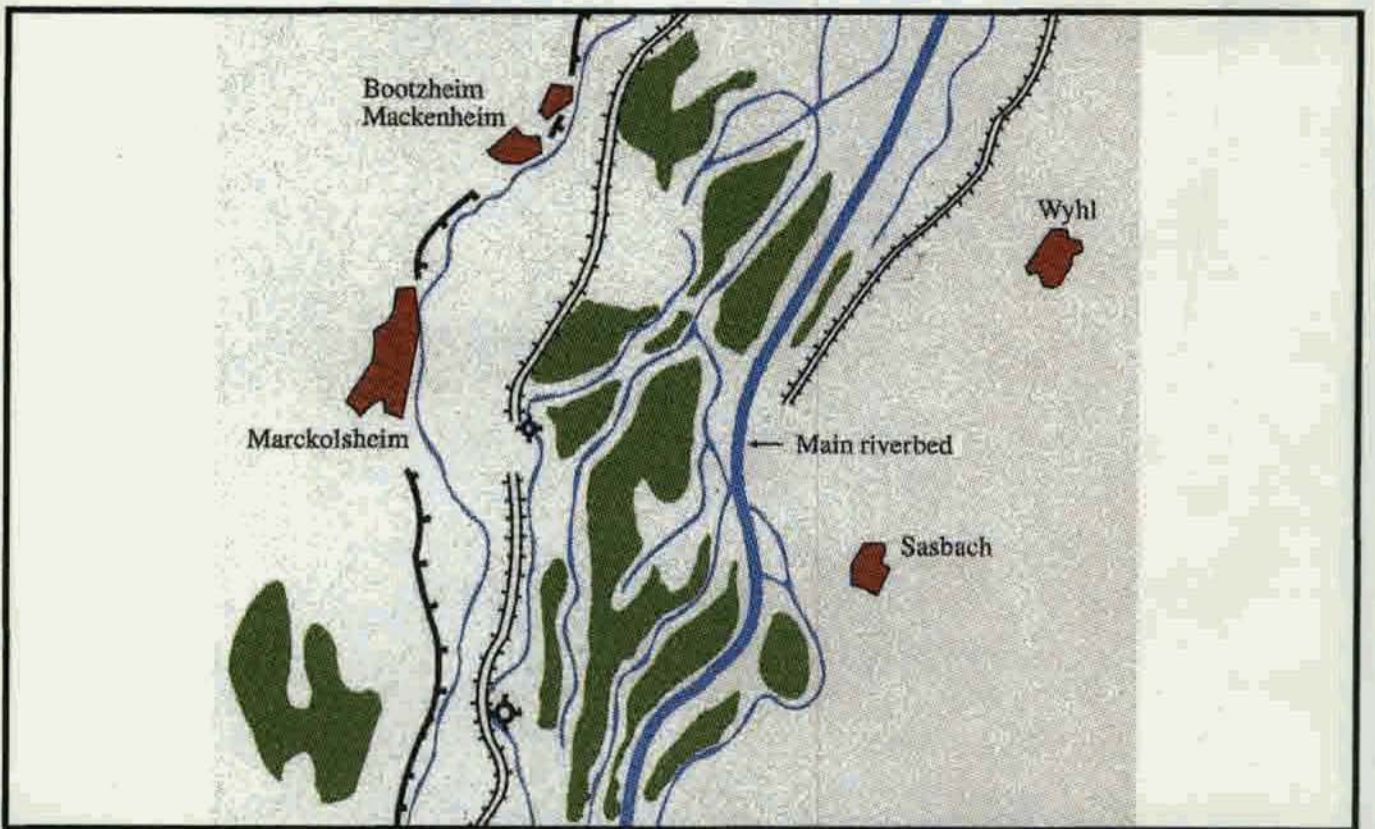
The Danube's delta along a stretch just downstream of Bratislava circa 1780 (superimposed on current map)



The Danube's delta along a stretch just downstream of Bratislava pre G/N Project



The 1780 status of the Rhine delta. A "single riverbed" had not been created yet.



The 1935 status after the implementation of a "single" riverbed before a waterworks project was built there.

branches and side arms to dry up and to prevent a repetition of the disappearance of the Rhine branch system on Slovak and Hungarian territory.

1.69 The section of the Danube downstream of Bratislava still preserves an extensive river branch system although, prior to the inception of the G/N Project, this was slowly disappearing due to the channelling of water flow into one main riverbed. In more recent times, the situation of the Danube floodplain started to deteriorate rapidly as the branches were isolated, that is they were deliberately separated by dykes from the main channel. While measurements in 1959/1960 showed that even at minimal flow in the main Danube channel approximately $100\text{m}^3/\text{s}$ of water still flowed through the river branches, just twenty years later these branches were completely isolated from the river during all flows of less than $2000\text{ m}^3/\text{s}$. The branches were fully active only during flows above $4000\text{ m}^3/\text{s}$. Thus, the network of side arms - so important to the floodplain ecology - was fully active for about 20 days a year only and was wholly isolated from the Danube during at least half of the year.

1.70 As a consequence, the water conditions in these river arms were poor. Due to the low velocities of flow and long periods of stagnation, the water quality of the side branches differed radically from that of the main Danube channel. The water in the branches was characterised by high alkali content, high organic matter and low or zero oxygen content. The self-cleaning ability of the river branch system was substantially impaired. Sedimentation was not washed out of the branches and large quantities of the ground water in the adjacent areas were degraded as the poor quality water infiltrated into the aquifer. As a result, plans for a new water supply works at Dobrohošť were abandoned due to high levels of nitrite and ammonium salts found in the ground water that had infiltrated from the side arm system.

E. Conclusion

1.71 It is beyond question that the current condition of the Danube and its floodplain is the result of centuries of human intervention. It is a river that has contributed greatly to the development of the States sharing the Danube basin. It is a river that has been extensively utilised for navigation, water supply, fishing and more recently for hydroelectric power production and other purposes. This utilisation has greatly altered the flow characteristics of the Danube.

1.72 It is equally beyond question that whenever measures are taken to modify the flow of a river, as contemplated by the G/N Project, there will be

environmental effects, some adverse. This is true of all projects on rivers such as the Danube or the Rhine. One important factor in the present case is that the same modern technology that has made possible complex river projects has also led to techniques to measure the environmental impacts and to avoid, offset, mitigate, or remedy them³⁶. To the extent certain effects are irreversible - for example, where it is necessary to transform the land in order to accommodate dams, dykes and reservoirs - these are matters that are the subject of political choice by the affected countries, to be weighed in the balance of competing considerations and priorities.

³⁶

In the EC Fact Finding Mission report of 31 October 1992, it was concluded at p.11 that "the environmental impacts of reducing the discharge in the Danube are negative, unless proper remedial actions are taken". Annex 20 (emphasis added). Its approach was thus that environmental impacts could be mitigated. As will be shown in Chapter V below, such impacts were dealt with in the course of the G/N Project and with a great deal of success.

CHAPTER II. THE PROPOSED SOLUTION: THE G/N PROJECT

2.01 The G/N Project has cost Czechoslovakia and the Slovak Republic US \$ 2.6 billion (Cz Crowns 24.3 billion) to date. The larger part of this sum has been devoted to construction but a very significant portion has also been spent on design, research, environmental and other studies. The reason for this huge investment into research works is that, in signing the 1977 Treaty, the parties were not simply establishing the legal basis for a joint hydroelectric project, but were also putting into place what they considered to be the best means of solving the environmental, navigational and other problems in this section of the Danube.

2.02 The choice of the G/N System was not arbitrary, nor was it an ill-considered emanation of the politics of the era. It was the result of more than twenty years of detailed research carried out by the most prestigious institutions in Czechoslovakia and Hungary and, in addition, by specially established joint bodies. In this period, 25 possible individual schemes were considered, each with its own series of variants¹. Thus, in total, more than one hundred different project designs were examined.

2.03 The construction of a river step in the Nagymaros area of the Danube was first actively considered by Hungary in the immediate post World War II period, before the Communist Party came to power². When, in the early 1950's Czechoslovakia began to examine the possibility of development of the Danube downstream of Bratislava, the two States met to consider whether a joint project would lead to a more harmonised and practicable development. A Joint Expert's Commission was formed in 1952 and detailed negotiations began at this date. During the years that followed, Hungary was a forceful party at the negotiation table, pushing for equal sharing of the power produced at the hydroelectric plants, although Czechoslovakia's share of the hydroelectric power potential to be utilised was greater, and pushing at one point for the border to be moved into the centre line of the bypass canal. An impetus towards the adoption of the G/N Project was provided by the 1965 flood although, it must be noted that such adoption was, if anything, impeded by the Czechoslovak

¹ These basic schemes are depicted in Annex 21.

² See, the 1994 interview with the Hungarian academician Emil Mosonyi (Professor in Germany) in Magyar Tudomány, No. 1/94, Annex 22.

Communist Party Central Committee, which insisted on further research into alternative projects.

2.04 The purpose of this Chapter is to explain why the G/N System was chosen over the multiple alternatives. Section 1 looks briefly at the basic aims of the parties to the 1977 Treaty in terms of establishing a coordinated, integrated and optimal usage of their section of the Danube. The background to the choice of the G/N System is summarised and it is shown that research of the most detailed and extensive nature dictated that the best means of obtaining the basic aims of the parties was the G/N System. The parties' approach to the study of environmental problems is also examined. Thus it will be seen that studies relating to the environmental impact of the Project were carried out as would be expected and were in accordance with international practice in terms of extent and detail.

2.05 In Section 2, the actual workings of the G/N System are explained. It is shown how the structures envisaged by the parties to the 1977 Treaty were originally designed to work and how the planned operation of these structures was tailored to take into account information gathered during the construction phase. The intended working of the System is therefore examined as at the signature of the 1977 Treaty and also as at May 1989, that being the date when Hungary first signalled its withdrawal from the Project. Finally, in this Section Slovakia examines briefly the legal basis for the implementation of the G/N Project, that is the parties' respective construction obligations under the 1977 Treaty.

2.06 Section 3 shows how the G/N System provided solutions to the problems of the Danube and its basin, described in the previous Chapter. This section effectively explains the logic behind the huge investment in the Project. Slovakia also examines the anticipated environmental impact of the G/N Project on the Danube. In particular, the System's expected impact on surface and ground water levels, drinking water quality and, in addition, the natural and cultivated environment are explained. It will be shown that the extent of such impact was continuously reviewed as new assessment techniques were developed. The Project was implemented in a fashion that allowed the parties to update and modify the system so as to enable the mitigation of any impacts perceived to be harmful.

SECTION 1. The Parties Considered the G/N System to be the Best Solution in Terms of the Identified Problems and the Optimal Utilisation of the Danube

A. The Background to the Choice of the G/N System

2.07 The need to establish the proper management of the Bratislava to Budapest section of the Danube and to make use of its hydroelectric potential was recognised in the immediate post-Second World War period. Because the Danube is bordered on both sides by Slovakia for only 22.5 of its 2,875 kilometre length, it was apparent that cooperation with the neighbouring States of Austria and Hungary was the best means of achieving optimal utilisation of the river. As a result of extensive consultation between the three States and multiple studies, by the end of the 1950s a scheme was in place providing for the coordinated utilisation of the Danube from the Austrian village of Wolfstahl to Nagymaros, situated 177 kilometres downstream in Hungary.

2.08 The first meeting between Czechoslovakia and Hungary to discuss a joint river project was held in July-August 1952. It was recognised that any development of the Danube would have to take full account of the change of gradient which occurs close to Sap (Palkovičovo) at rkm 1810. As mentioned in Chapter I above, upstream of this point the river is relatively fast flowing whereas downstream the gradient is considerably more gentle. It was therefore necessary to choose a different type of development for the different sections. First, it was decided that at the end of the downstream section *i.e.*, in the Nagymaros region, a simple river step could be put into place³: this would involve the damming of the river by a weir (that is, a dam with opening gates to control water flows) and the resultant impoundment of a headwater section. Electricity would then be produced as the water was channelled via a turbine into the riverbed below. Due to the differing water levels upstream of the dam and downstream in the river below, such weir systems are commonly referred to as steps. For the section upstream of Sap (Palkovičovo), it was agreed by both Hungary and Czechoslovakia that some form of bypass canal was required - partly to enable navigation and partly to allow the incorporation of a further step or series of steps for the production of hydroelectricity.

³ As noted at para. 2.03, above, Hungary was already considering the construction of a step in the Nagymaros region.

2.09 In the ensuing years, each party submitted a huge number of possible designs, charting the merits of different step locations, multiple steps, canals of differing lengths or different locations both in terms of junctions with the Danube and the choice of the left or the right bank. It was not until 1963 that, in governmental negotiations held 18-20 April, the parties arrived at a design basically similar to the G/N System, although this was not accepted at this stage as the definitive optimal solution. It was not for a further ten years, in January 1974, after multiple design changes and continuous refinement, in addition to the consideration of other alternatives, that the G/N scheme was approved by the Czechoslovak government. Hungarian approval of the scheme was accorded the following year.

B. The Reasons Behind the Choice of the G/N System: a History of Design and Environmental Studies

2.10 A period of 22 years had elapsed between the first intergovernmental negotiations held by the parties and this approval of the Project. During this period, many hundreds of research projects were carried out. A list of all the basic studies undertaken prior to governmental approval of the Project in 1974, together with a summary of their contents and the extent to which recommendations were accepted, forms Annex 23 to this pleading. In all, a staggering 364 research projects were taken into account in the formulation of the design of the G/N System up to 1974⁴. However, as will be shown below, the final decision as to the Project design did not by any means mark the end date of Project monitoring studies, impact assessment and the updating of research so as to take full advantage of new techniques and technological developments.

2.11 The majority of the studies listed in Annex 23 were carried out by the Czechoslovak, Slovak and Hungarian Academies of Sciences, the principal universities of each State, the Research Institute of Water Management (in Bratislava and in Prague), Hydroproject in Bratislava, and VIZITERV and VITUKI in Budapest⁵. Research documents were presented by these bodies to a Joint Commission of the two States, responsible for approving and adopting research conclusions, where appropriate, and formulating the Joint Treaty Program. In terms of numbers, 113 studies were

⁴ It must be noted that Annex 23 only lists research projects whose recommendations were actually taken into account. The total number of studies prior to 1974 is therefore greatly in excess of this figure.

⁵ VIZITERV is the Hungarian Consulting Company for Water Engineering; VITUKI is the Hungarian Research Centre for Water Resources Development.

produced which focussed on the G/N System as an integrated whole. A further 135 were specifically dedicated to the Gabčikovo part of the Project and 116 studies were directed to Nagymaros alone. In addition, a large number of more specialised studies were commissioned⁶.

Geology/Seismology

2.12 While the territory in which Nagymaros lies is formed largely of limestone rock formations with a depth in excess of 300 m, the Gabčikovo section of the G/N Project lies on a layer of gravel sand also several hundred metres in depth. To build large concrete structures on such gravel foundations demands an enormous amount of detailed planning, especially in terms of locating the optimum placement for construction. In fact, some 39 studies were devoted to researching the geology and seismology of the G/N Project area. As discussed in greater detail at paragraph 2.60, *et seq.*, below, seismic studies were carried out in collaboration with experts from Hidroprojekt Moscow, and four comprehensive studies prepared by VIZITERV (Budapest) were devoted to the tectonics of the Bratislava - Budapest region. As a result of such studies, the hydroelectric plant and navigation locks at Gabčikovo were moved 700 m upstream and away from the area of a geological fault line⁷.

Construction, Navigation and Energy Production

2.13 Some 39 studies were dedicated to ensuring the safe and proper construction of the Dunakiliti weir, the Nagymaros and Gabčikovo steps and the bypass canal. The impact of such studies may be seen, for example, in the impressive depth and solidity of foundation works. In addition, in order to comply with the recommendations of the Danube Commission, 15 studies were devoted solely to navigation issues such as the operation, maintenance and safety of the chosen route. Finally, 45 studies addressed

⁶ See, for example, "Arbeitsgemeinschaft Donauforschung der Societas Internationalis Limnologiae", Professor R. Liepold, Stuttgart, E. Schweizerbartische Verlagsbuchhandlung, 1965.

⁷ While the existence of this fault line was known to the parties, its exact location only became clear as a result of improved sounding techniques. The location of geological faults under hundreds of metres of gravel is highly complicated and the consequent relocation of Gabčikovo testifies to the thoroughness and high quality of the background studies carried out by the parties. It must however be stressed that the original design dimensions of the Gabčikovo step took full account of the existence of the fault line. The design therefore allowed for the step to be located on or close to the fault line without there being any negative safety implications. The subsequent relocation shows the highly conservative approach adopted by the parties in terms of safety considerations.

issues of energy production and, in particular, how to optimise the operation of the G/N System to achieve energy production alongside good navigation conditions.

Environment

2.14 It has already been shown in Chapter I above that the G/N System was both intended and accepted to have a wide range of impacts on the environment. In the main, such impacts were beneficial, e.g., the resolution of the environmentally disastrous severe flooding of the Danube. Nonetheless, it was accepted - and it was self-evident - that the Project would have a substantial impact on the immediate area: principally in terms of the actual construction of the reservoirs and the canal and in terms of local changes in water level. These impacts were extensively considered by the parties - both prior to and after the signature of the 1977 Treaty. As a result, the range of environmental studies is extremely wide, covering subjects as diverse as flood protection, ground water, the side arm system, forestry planning and fish stocks. These studies showed that the Project was sustainable in environmental terms. Details of the environmental studies carried out prior to 1974 are also contained in Annex 23 to this pleading and the contents of these studies are briefly reviewed below.

Surface and Ground Water

2.15 It was of obvious importance to the parties to establish the hydrological impact of the Project and 37 studies were devoted to problems arising from different possible water regimes. Particular attention was devoted to flooding, but other aspects were also carefully researched such as sedimentation, the regime of bedload and suspended load, river bottom erosion, ice conditions and the impact of winter conditions on the Danube generally⁸. In terms of the effect of the System on the quality of surface and ground waters, some 36 major studies were carried out. The effect on water quality of changes in hydraulic parameters, climatic conditions and more general factors such as pollution was thoroughly dealt with, as was the influence of the System and its impounded sections on ground water levels and quality. These studies demonstrated to the satisfaction of the parties that the Project would not affect surface or ground water in an unacceptably negative way and, to the contrary, would lead to certain specific improvements in water quality.

⁸ The regime of bedload and suspended load has been continuously monitored at Bratislava since 1955.

Agriculture and Forestry

2.16 A further series of studies was devoted to the impact of the Project on agriculture and forestry. The regime of ground waters and its impact on agricultural production was evaluated. Plans were developed for the recultivation of land temporarily occupied during the construction phase whilst the optimisation of forest management after the completion of the Project was studied. One part of these studies was aimed at the protection of woods in the inundation area and one important conclusion reached was that this woodland should be protected by the construction of small overflow weirs in the Danube side arms. These would operate so as to hold back the water flow in the river branches and thereby increase local ground water levels. The construction of similar weirs in the old Danube riverbed was also proposed (and designed) by Hungarian scientists, and various methods of regulating ground water levels in the areas adjacent to the old riverbed were explored by VITUKI, Budapest.

The Bioproject

2.17 As early as 1963, a concerted effort was made to examine the so-called territorial/technical impacts of the Project, that is the effect of the G/N System on the ecosystems of the surrounding area. It was decided that a territorial plan should be drawn up, the aim of which would be to evaluate environmental impacts and to resolve in a comprehensive way any that might be unfavourable. On the Czechoslovak side, the work was entrusted to URBION, Bratislava, while on the Hungarian side it was carried out by VATI, Budapest⁹. Parts of the territorial plan were rendered obsolete by the ongoing changes in the System design and in 1975 a further study was commissioned to be entitled: "Biological project of the territory affected by the construction of the G/N Project" (the "Bioproject").

2.18 This study was completed in 1976 by URBION with the participation of the Slovak Academy of Sciences. The Bioproject is a very substantial piece of work. It comprises 15 closing reports, 21 published volumes, 72 published articles and 17 non-published works such as technical studies. As a result of this and similar studies, at the time of the signature of the 1977 Treaty the parties already had the basis for an understanding of the impacts of the G/N System on its immediate

⁹ URBION and VATI were the Institutes for Urban and Regional Planning for Czechoslovakia and Hungary, respectively.

environment and may therefore be considered to have made an informed political choice to accept such impacts¹⁰.

2.19 The purpose of the Bioproject was to undertake basic research and, in addition, to collect and evaluate the existing studies concerning the natural and biological status of the territory to be affected. The ambit of Bioproject was wide. Its compilers were instructed to examine the changes caused by the construction in terms of biological and socio-ecological relations, forestry and water management, agriculture, fisheries, hunting, hygiene and the protection of nature. It was expected to propose measures to guarantee both the protection of the environment during the construction phase and the biological restoration of the area after completion of the Project.

2.20 Before considering the recommendations of the Bioproject, it should be pointed out that, in terms of international practice, the Bioproject may be considered unusual due to the wide nature of its coverage and its detailed approach. In 1975 it was not standard either in Western or Eastern European or other countries, to carry out environmental assessment studies to such an extent prior to the construction phase of a hydroelectric or other large construction project. The completion of Bioproject enabled important modifications to be made to the operation of the G/N System and engendered the construction of ancillary facilities aimed at protecting the environment. In total, more than 200 proposals for ensuring such protection were formulated. Of these, the following may be seen as the most important:

- First, for the maintenance of meadow and forest areas after changes in the ground water level (including re-forestation of the construction areas).
- Second, for the delineation of agricultural land into areas in which the conditions for production were expected (i) not to be altered, (ii) to be improved and (iii) to be affected adversely. A series of remedial measures was proposed for the third category. In the case of permanently saturated areas, a system was evolved consisting of protection levees and seepage canals, which were intended to reduce high water levels or to restrict these to fixed areas. Attention was given to the re-use of topsoil from construction sites and, at the same time, a proposal for the biological recultivation of those areas to be temporarily occupied during the construction phase was elaborated.

¹⁰ The Bioproject was presented in stages to the Hungarian Academy of Sciences by means of special reports. The public was kept informed through the national review "Životné Prostredie" ("Environment").

- Third, for the delineation of 21 experimental areas of land reserves, arable land, permanent cultures and permanent grass areas for the purpose of further observation.

- Fourth, for the impact of construction and changed hydrobiological relations on fish and other aquatic species to be evaluated to achieve an appropriate system of water management. A proposal for the re-creation of piscicultural conditions in the system of Danube branches and in the seepage canals was accompanied by a proposal for the adaptation of the subsoil and river bank area, to ensure the optimal composition of water ecosystems. Further proposals were aimed at the protection of rare fish species.

- Fifth, for the conservation of wildlife. For example, measures aimed at creating and protecting the places of assembly and overnight stay of water and migratory birds were envisaged. Proposals for the protection of threatened animals and the maintenance of the ecological balance of natural wood cultures were finalised. Also established were proposals for the protection of animal species living on the territory to be permanently flooded, for their transfer to and settlement in new areas, as well as for the re-population of affected territories by animals suited to the changed conditions. The aim in each case was to ensure balanced and natural conditions for wildlife after the construction phase.

- Sixth, for the guarantee of water purity, account being taken of the existing degree of pollution of the Danube as well as the changing needs of riparian inhabitants, of industry and of agriculture. The Project proposed measures to guarantee the purity of the Danube water and ground water sources on Zitný Ostrov, to provide improved conditions in the Danube's tributaries and to improve the purification of wastewaters from industrial plants along the river banks. The demand for water supply in the region was calculated. Proposals for the rational utilisation of waste and the construction of water-supply and sewer canal systems were elaborated.

- Seventh, for the protection of the riverine ecosystems. In order to preserve the territory to be affected by construction, a plan for the protection of the natural environment was elaborated, experimental areas were delimited and protected areas of natural conservation were selected. In addition, a technical solution was developed to preserve and improve the branch system of the Danube, which would also comprise the preservation of ecosystems in the area between the navigation canal and the old riverbed.

2.21 Each of these important proposals was discussed between the Bioproject's compilers and the various Czechoslovak ministries involved at meetings held in November 1975, January 1976 and June 1976¹¹. It is important to note that the Bioproject, comprehensive as it was, by no means marked the end of the parties' attention to environmental issues. The parties naturally continued to devote their attention to updating research into the impact of the G/N Project after the conclusion of the 1977 Treaty - both in terms of the environment and other areas. As a result a further 118 studies were completed from 1974 to 1990, a list of which studies together with a brief summary of the contents thereof is annexed hereto as Annex 24.

2.22 In addition, an update of the Bioproject was carried out in 1986. This focused almost exclusively on the impact of the Project in the area between the Danube riverbed and the bypass canal. Once again, the study was compiled by URBION. Five zones were delineated - the reservoir zone, the headwater canal, the tailwater canal, the Danube riverbed/side arms and the river/canal confluence - and the impacts in each zone in terms of its local environment was evaluated.

Independent Appraisals

2.23 Further, a number of independent reports were commissioned. Of particular importance are those studies carried out from 1989 up to May 1992 - the period in which Hungary suspended and then purported to terminate the 1977 Treaty. In 1988-1989, Hungary reacted to popular opinion raised by political opponents of the Project by obtaining reports from two separate sources on the environmental impact of the G/N System. First, in June 1988, the Hungarian Research and Development Production Company for Information Systems ("INFORT") approached the University of Massachusetts. A small group from the University visited Hungary for about a week in October 1988. A short, draft study was produced by the University of Massachusetts in March 1989¹².

¹¹ The ministries and other institutions represented included the following: Ministry of Forestry and Water Management, Ministry of Agriculture, Ministry of Industry, Federal Ministry for Technological Development, Ministry of Health (environment section), Ministry of Culture, Hygiene Institute, Institute for the Protection of Historic Values and Nature, the Administration of the Danube Basin, the Research Institute of Forestry, Water and Hygiene, the State Fishing Enterprise and the State Laboratory for Fishing and Hydrobiology.

¹² Extracts of this study form Annex 25. It may be noted that the authors of the Massachusetts Study describe its compilation as a "tremendous learning experience". *Ibid.*, p. (i).

2.24 This study was not based on new scientific data and it appears that insufficient attention was accorded by the study's compilers to updates in the Project design and the mass of information collected on the Project by Czechoslovak and Hungarian scientists alike. In any event, the draft study was very poorly received by Hungarian scientists involved in the Project. In particular, a critique was prepared by the Director of the Hungarian National Hydraulic, Investing, Consulting and Engineering Company ("OVIBER") in order to assist in the preparation of any final report¹³:

"Since the final report will be an important issue, the draft needs several corrections in order to contain factual statements and to exclude misunderstandings or misinterpretations. The draft suggests several actions which have been already completely or partly executed, an updating of the draft corresponding to the recent status is also necessary."

2.25 In particular, in its summary overview section, the Massachusetts study makes four recommendations that it considered to be pre-conditions to the operation of the G/N System:

"In reviewing the project and information gathered during our visit, we feel it is essential that four conditions be met prior to putting the system in operation:

- installation of a monitoring system to track water quality, at least five years prior to barrage operation, to create a baseline set of data;
- development of a 3-dimensional computer modeling system to better understand the complex operation of the river system, such as the movement of pollutants to, and within, the groundwater;
- establishment of a Geographic Information System to integrate the data collected from the monitoring and modeling systems, and to facilitate spatial evaluation of the potential consequences of the project; and
- formation of an independent water authority (the proposed Gabčíkovo-Nagymaros Environmental Commission) to evaluate and comment on decisions made about the project, and to serve as a public forum for information dissemination and exchange¹⁴."

¹³ Also contained in Annex 25.

¹⁴ Ibid.

But, as the OVIBER criticisms make clear, each one of these conditions had already been fulfilled. Thus:

- "- a monitoring system exists and water quality data are collected since 25 years. This monitoring system is under further development.
- a complete 3-dimensional modeling system can be a final goal, recently mostly 2-dimensional models are available, which are sufficiently describing the phenomena. Models for pollutants are under improvement in various complexity.
- within the framework of the monitoring system a Geographic Information System was developed at VIZITERV which facilitates spatial and timely evaluations.
- the responsible authority for the investment is Ministry for Environment and Water Management. Independent supervising bodies have been created by the Parliament (an ad-hoc committee) and by the Council of the Ministers (a so-called "public" committee composed by several representatives of the independent environmentalists).

Thus, the major recommendations of American experts have been already implemented, independently from the draft report¹⁵."

2.26 A further report was produced by the Massachusetts group in May 1989¹⁶. This consisted mainly of the same material together with many illustrations, a consideration of suggested alternatives to the G/N Project and new sections entitled "Visual and Cultural Analysis of the Nagymaros Barrage Project" and "Proposal for a Danube Bend National Heritage Park". Of greater interest is a further section prepared by Professor Harry Schwarz of Clark University, Worcester, Massachusetts, entitled "An Engineering Evaluation of the Bös-Nagymaros Barrage System". This evaluation is referred to at paragraph 2.59 below because Slovakia considers that it is based on a more careful examination of the Project than the remainder of the updated study. In particular, Professor Schwarz appears to have spent 9 days during his visit to Hungary, to have interviewed OVIBER and VITUKI engineers and to have listened to the opinions of opponents of the Project¹⁷.

¹⁵ Ibid.

¹⁶ Annex 26.

¹⁷ Ibid., p. 31.

2.27 Shortly afterwards, Bechtel Environmental Incorporated ("Bechtel"), a worldwide organisation based in California and specialising in environmental impact assessment studies, was requested by Hungary to review the potential environmental impacts, operational considerations and planned mitigation measures with regard to the G/N System. Bechtel was sent extensive Project documentation by VIZITERV in July 1989. Bechtel subsequently spent some time in Hungary and it produced a comprehensive report (the "Bechtel report") in February 1990. Czechoslovakia also commissioned an independent report during this period. In the light of Hungary's claims and its own concern to ensure that the Project should not be environmentally damaging, it approached the Canadian company, Hydro-Québec International ("HQI"). HQI was commissioned in September 1990 to review the potential contamination of or reduction in the water table, the existing environmental studies and, in addition, the security of the various construction works. Its report (the "HQI report") was produced in December 1990¹⁸.

2.28 The Bechtel and HQI reports are important documents, not merely because they were commissioned at a time when concern for the environment was being voiced on a popular level - in Czechoslovakia as well as in Hungary - but also because they provide an impartial and detailed review of the Project studies and research data compiled by the parties up to 1990. The reports show independently that environmental impact had not only already been carefully considered in the various Project studies, but had also been taken into account and mitigated to a large degree. Of course such mitigation is an ongoing process and, unsurprisingly, the reports did point to areas where further mitigation might be required. But neither report predicts or even hints at an environmental disaster.

2.29 The detailed findings of the Bechtel and HQI reports will be taken up in Sections 2 and 3 below. But these reports have a special importance in that they also provide a review - and give an independent opinion of - the pre-existing studies related to the environment carried out for the G/N Project. Both reports testify to the quality and scope of such studies. For example, the Bechtel report notes in its introduction:

"The project has used a sound technical and scientific basis to identify impacts and appropriate mitigations¹⁹."

¹⁸ Extracts of the Bechtel and HQI reports form Annexes 27 and 28 respectively.

¹⁹ Bechtel report, *op. cit.*, p. 1-7.

Similarly, the HQI report notes:

"Les techniciens et les travaux font généralement preuve d'une compétence et d'un souci du détail élevés²⁰."

Translation:

"The technicians and the works generally show a high standard of competence and attention to detail."

2.30 Neither report is critical of the approach adopted in the G/N Project - that is the consideration of environmental impact in conjunction with the putting into operation of an agreed design - for this was the internationally accepted means of proceeding at that time. The HQI report explains this point:

"La conception du projet Gabčíkovo-Nagymaros remonte à plus d'une vingtaine d'années. Il va de soi qu'à cette époque, l'intégration des préoccupations environnementales revêtaient moins d'importance qu'actuellement, et ce, partout dans le monde. A cet égard, des études environnementales ont été entreprises parallèlement à la construction des ouvrages du complexe, soit vers l'année 1975. La solution technique étant déjà choisie, ces études ne portaient donc pas sur une comparaison de variantes, mais bien plutôt sur l'optimisation du projet retenu. En ce sens, les études réalisées à cette époque étaient comparables à celles qui furent effectuées en Amérique du Nord, sur le territoire de la Baie James par exemple²¹."

Translation:

"The conception of the Gabčíkovo-Nagymaros Project dates back more than twenty years. It is to be noted that at that time, throughout the world, the integration of environmental considerations had less importance than today. Thus, environmental studies were carried out in parallel with the construction of the System, that is around 1975. Technical solutions having already been chosen, these studies did not consist of a comparison of alternatives, but rather of the optimisation of the adopted Project. In this sense, the contemporary studies were comparable with those carried out in North America, on the James Bay territory, for example."

2.31 In addition, according to both reports, the project research into the all important area of the impact of the G/N System on the local water regime has

²⁰ HQI report, *op. cit.*, p.46.

²¹ *Ibid.*, p. 106.

been extremely thorough. This must be particularly noted, since in Hungary's 1992 Declaration "the lack of an established hydrogeological model and the lack of hydrobiological and water quality studies" is criticised²². In contrast, the Bechtel report, commissioned by Hungary, found that:

"The hydrologic regime of the project area has been thoroughly studied and potentially significant impacts have been identified by VIZITERV and associated experts and Bechtel concurs with this assessment²³."

Thus, not only does Hungary make a completely unfounded allegation but also it may be seen to be criticising its own research body, VIZITERV. Moreover, a similar conclusion with regard to the studies carried out by Czechoslovak specialists is reached in the HQI report:

"Le genre d'essais effectués (pompages, essais de perméabilité, suivi de la piézométrie et des régimes des crues) et leur nombre de même que leur interprétation ont été faits d'une façon très acceptable selon les standards internationaux. Nous devons même signaler de nombreux cas où les hydrogéologues consultés ont fait preuve d'ingéniosité²⁴."

Translation:

"The type of tests carried out (pumping, permeability tests, analyses of piezometry and flood regimes), their number and their interpretation are all in complete accordance with international standards. We must even point to numerous cases in which the hydrogeologists consulted showed ingeniousness."

SECTION 2. The Outline of the G/N System and its Benefits to the Parties

A. Description and Operation of the System

2.32 The G/N System, as envisaged by the 1977 Treaty, was a multi-purpose project designed to regulate the usage of the Danube for a length of over 200 km, that is from the entrance point of the river into the Dunakiliti-Hrušov reservoir to the end of the dredged section of the riverbed close to Budapest. In addition to the utilisation of the river's hydroelectric potential, a reliable navigation route was to be

²² Annex 17, p. 6.

²³ Bechtel report, op. cit., pp.1-1 and 1-2.

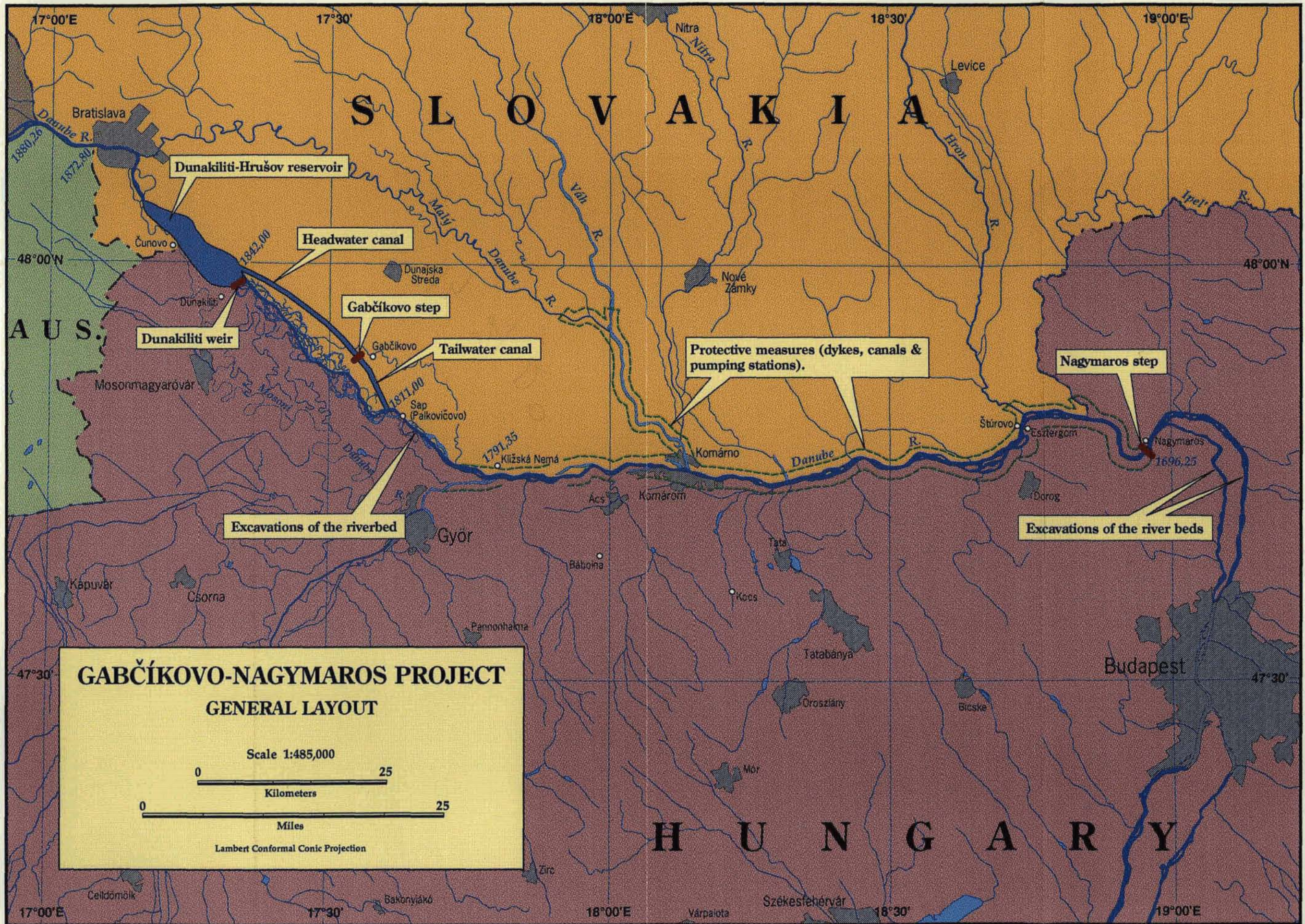
²⁴ HQI report, op. cit., p.43.

ensured and protection against floods greatly improved. The stretch of river concerned is shown in Illus. No. 21, which also provides the locations of the principal structures of the G/N System.

2.33 The functioning of the System - as an integrated whole - may be described graphically by means of a longitudinal profile of this stretch of river. This is shown by Illus. No. 22. At the left side of the profile, the Danube reaches Bratislava, still flowing at a fast rate from its Alpine source. It descends to Dunakiliti, where, as planned, it is dammed by a weir. A large reservoir is created that brings the water level up to the level of 131.1 m, a level chosen both to avoid any increase in water levels upstream of the border with Austria and to enable good navigation conditions up to Bratislava. The Dunakiliti weir is located at rkm 1842. As planned, part of the Danube passes through this weir and continues along the previous riverbed, but for the larger part the water flows through a 17 km long headwater canal, whose entrance is located at the lower end of the reservoir. In order to concentrate the hydraulic energy, water level is maintained in the canal at 131.1 m until the flow reaches the Gabčikovo step. This involves raising the canal and its banks above the local terrain. Navigation is transferred into this canal.

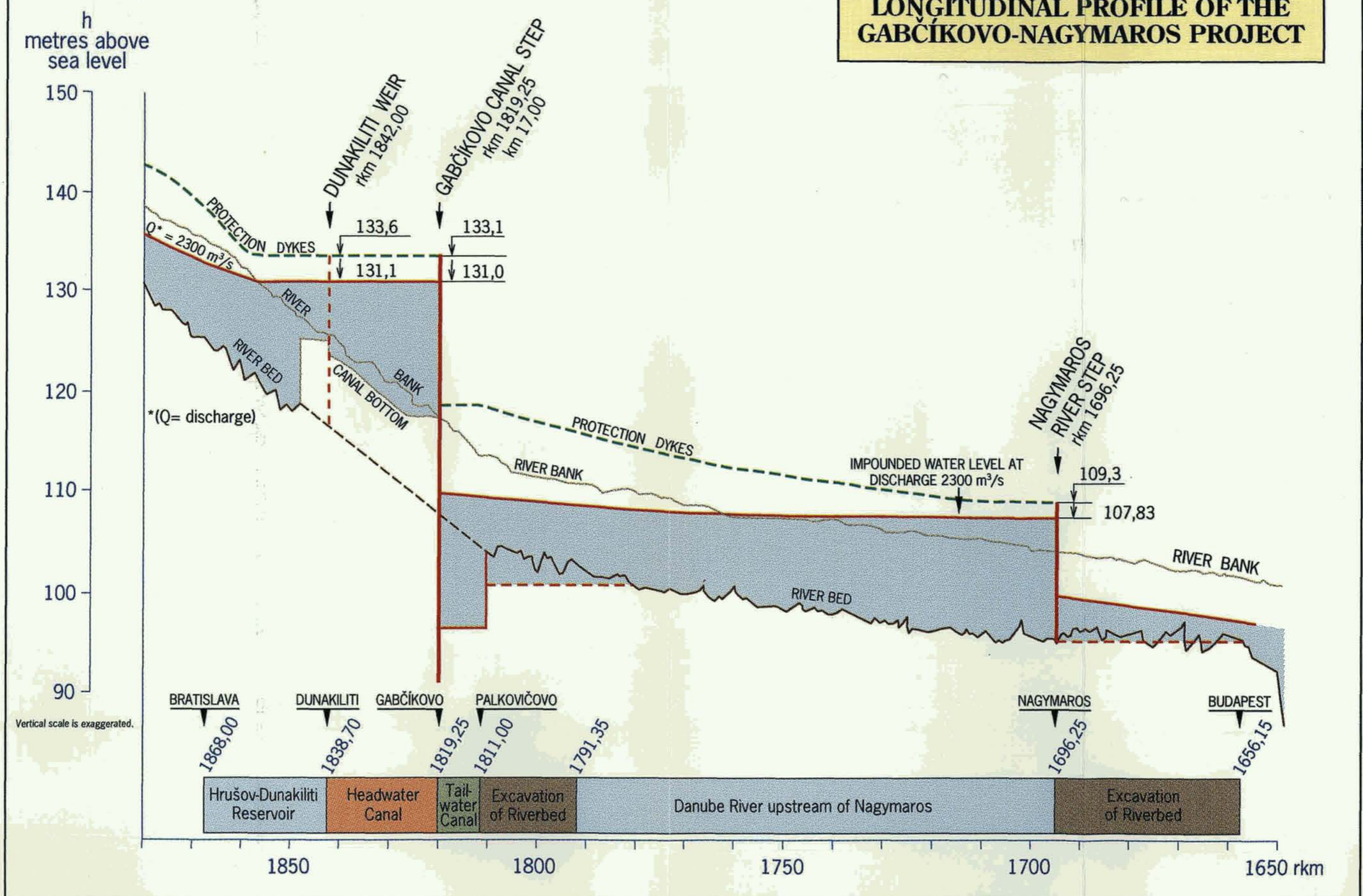
2.34 The Gabčikovo hydroelectric plant and navigation locks form the first of the Project's two steps. Here the water falls from 131.1m to a new downstream level of around 108.3 m, passing through a series of hydroelectric turbines, into an 8 km tailwater canal that rejoins the Danube riverbed at rkm 1811, that is just upstream of Sap (Palkovičovo). For approximately 20 km downstream of this point the riverbed is excavated - in order to achieve a greater fall at the Gabčikovo step and to allow for safer navigation. Thus, the level of 108.3 m is maintained along this reach and, in fact, is reduced only slightly by the time the river reaches the next step, at Nagymaros. In effect, an extended headwater section is created within the existing river banks by the weir at Nagymaros, replacing what is anyway the first slow flowing section of the Danube. In spite of the long distance travelled, the step at Nagymaros down to the new riverbed level is less than 10 m²⁵. Hydroelectric power is once more produced as the river flows through the step into a second dredged section of the Danube, marking the end of the G/N System.

²⁵ This depends on the flow accumulated in the headwater section - the range in the step height is from 3 to 10 m.



Specially prepared for presentation to the International Court of Justice.

LONGITUDINAL PROFILE OF THE GABČÍKOVO-NAGYMAROS PROJECT



Specially prepared for presentation to the International Court of Justice.

2.35 The 1977 Treaty stresses the fact that the Project forms an integrated system. Article 1.1 specifically states that "the System of Locks ... shall constitute a single and indivisible operational system of works"²⁶. The reason for this is technical as well as legal. It was the parties' intention that the hydroelectric plant at Gabčíkovo produce electric power mainly at peak flows, that is in short intervals coinciding with peak demands in electricity. This may be described as follows: the water accumulates in the reservoir and is released through the turbines for a given period of time, planned to be around five hours; peak production ceases at the end of this period, and the level in the reservoir is allowed to build up so that the cycle of peak production can continue²⁷.

2.36 The parties planned that there would be two peak production periods per day - to cope with the morning and evening periods of peak demand. As a result of the peak cycle, the water level in the tailwater canal and even further downstream would obviously vary. Such fluctuation could not be accepted along a length of the Danube without further regulation, as it would lead to severe erosion, environmental problems and would also constitute a navigational hazard. Thus, it was planned that the Nagymaros step would act as a flow regulator. By impounding the water behind a step, the impact of fluctuating levels in the tailwater canal would be minimised as this would naturally be reduced at the confluence with a relatively large body of water. In addition, the Nagymaros step would generate power on a constant basis only, *i.e.*, its discharge into the riverbed below would never vary so that downstream of this point no impact of the water fluctuations could be felt.

2.37 In spite of the integrated nature of the System, Articles 1.2 and 1.3 of the 1977 Treaty divided the System into two basic sections - consisting of the Gabčíkovo section and the Nagymaros section (*Illus. No. 21*). The principal works in the Gabčíkovo section consisted of the Dunakiliti weir and reservoir, the headwater canal, the Gabčíkovo power plant and locks, the tailwater canal and the regulation measures in the Danube riverbed and side arms. In the Nagymaros section, the principal works were the excavation of the Danube, flood protection structures and the step itself, comprising

²⁶ Annex 2. The reference to "locks" in Article 1.1 covers the weirs and steps in the G/N System.

²⁷ According to the original project, it was planned that when discharges in the Danube were higher than 4000 m³/s, Gabčíkovo would operate continuously and the reservoir water level would be maintained at 131.10 m. As soon as the Danube discharge decreased below this value, the Gabčíkovo step would change over to peak operation. For peak operation, the capacity of the reservoir between maximum and minimum operation level would be within the range 131.10 - 130.70 m.

the power plant and locks. This is a logical division for the purposes of the description of the System and is followed here²⁸.

The Gabčíkovo Section

2.38 An illustration of this part of the System is provided as Illus. No. 23, while Illus. No. 24 delineates in greater detail the surrounding area and the location of the different constructions.

The Dunakiliti Weir and Reservoir

2.39 From Illus. No. 24 and Illus. No. 25 it may readily be seen that the first major construction in the System was to be the Dunakiliti weir at rkm 1842 and the reservoir stretching behind the weir upstream to rkm 1858. It was the parties' intention that the damming of the Danube at this point would create a reservoir approximately 16 km long and 3-4 km wide. The sides of the reservoir were to be formed partly by pre-existing river dykes, upgraded to cope with the permanent hydraulic pressure, and partly by newly constructed dykes²⁹. Other key features of the reservoir were first, the exit point on the right bank for the Mosoni Danube and, second, the seepage canals, constructed on both banks to capture water seeping from the reservoir. This water would then be channelled into irrigation canals, the Mosoni Danube and the side branches of the Danube and therefore serve a beneficial purpose instead of raising levels adjacent to the reservoir and causing waterlogging.

2.40 An illustration of the Dunakiliti weir is provided as Illus. No. 25. Although the main function of the weir was to create and maintain the appropriate water level for channelling to Gabčíkovo, other important functions were to be served, being principally the provision of a safe navigation route through the reservoir, the regulation of flow into the Danube riverbed below and the discharge of excess waters during flood conditions. The weir was designed to be able to cope with the 10,000 year flood and could therefore safely divert a flow of 5270 m³/s, that is 2.5 times the Danube's average

²⁸ A short technical description of the whole System, together with various illustrations, is given in the Hungarian informatory booklet, produced by OVIBER, that forms Annex 29.

²⁹ The height of the dykes was designed so that the crest would be 2.5 m above the backwater level at a discharge of 4000 m³/s. Thus, during the 100 year flood, the distance between the water level in the reservoir and the dyke crest is still 1.5 m. The 100 year flood is a flood, the likelihood of occurrence of which is 1%.

**GABČÍKOVO-NAGYMAROS PROJECT
GABČÍKOVO SECTION**

SLOVAKIA

Bratislava

Hrušov-Dunakiliti Reservoir

International boundary

Dunakiliti

Dunakiliti weir

HUNGARY

Danube River

Bypass canal

Gabčíkovo

Gabčíkovo step

Sap
(Palkovičovo)



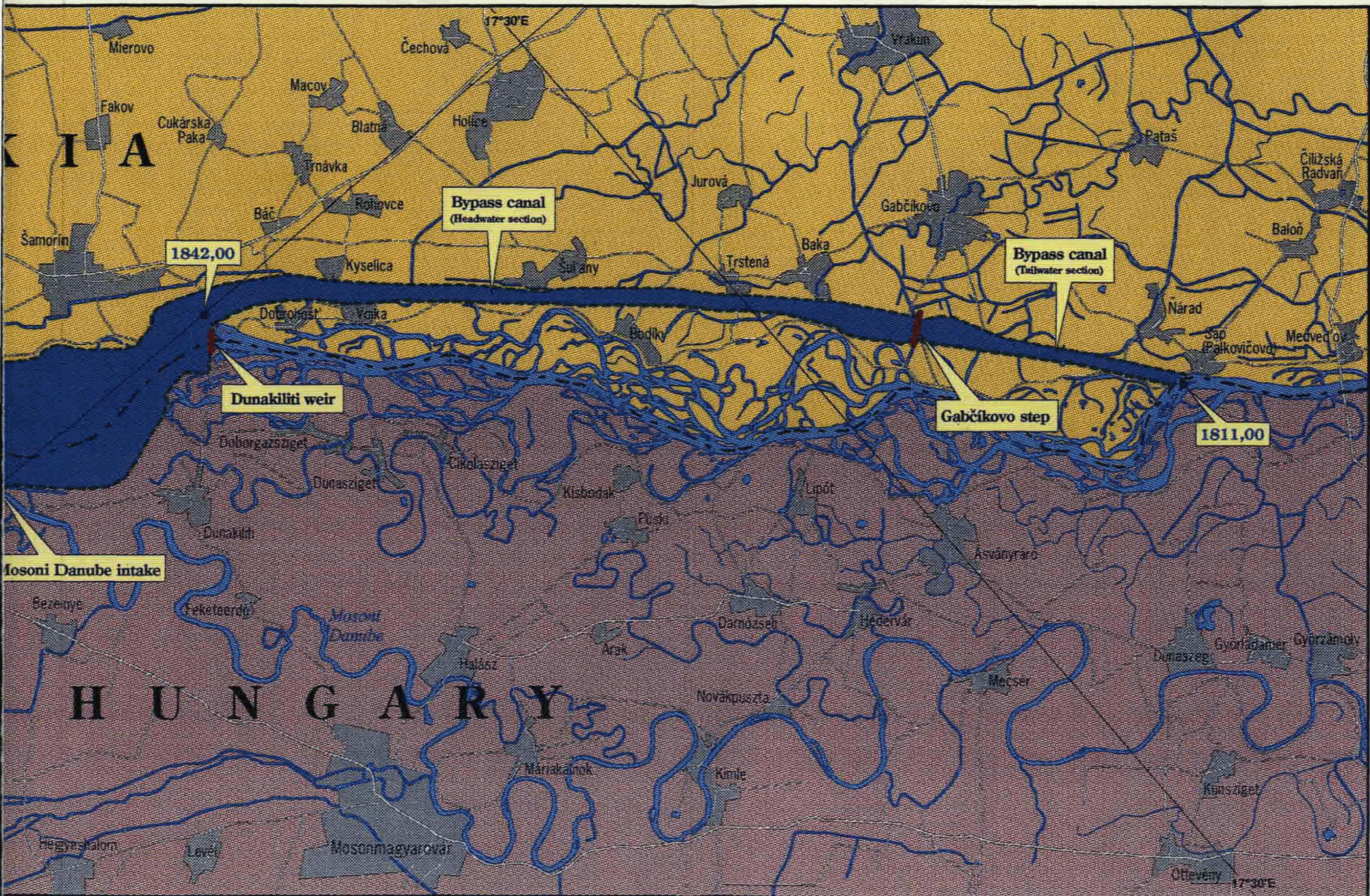
GABČÍKOVO-NAGYMAROS PROJECT
GABČÍKOVO SECTION

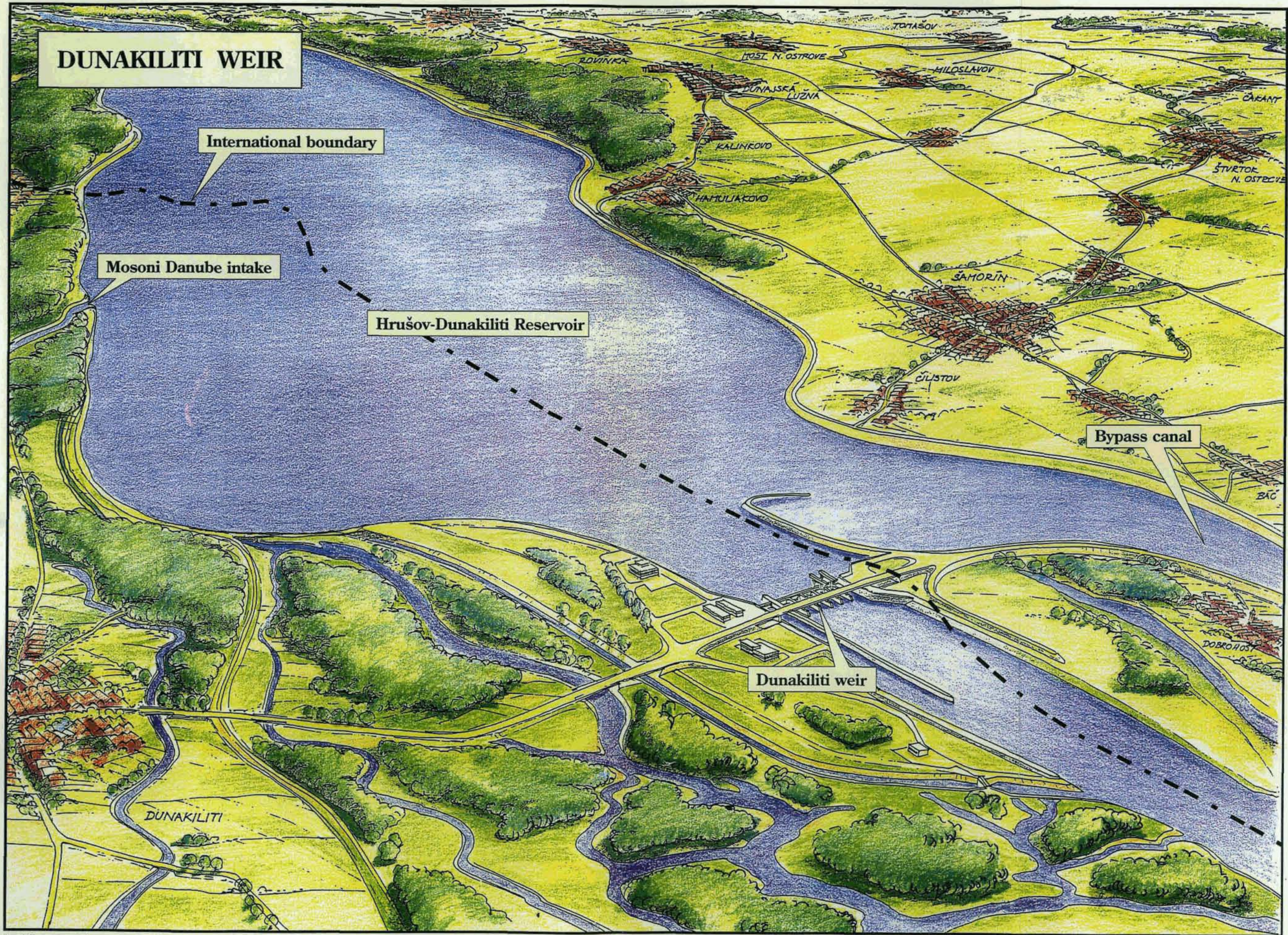
Scale 1:100,000

0 1 2 3 4 5
 Kilometers

0 1 2 3 4 5
 Miles

Specially prepared for presentation to the International Court of Justice.





DUNAKILITI WEIR

International boundary

Mosoni Danube intake

Hrušov-Dunakiliti Reservoir

Bypass canal

Dunakiliti weir

DUNAKILITI

flowrate, into the bypass canal during flood conditions³⁰. In addition, the weir was to provide a means for the evacuation of ice floes from the reservoir during winter conditions. Regulation was to be achieved by seven weir gates, each 24 m wide. The weir also comprised both a temporary navigation lock on the right bank with a fish pass to enable fish to traverse the structure without damage and an intake for the supply of water to the Hungarian system of side arms up to 200 m³/s.

2.41 Construction of this weir was a major project due to the underlying layer of more than 200 m of gravel/sand. Extensive foundation work was therefore required, a huge open pit being excavated and protected on its periphery by a sealing screen of concrete, some 27 metres deep. A firm base was then formed by injecting the sand/gravel mix with cement to a depth of five metres below the construction pit. Thus, the foundations descended to a total of 32 m below ground level, providing a totally safe base for the construction works.

The Bypass Canal : Headwater Section

2.42 Undoubtedly one of the most important facets of the 1977 Treaty is the agreement by the parties to channel the main part of the Danube flow into a canal located on Czechoslovak territory between rkm 1842 and 1811. This canal performs three main functions. First, it creates safe and constant navigation conditions, enabling a substantial reduction in journey time, an increase in ship freight capacity and the avoidance of what was a hazardous and frequently impassable section of the Danube. Second, it channels the water to the Gabčíkovo power plant, enabling the production of electricity. Third, as mentioned above, it enables the safe handling of the 10,000 year flood by handling safely the diversion of nearly 5,300 m³/s.

2.43 The canal is a major structure in itself. For the greater part of its length, for example, the canal is more than 270 m wide and at least seven metres deep. But it must be recognised that a canal of such proportions was vital not merely for navigation and for the hydroelectric power plant but also to enable the safe channelling of flood waters away from the reservoir. Put simply, the Danube is a large river and it is obvious that the canal too would have to be of similar, substantial proportions in particular in order to accommodate the Danube waters at flood levels. Because the headwater canal retains the reservoir water level of 131.1 m along its 17 km length, its banks and its own water level rise above the local terrain. Any failure to provide an

³⁰ The 10,000 year flood is a flood, the likelihood of occurrence of which is 0.01%.

adequate safety margin in the design and construction might have caused the canal to burst its banks and flood the surrounding area. As designed and constructed, such a scenario is wholly impossible. The holding banks are sealed by layers of concrete and asphalt and are constructed both to provide a safety margin of two metres above the contained water level and to resist severe earthquake, that is up to factor 8 on the MSK scale³¹. The bottom of the canal is sealed by a plastic sheet, protected by a 1m thick layer of gravel.

2.44 A further feature is that, as with the reservoir, the bypass canal benefits from seepage canals to regulate the local ground water level. One clearly beneficial impact here is that excess seepage water from the left side seepage canal may either be used for irrigation or channelled by a culvert under the canal located 4 km along its length into the left side branches of the Danube. The maximum capacity of this culvert is 60 m³/s, contributing to the balanced and revitalised water regime planned for the Danube side arms.

The Gabčíkovo step

2.45 Illus. No. 26 portrays the Gabčíkovo step, situated between the village of Gabčíkovo and the Danube (at rkm 1821). As this illustration shows, the step consists of two main parts: the hydroelectric power plant and the navigation locks. The power plant is designed so that eight turbines, each with a diameter of some 9.3 metres, produce power to a total maximum installed capacity of 720 MW. River craft pass to the left of the power plant through twin navigation locks 34 metres wide and 275 metres long. Thus, a tug towing nine barges, each with a capacity of 1,600 tonnes, can mount or descend the 23 metre step in just 14 minutes - the time required to fill or empty the lock.

2.46 As with the Dunakiliti weir, Gabčíkovo has had to be built on layers of water-bearing gravel sands, with a thickness here in excess of 300 metres. The step therefore had to be located and constructed taking into account the need for substantial foundation works, together with the local seismic and tectonic conditions. Once again, it was necessary that large construction pits be excavated - one each for the power plant and the navigation locks. The area of each pit was around 80,000 m², that is the size of ten football fields. Foundations seven metres and five metres thick were

³¹ The MSK scale is the Medvedev-Sponhener-Karnick scale. See, para. 2.60 et seq., below.

GABČÍKOVO STEP

Bypass canal - (headwater section)

Hydroelectric power plant

Navigation locks

Bypass canal - (tailwater section)

laid down for the power plant and the locks, respectively, the lowest point of which is in each case 60 m and 46 m below the immediate terrain. These state of the art construction works are depicted in greater detail in Annex 29. By way of comparison, it may be noted that the construction pit bottom at Gabčíkovo was comparable in size to the pits associated with the building of the Alsatian power plants on the Rhine, where a similar construction technology was applied.

The Bypass Canal: Tailwater Section

2.47 The tailwater canal carrying water and shipping from Gabčíkovo to the Danube riverbed is 8.2 km long, approximately 275 m wide, and is cut into the terrain to a depth of 13 m. A substantial safety margin in terms of water flow is again provided, the water depth at peak flow being some 2 m below the banks. Protection from floods is further guaranteed by protective dykes constructed on both sides of the canal. The banks of the tailwater canal are fortified (by a 70 cm thick riprap) to take account of the water level fluctuations expected during peak operation of Gabčíkovo. Where the tailwater canal rejoins the Danube at rkm 1811, the design provided that dredging would be carried out between Sap (Palkovičovo) and Gönyü (around 15 km downstream) so that the water level at the confluence would be 0.7 m below its previous level (when discharge from the tailwater canal was at the peak operation flow of 4000 m³/s). As a result of such dredging, navigation would be facilitated, flood water level decreased and the power production of Gabčíkovo increased due to the greater depth of its step. In order to prevent erosion, water would be impounded from the Nagymaros step and a transitional section starting 6 km upstream from the confluence was also planned to be excavated in the Danube riverbed.

Regulation Measures in the Old Riverbed

2.48 Due to the construction of the bypass canal, it was anticipated that the natural water regime in the Danube between rkm 1811 and rkm 1842 would change. Discharges coming from the reservoir would pass mainly through the bypass canal, although a flow would be maintained in the old riverbed. Discharges exceeding the bypass canal capacity, ice floes and bedload would also be conveyed through the old Danube riverbed.

2.49 In the upper part of the old Danube riverbed, underwater weirs were designed to allow water to be maintained at a level corresponding to low water level in the Danube in pre-dam conditions. The Danube branches in the adjacent area

would be dammed up at several places so as to create a series of distinct regions, each with its own surface water level but with a continuous flow maintained between the regions to ensure their revitalisation. In effect, a series of cascades would be created and, as a result, more favourable and stable conditions would be created also. These measures were aimed at eliminating the unfavourable impact on the floodplain forest ecosystems caused by the sinking riverbed and also at improving local ground water levels.

2.50 Along the middle part of the old Danube section, it was nonetheless anticipated that ground water levels would decrease in adjacent riparian zones. Water losses would therefore be compensated by means of the development of existing irrigation systems. The Dunakiliti weir would also be operated in such a way that a discharge of 50 m³/s would be provided in the winter season and up to 200 m³/s over the growing season according to requirements, with the possibility of occasional flushing to remove excessive sedimentation.

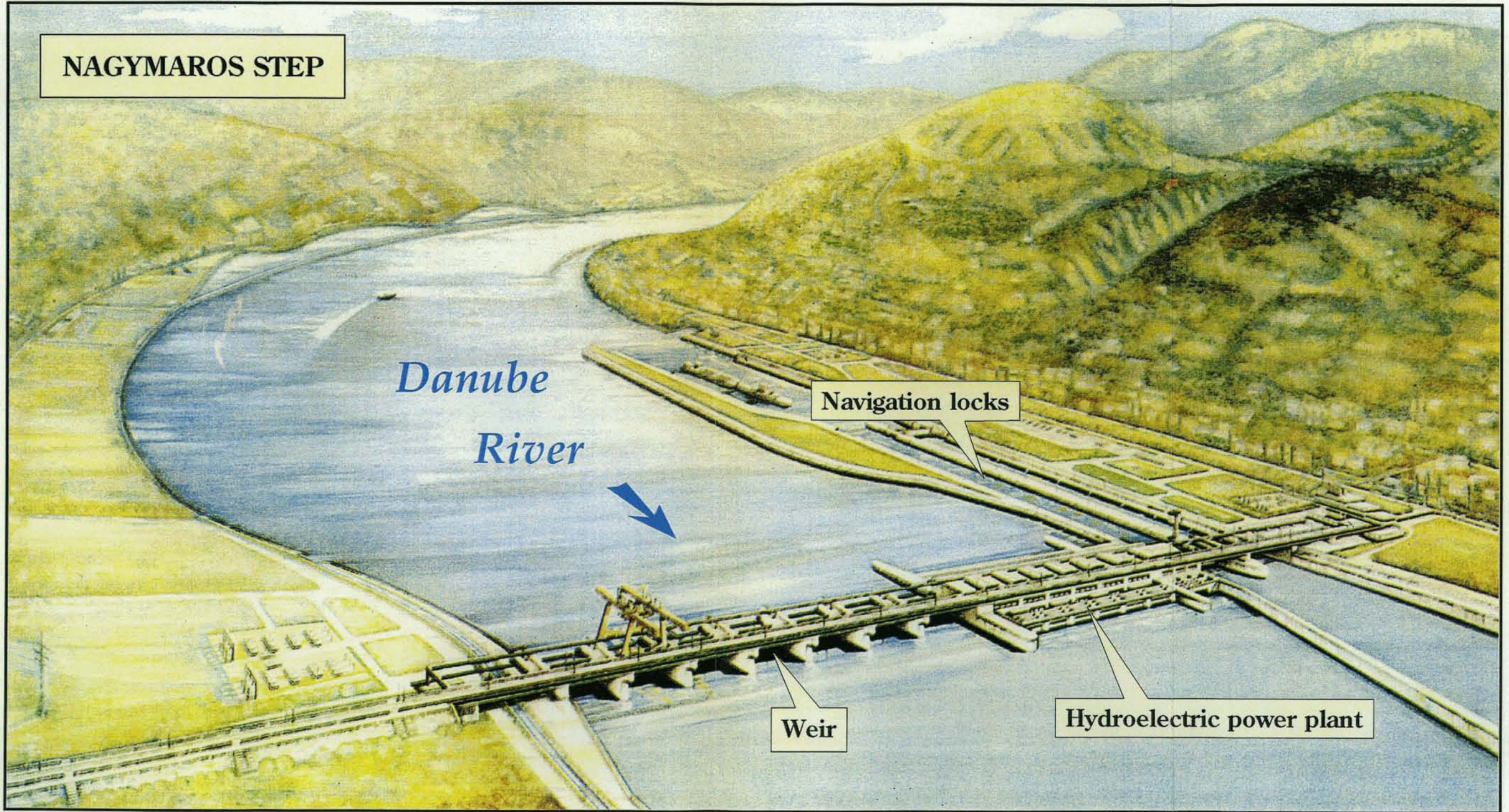
The Nagymaros Section

2.51 The general location of the Nagymaros section of the Project is depicted in Illus. No. 21 (appearing at paragraph 2.32 above); the individual constructions are shown here in Illus. No. 27. This part of the G/N System was intended by the parties to satisfy four basic functions: first, to compensate fluctuating water levels caused by peak operation of Gabčíkovo; second, to allow for the safe evacuation of flood waters from this region of the Danube; third, to produce hydroelectric power; and, finally, to enable safe navigation. These functions were to be fulfilled by the one principal construction of this section, being the Nagymaros step. Three other sets of works were also envisaged: the dredging of the Danube riverbed downstream of the step; flood protection measures in Slovak territory upstream and, finally, similar although less extensive measures on Hungarian territory, also upstream of the step (Illus. No. 21).

The River Step

2.52 The Nagymaros step itself was to be situated on a large bend in the Danube riverbed at rkm 1696.2 between the villages of Nagymaros and Visegrád. The geography of this location had been surveyed and studied by the Hungarians prior

NAGYMAROS STEP



Specially prepared for presentation to the International Court of Justice.

ILLUSTRATION NO. 27

even to the first governmental negotiations in 1952³². At these negotiations the Hungarian delegation recommended this location because of the favourable conditions with regard to geology and morphology, being in particular the presence of hard andesite bedrock which would form a solid foundation for the structure. Thus, construction would present a lesser challenge than for the Dunakiliti and Gabčíkovo structures.

2.53 The step itself, as designed, consists of three functional units - the weir, a hydroelectric power plant and two navigation locks³³. The weir is located on the right side of the construction and, as at Dunakiliti, consists of seven gates each 24 m wide. In total the weir is 200 m wide and, in the event that flood discharge in the Danube reaches 6,000 m³/s, each gate will be opened to its maximum position and the flow let through without any energy extraction. Adjoining the weir is the hydroelectric power plant, which has a maximum absorption capacity of 2,800 m³/s. The plant consists of six horizontal turbines, each of a 7.5 m diameter, the total installed capacity of which is 158 MW. Finally, the two navigation locks are located on the left bank and are of the same dimensions and capacity as the Gabčíkovo locks.

The Nagymaros Headwater Section

2.54 The effect of the Nagymaros step is that the water level upstream is kept permanently at a level within the range of 107m - 108m, that is up to 3 m above the previous high water level and, at some points, higher than the adjacent terrain³⁴. Nonetheless, the impounded water would be confined within the existing river dyke structures. As a result, these pre-existing river dykes, which were intended to provide protection against flooding, would become permanently loaded structures. Thus, the parties planned to strengthen all existing structures and incorporate new elements such as underground screen-walls and sealing aprons to prevent underground erosion of the foundations. Such works were planned both on the Danube's dykes and the dykes on the Slovak tributaries - the Ipeľ, the Hron, the Váh - and also on the lower section of the Malý Danube³⁵. Along all such dykes, it was intended that drainage canals would be

³² As noted at para. 2.03 above, prior to this date the construction of a river step in this area, independent of any joint project, was already being considered by Hungary.

³³ In order to build the step, it was necessary to temporarily divert the flow of the Danube and protect the construction site by means of a coffer dam.

³⁴ The precise level would fluctuate due to peak operation at Gabčíkovo.

³⁵ The works on the left bank would not constitute a single section but would be formed of 8 separate sets of flood protection works in the following regions: the lower Ipeľ, the lower Hron,

built to maintain local ground water levels at a suitable height so as not to harm local agricultural production. Seepage waters would be pumped back into the river by means of new pumping stations.

2.55 The measures required upstream on Hungarian territory are less substantial for simple, geographic reasons. The right bank in the upper section is formed by a terrace raised above the Danube water level and in the lower section of the Danube, the river flows between the Borzsony and Pilis mountains, which slope directly towards the river channel. Thus, the natural terrain fulfills to a large extent the purpose of the dykes necessary on the Slovak bank³⁶. However, there is a considerable concentration of industry in this area of Hungary and relocation of some local railways and road systems running alongside the Danube would be necessary in conjunction with the completion of the Project.

Excavation of the Riverbed

2.56 Downstream of Nagymaros, the parties intended to dredge the Danube riverbed along a length of 40 km. The purpose of this would be to facilitate navigation and to increase the depth of the step at Nagymaros. A short way downstream of the step, the Danube splits into two channels creating a small island called Szentendre. Both channels are open to navigation and it was therefore envisaged that both would be dredged, although on completion of the Project it was planned that only the main Vac branch be used for international navigation.

B. The Safety of the Planned Structures

General Safety Considerations

2.57 It is vital that large dam structures that retain huge amounts of water are safe and can withstand not only extreme flood or constant underwater erosion conditions, but the possibility of earthquake conditions also. The flood of 1965, during which several flood protection dykes collapsed, demonstrated that structures in this area, unless properly designed, were susceptible to erosion beneath their foundations. As a

Kravany, Iza, Komárno town, Komárno/ Medveďov, the Váh left bank and, finally, the Váh right bank/Malý Danube.

³⁶ Nonetheless, there were planned to be seven separate flood protection zones on the Hungarian right bank: Visegrád/Dömös, Pilismarót, Esztergom, Nyergesújfalu/Dunaalmás, Komárom, Komárom/Gönyű and Nagymaros/Ipoly.

direct result of this flood, a large number of studies were undertaken to enable the pinpointing of the exact causes of dyke failures and the prevention of similar occurrences in the future. As to the possibility of earthquake, gravel sands are known to be prone to the phenomenon of liquefaction and it was therefore essential that full account be taken of possible seismic movement.

2.58 There is no doubt that the engineers involved in this Project were fully aware of the difficulties faced in terms of possible structural erosion and that these difficulties were taken into account. Thus, the HQI report notes:

"Les principes de conception des ouvrages ont pris en compte la complexité de fonctionnement du projet et les difficiles conditions de fondation des ouvrages de référence³⁷."

Translation:

"The design principles of the structures took into account the complexity of Project operation and the difficult conditions with regard to the foundations of the major structures."

It continues ...

"Ainsi, lorsque les charges hydrauliques dépassaient des valeurs de l'ordre de 8 à 10 mètres, on a cherché à assurer une étanchéité complète du fond de la retenue. Pour des têtes d'eau inférieures, on a pris des mesures importantes pour limiter les gradients d'écoulement qui sont la cause première des phénomènes d'érosion interne. Ces mesures, appliquées suite à une analyse approfondie de ces phénomènes dans les conditions du site, sont accompagnées de façon cohérente d'un dispositif d'auscultation important adapté à un ouvrage de grande longueur, où il existe toujours une possibilité de rencontrer localement une conjugaison de conditions défavorables. Les données présentées telles que décrites plus haut indiquent que les réparations éventuelles seront d'ampleur limitée et devraient avoir peu d'impact sur le projet.

Les plans et devis, leur application et le contrôle de qualité correspondent en général aux standards appliqués pour ce type d'ouvrages³⁸."

Translation:

"Thus, when the hydraulic structures exceeded heights in the order of 8 to 10 metres, the complete water-tightness of the bottom of the dyke was

³⁷ HQI report, op. cit., p. 78.

³⁸ Ibid.

sought. For headwaters of lower depth, significant steps have been taken to limit the flow gradients, which are the primary cause of internal erosion. These measures, applied as a result of an in depth analysis of such phenomenon in on-site conditions, have been accompanied in a coherent manner by an extensive sounding system adapted for a work of great length, where it is always possible to find a local convergence of unfavourable conditions. The results as those described above indicate that possible repairs will be limited and should have little impact on the Project.

The designs and estimates, their application and the quality control correspond in general to the applicable standards for this type of structure."

Put simply, the lessons to be deduced from the 1965 and previous floods have been learnt: the structures as designed and built comply with international standards and are safe against water induced erosion.

2.59 Very similar conclusions were reached by Professor Schwarz in the Massachusetts study of May 1989. With regard to his inspection of the Dunakiliti weir and reservoir system, he concluded:

"The work appeared to be carried out in an excellent professional manner and the work site generally well organised and well cared for³⁹."

As to the possibility of breaches in the dykes, weirs or banks (of the headwater canal), he noted:

"Competent and periodic inspection and immediate repair of any deficiency discovered is the guarantee of safety for the low-lying areas. Serious damage from a sudden failure of the barrage by war or sabotage is unlikely.

The low height of the dams and the relatively small amount of water stored would create a flood wave not greater than a natural flood⁴⁰."

Professor Schwarz's overall conclusion is even more important:

"The project as presently designed is sound from an engineering viewpoint. All the studies customarily associated with such a project appeared to have been made. The design appears efficient for power and navigation, and is, at the same time, as compatible to the landscape as

³⁹ University of Massachusetts study, May 1989, Annex 26, p. 31.

⁴⁰ Ibid., p. 35.

possible. Construction is proceeding at a rapid pace and also appears well-organised and carried out in a highly professional manner⁴¹ .

Seismic Safety

2.60 In terms of earthquake protection, a three year study carried out from 1975-1978 provided an extremely detailed history of the location of seismic movement in the Project area and its effects from the year 1400 to date. This study shows that the area affected by the Project has been seismically active particularly in the region of Bratislava and Komárno and along fault lines as, for example, at Budapest. But seismic activity is not of a degree sufficient to pose a threat either to the large cities that have been built up in this region or to the G/N System structures, which had of course been designed to withstand seismic movements⁴². As the HQI report explains, a further verification was achieved by tests carried out in 1982, which involved simulated seismic shocks:

"De plus, en 1982, des vérifications de stabilité des digues sous la sollicitation de secousses sismiques ont été effectuées au niveau de la liquéfaction possible des sables silteux. Ces calculs ont été basés sur des densités relatives estimées à partir des essais de pénétrations dynamiques suivant plusieurs méthodes, dont la méthode simplifiée de Seed et Idriss qui est la méthode généralement utilisée en Amérique du Nord pour ce type de problème. A partir de ces calculs, l'accélération maximale susceptible de provoquer ce type de phénomènes était évaluée... Cette valeur lorsque comparée aux accélérations envisagées alors, à partir des intensités M.C.S. (même en les majorant d'une unité) montrait que ces phénomènes n'étaient pas à craindre, comme l'indiquaient les données historiques⁴³ ."

Translation:

"Moreover, in 1982, verification of the stability of the dykes under induced seismic shock was carried out with a view to the possible liquefaction of silt/sands. These calculations were based on relative densities estimated from tests of dynamic penetration following several methods, including the simplified method of Seed and Idriss which is the

⁴¹ Ibid., p. 37.

⁴² HQI report, op. cit., p. 62.

⁴³ Ibid., pp. 69-70. The MCS measurement is the Mercalli-Cancanni-Sieberg scale of intensity. This scale is currently in use in Italy, Greece, Spain and Portugal and in a modified version in the United States of America. The scale runs from 1-12. The Medvedev-Sponhener-Karnick scale (MSK), is a development of the MCS scale and is now in use in the rest of Europe. This scale runs from 1-10. Neither scale converts into the well-known Richter Scale, as this is a measurement of the magnitude of an earthquake, i.e., the amount of energy released, and not of intensity.

method generally used in North America for this type of problem. From these calculations, the maximum acceleration susceptible to provoke this type of phenomenon was evaluated... This value, when compared with the previously envisaged intensities, using the MCS scale (even in upgrading these by one) showed that such phenomena were not to fear, as indeed the historical data indicated."

2.61 It should be self-evident that it was in the parties' interest to investigate the possibility of earthquake with the utmost care and, in doing so, to ensure the allowance of a suitable safety margin in the constructions and the ability to handle possible worst case scenarios. For example, with regard to the bypass canal the parties tested the stability of the protection dykes for the most unfavourable load: a rupture in the canal's lining coupled with a simultaneous earthquake. High safety factors were achieved and it was shown that, even in the case of a very strong earthquake, the dykes would retain the canal's water and protect the surrounding terrain⁴⁴. Such security was achieved by removing the gravel sands subject to liquefaction in the construction area and replacing these by more solid materials.

2.62 Hungary has alleged in its 1992 Declaration that the Project took insufficient account of seismic considerations by applying the figure of 6.0° MCS in the construction design phase and that a figure in the region of 8.7° - 9.0° MSK should have been applied⁴⁵. Such an allegation is simply wrong.

2.63 The principal structures of the G/N Project were, as would be expected, designed and built in accordance with applicable construction codes⁴⁶. As a result, the structures were originally designed to remain stable even during an earthquake of 9° MCS. This design rating was clearly conservative when measured against the seismic map of the area approved by Czechoslovak and Hungarian experts at meetings held on 23-25 November 1965, which recorded that the Project area was situated mostly in a zone of intensity 6° on the MCS scale, reaching 7° MCS in the Bratislava and Komárno areas, that is away from the main construction sites. These analyses were reviewed at various times during the Project. The following four studies are of particular interest:

⁴⁴ "The Binational Gabčíkovo-Nagymaros Project", V. Lokvenc and M. Szantó, Water Power & Dam Construction, November 1986, p. 33. Annex 30.

⁴⁵ See, Annex 17, p.17.

⁴⁶ The relevant codes employed during the design phase were ON-736053, CSN-736503, CSN-730036 and CSN-736850.

- (1) Dr. J. Janáček - Dionýz Štúr Geological Institute, Bratislava: Geologic assessment and evaluation of definitive siting of the Gabčíkovo step.
- (2) Ing. A. Molnár - Geophysical Institute, Slovak Academy of Sciences, Bratislava (1977): On potential earthquake hazard at the Gabčíkovo water work.
- (3) Dr. I. Brouček (ed.) - Geophysical Institute, Slovak Academy of Sciences, Bratislava (1975): Seismicity of Slovakia and its relation to the structure of the Carpathian region. Final report.
- (4) Ing. I. Klapetek, CSc - Research Institute of Civil Engineering, Bratislava (1982). Instructions for designing hydrotechnic building structures in seismic regions. State research report No. P-12-526-266.

2.64 According to Dr. Janáček, the maximum seismic intensity in the Project region was 7° MCS. In fact, compared to the region of more pronounced seismic activity in the Hungarian part of the Danube lowlands, the region of Žitný Ostrov i.e., the Project region, was found to be relatively aseismic or quiescent. This analysis was effectively supported by Mr. Molnár, who found that maximum observed intensities over the documented historic period did not exceed the value of 6° MCS. Similarly, Dr. Brouček found that the G/N System was to be sited in an area with relatively the lowest seismic activity of the region and that the maximum observed intensity at the planned construction sites was 5° MCS. The MSK scale was applied by Mr. Klapetek in his analyses and he confirmed that the dykes were safe in the case of an earthquake of an intensity 7.5° MSK, the approximate equivalent of 9° MCS. Such high intensities have never been observed in the area⁴⁷.

⁴⁷ See, also, HQI report, op. cit., p. 63; study of Seismic Department of the Research Institute of Geodesy and Geophysics, Hungarian Academy of Sciences, Map of Maximum Earthquake Intensities in Hungary delimiting areas with intensities in excess of > 5° MSK, D. Csomor (Geophysical Institute of the Hungarian Academy of Sciences, Budapest, 1978); D. Prochazkova (Geophysical Institute of the Czechoslovak Academy of Sciences, Prague): Map of Maximum Observed Intensity of Hungary and Southern Slovakia. Contribution of the Geophysical Institute, Slovak Academy of Sciences, No. 11/1981; Commission of Academies of Sciences of Socialist Countries for Planetary Geophysical Research (Geophysical Institute of the Czechoslovak Academy of Sciences, Prague, 1978) Atlas of Iseismal Maps: Central and Eastern Europe.

2.65 In terms of independent assessment, the seismic intensities of the region and the sustainability of the proposed constructions have been carefully reviewed at various times by Hidroprojekt of Moscow. The following studies are of particular relevance:

- (1) Gabčikovo hydroelectric power plant on the Danube river (CSSR). Conclusions of consultations on technical project, Hidroprojekt, Moscow, 1972.
- (2) Gabčikovo hydroelectric power plant on the Danube river (CSSR). Conclusions of consultations. Assessment of seismic safety and resistance of dykes of power canal in Gabčikovo hydropower plant on the Danube river, Hidroprojekt, Moscow, 1981.
- (3) Gabčikovo hydroelectric power plant on the Danube river (CSSR). Conclusions of consultations. Geotechnic assessment of soil underlying a base of dyke of power canal and assessment of stress condition and deformations of dyke and subsoil of power canal in the Gabčikovo hydroelectric power plant on the Danube river taking seismic aspects into account, Hidroprojekt Moscow, 1982.

As a result of these studies, the Soviet codes SNIP II A.12-69 "Building in seismic zones" and SNIP II 7-81 were taken into account in the actual construction phase. The consequence of the application of these strict codes is that the dykes are safe for an earthquake of an 8° MSK intensity.

2.66 In conclusion, the design is more than sufficient and, in any event, the principal structures have been located away from the more seismically active areas (Bratislava and Komárno). There are no structures close to Bratislava, while the structures close to the Komárno area are flood protection dykes. As the HQI report points out, the stability of these dykes could not present a hazard even in the event of a severe earthquake, because the chances of having a simultaneous flood are, in practical terms, zero. Even greater precautions were taken with the flood protection dykes for the headwater canal, because this section of the canal is higher than the surrounding terrain. As noted above, all materials in the dykes subject to liquefaction were replaced. As the HQI report notes:

"Les digues les plus élevées bordant le canal d'aménée sont à l'abri de tout risque du fait de la substitution des matériaux liquéfiables⁴⁸."

Translation:

"The highest dykes of the headwater canal are immune to any risk due to the substitution of materials subject to liquefaction."

The constructions of the G/N System were in accordance with the highest safety standards and throughout the history of the Project the parties have made every effort to update and take full account of local seismic values.

C. The Developing Nature of the Project

2.67 It is clear, not least from the 1977 Treaty, that the parties always envisaged that the functioning of the Project would be monitored on a continuing basis and that technical aspects of the System would be updated and improved as the Project progressed. Article 1 simply sets out the principal works of the system, the detailed and technical elaboration of which was to be carried out in accordance with the Joint Contractual Plan, referred to in Articles 1(4) and 5. The continual updating of this Plan was foreseen as one of the principal functions of the Plenipotentiaries who, as provided for by Article 3 (3), were to approve proposals for its modification within the scope of the 1977 Treaty.

2.68 It has already been seen that environmental impact was considered by the parties prior to the signing of the 1977 Treaty. It is nevertheless true that in the period since that date environmental issues have come to occupy a far greater place in the foreground in large construction projects, whether in Central Europe or elsewhere in the world. As a result of the increased concern in this area, priorities have to a degree been reassessed and the System has been modified.

Technical Changes in the System in Place by May 1989

2.69 One of the areas of particular concern has been the restoration of the ecosystems bordering the Danube riverbed and its associated system of meanders downstream of Dunakiliti. The quantity of water to continue down this section of the river was not specified in the 1977 Treaty, but according to the Joint Contractual Plan

⁴⁸ HQI report, *op. cit.*, p. 63, (emphasis added).

this amount was to be between 50 and 200 m³/s, that is 50 m³/s during the winter and 200 m³/s during the growth season, with occasional higher flows to prevent excess sedimentation. Following the Bioproject, its 1986 update and subsequent re-examinations carried out especially since 1988, it was considered that this amount should be increased. As at May 1989, the conclusion had been reached that the Dunakiliti weir should channel up to 350 m³/s into the Danube riverbed on a continual basis, with the flow being temporarily increased to 1,300 m³/s each week in order to prevent the deposition of fine sediment in the riverbed.

2.70 At the same date, the following important modifications were also foreseen:

- The construction of 7-8 underwater weirs in the Danube to increase the water level in the river and the ground water level in the immediate area.
- The construction of various weirs in the Danube side arms to conserve the height of the local water table. This would create a system of distinct regions, each with its own water level, but interlinked by a series of cascades. Thus a constant flow of water would be achieved. Each weir would have a submerged opening to enable fish to pass and re-pass without difficulty.
- The construction of lowered sections in the banks of the Danube to so that when the flow of 1,300 m³/s was channelled into the Danube, this could pass into the side arms, allowing also the crossing of fish and other aquatic life.
- The construction of fishpasses between the Danube riverbed and the side arms.
- The construction of an outlet from the bypass canal to divert a guaranteed 20-50 m³/s into the left bank side arm system, the actual amount to be decided upon once the region's needs were evaluated. This amount could then be increased up to 234 m³/s at various times during the growing season in order to simulate local flood conditions. This would represent a net benefit because, on average, such an inundation would have occurred only once every

two years before the G/N System was put into place. As the HQI report notes:

"Selon l'avis des experts consultés, cette gestion procurerait des conditions d'écoulement améliorées par rapport aux conditions actuelles, en évitant entre autres la stagnation de l'eau dans certains méandres et l'assèchement d'autres portions de ceux-ci⁴⁹."

Translation:

"According to the experts consulted, such water management would lead to flow conditions superior to the actual conditions, avoiding amongst other things the stagnation of waters in certain meanders and the drying up of others."

The further investment required for such measures was accepted by Czechoslovakia at least; and, as will be seen in Chapter V below, it was fully ready to implement these modifications.

D. The Obligations of the Parties under the 1977 Treaty

2.71 The purpose of this sub-section is not to analyse in detail the respective obligations of the parties to the 1977 Treaty. This has been left to Chapter VI below. The aim here is simply to explain how the years of design and study resulting in the G/N System were to be brought to fruition by the parties according to their treaty obligations, in particular those contained in Chapter III of the Treaty, headed "Realization of the System of Locks" and comprising Articles 4 to 8.

2.72 The central provision of Article 4 is that the joint investment, that is the construction of the G/N System, be carried out in accordance with the Joint Contractual Plan, which would provide the technical basis for the construction works. The detailed contents of this Plan was already the subject of a separate agreement between the parties dated 6 May 1976, the 1976 Joint Contractual Plan Agreement⁵⁰. Essentially, the Joint Contractual Plan was to provide the detailed work schedule and the basis for the ordering of the equipment and materials and the drawing up of the construction plans.

⁴⁹ HQI report, op. cit., p. 104.

⁵⁰ Annex 3.

ARTICLE 5. Responsibility for the costs of the joint investment, apportionment of labour and supplies.

Amount budgeted
(in millions of
CS Crowns)

(a) Czechoslovak responsibility:

633	(1) The Dunakiliti-Hrušov head-water installations on the left bank, in Czechoslovak territory;
3,276	(2) The head-water canal of the by-pass canal, in Czechoslovak territory;
5,026	(3) The Gabčíkovo series of locks, in Czechoslovak territory;
1,237	(4) The flood-control works of the Nagymaros head-water installations, in Czechoslovak territory, with the exception of the lower Ipeľ district;
<u>371</u>	(5) Restoration of vegetation in Czechoslovak territory;
<u>10,660*</u>	

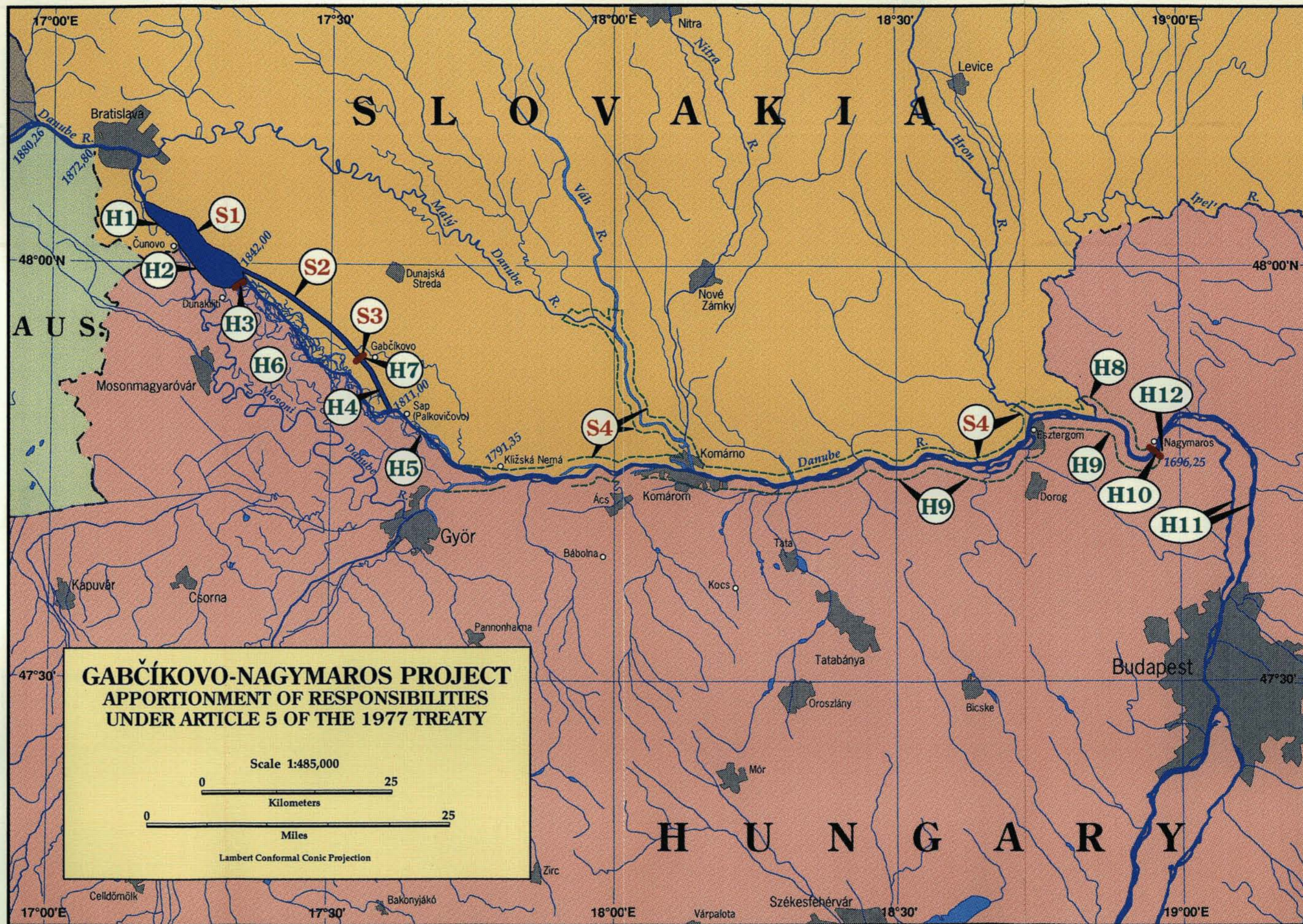
Amount budgeted
(in millions of
CS Crowns)

(b) Hungarian responsibility:

376	(1) The Dunakiliti-Hrušov head-water installations on the right bank, in Czechoslovak territory, including the connecting weir and the diversionary weir;
396	(2) The Dunakiliti-Hrušov head-water installations on the right bank, in Hungarian territory;
1,625	(3) The Dunakiliti dam, in Hungarian territory;
1,864	(4) The tail-water canal of the by-pass canal, in Czechoslovak territory;
808	(5) Deepening of the bed of the Danube below Palkovičovo (Sap), in Hungarian and Czechoslovak territory;
281	(6) Improvement of the old bed of the Danube, in Hungarian and Czechoslovak territory;
55	(7) Operational equipment of the Gabčíkovo system of locks (transport equipment, maintenance machinery), in Czechoslovak territory;
170	(8) The flood-control works of the Nagymaros head-water installations in the lower Ipeľ district, in Czechoslovak territory;
988	(9) The flood-control works of the Nagymaros head-water installations, in Hungarian territory;
3,250	(10) The Nagymaros series of locks, in Hungarian territory;
348	(11) Deepening of the tail-water bed below the Nagymaros system of locks, in Hungarian territory;
41	(12) Operational equipment of the Nagymaros system of locks (transport equipment, maintenance machinery), in Hungarian territory;
<u>281</u>	(13) Restoration of vegetation in Hungarian territory.

10,557*

* The parties' obligations amounted to CSK 10,660 million and CSK 10,537 million respectively.
These totals included various other minor works not included in Article 5 of the 1977 Treaty.



Specially prepared for presentation to the International Court of Justice.

2.73 Article 5 provides for the apportionment of the costs of the joint investment and the necessary construction works. Such costs were to be borne equally - Article 5 (1). The division of the construction works was obviously more complicated. The guiding principle was that each party would be responsible for the construction of those works situated on its territory. However, as 63% of the envisaged works were to be on Czechoslovak territory, it was necessary that Hungary be responsible for some construction in Czechoslovakia in order to allow for an equal apportionment. The resulting apportionment, as provided for in Article 5(5), is shown by means of Illus. No. 28. Detailed costing of this work was to be carried out in the Joint Contractual Plan and the settlement of any difference was to be in the form of additional labour and supplies by the relevant party (Article 5(6)). Any additional costs were not to be apportioned except in the case of damage arising from unavoidable circumstances, unforeseeable geological conditions, or mutually agreed modifications adopted in an update of the Joint Contractual Plan.

2.74 The basic timescale for the implementation of the Project was given in Article 4(4), which provided for the putting into service of the hydroelectric power stations in the period 1986 - 1990. A more detailed breakdown of this schedule was provided in the 1977 Mutual Assistance Agreement, signed by the parties on the same day as the 1977 Treaty⁵¹. Article 1(1) of the 1977 Mutual Assistance Agreement provided as follows:

"The Contracting parties have agreed to realize the Gabčíkovo - Nagymaros System ... according to the following structure:

The beginning of preparatory works 1978
The hydro power station Gabčíkovo
- Putting into operation the first generator unit 1986
- Putting into operation the eighth generator unit 1989
The hydroelectric power plant Nagymaros
- Putting into operation the first generator unit 1989
- Putting into operation the sixth generator unit 1990⁵²."

2.75 It will be seen in Chapter III below that this timescale was subjected to further modification at the request of Hungary. The 1977 Mutual Assistance Agreement also provided for a re-allocation of the construction works as apportioned in Article 5(5) of the 1977 Treaty. Czechoslovakia was to carry out some

⁵¹ Annex 5.

⁵² Portions of text indented for purposes of clarity.

of the works on the Dunakiliti weir and the tailwater section of the bypass canal, whilst Hungary was to carry out additional works near the confluence of the canal and the Danube. In all, this meant that Czechoslovakia was to bear an additional expense of 276 million Czechoslovak Crowns, which was to be compensated by the right to a greater share of the power produced at Gabčíkovo during the years 1986 - 1988⁵³.

SECTION 3. The G/N System Provided the Solutions to the Problems Identified by the Parties

2.76 The G/N System was intended to be of mutual and general benefit to the parties in terms of the efficient management and sustainable development of the Danube's water resources. Given that 25 years of detailed research preceded the signature of the 1977 Treaty, it should not be surprising that the parties were, in fact, correct in their belief that the System would be beneficial. It should first be remembered that the problems in this section of the Danube were largely caused by incoherent attempts to improve navigation dating back at least one century. As the EC Working Group of Independent Experts noted in November 1992, the removal of navigation from the section of the Danube upstream of Sap (Palkovičovo) actually created a unique opportunity to re-establish a more natural environment:

"In the past, the measures taken for the navigation constrained the possibilities for the development of the Danube and the floodplain area. Assuming the navigation will no longer use the main river over a length of 40 km a unique situation has arisen. Initiated by technical measures the river and the floodplain can develop more naturally"⁵⁴.

2.77 Demands on the river in terms of navigation had led to the radical alteration of the Danube from a system of meanders to a single, straight channel, leading in turn to severe flooding, erosion and other environmental problems. Small local floods that do not exceed the area of the floodplain woodlands may be of benefit to the ecosystem, but major inundations such as those of 1954 and 1965 are catastrophic, whether in terms of the environment or damage to persons, livestock and property. And,

⁵³ Article 3 of the 1977 Mutual Assistance Agreement provided that Hungary should compensate Czechoslovakia by means of a total of 848 GWh produced at Gabčíkovo. A further allowance was made for the fact that Czechoslovakia would be committing its investment at an earlier date. Therefore, the allocation in GWh for the period 1986 -1989 was for a total of 1022.5 GWh in the favour of Czechoslovakia to be staged as follows:

	1986	1987	1988	1989
Czechoslovakia	199	1,513	1,523	1,340
Hungary	0	100	1,090	1,340

⁵⁴ EC Working Group Report of 23 November 1992, Annex 12, p. 58 (emphasis added).

although the prime aim of the various modifications to the river's course had been to simplify navigation, the Bratislava-Budapest section had nonetheless remained the most difficult section of the Danube to navigate and was only fully navigable for less than two-thirds of the year. The river flowed faster because its route was more direct, but no benefit was reaped from this flow in terms of energy production and all that happened was that the Danube cut its way into the terrain, lowering the ground water level in the adjacent countryside.

2.78 The purpose of this Section is to examine the extent to which such problems were solved within the G/N Project and, in addition, the extent to which the modification of the Danube effected by the G/N System could engender other problems requiring solutions. Thus, this Section explains the beneficial impact of the Project in terms of flood control, navigation, energy production and other areas but also examines fears that the System might have a detrimental impact on water levels or water quality with their associated impacts on the environment. Reference is made, where possible, to independent opinions because, in the past, Hungary has sought to devalue the research of both Czechoslovak and Hungarian institutions and to portray even its own scientists and engineers as the voiceless servants of the former regime. The statements contained in the Bechtel and HQI reports, for example, show this portrayal to be wholly inaccurate. Slovakia will try to refer to them and to other independent reports as often as possible for they provide strong, impartial evidence of the beneficial nature of the G/N System.

A. The Existing Problems

Flooding

2.79 Flood control was one of the principal concerns of the parties in the conclusion of the 1977 Treaty - Article 13 specifically provides for the co-ordinated handling of flood conditions and the discharge of high waters through the G/N System. The Danube already has an extensive system of dykes to prevent flooding. But such dykes alone have not proved in the past to be an effective means of flood control and the region remained permanently endangered by inundation in spite of the existence of 1,300 km of drainage channels and associated pumping stations⁵⁵.

⁵⁵ See, paras. 1.21 - 1.34, above.

2.80 Flood control would be achieved by the G/N System because the Danube's waters would for the first time be carefully managed. In the Gabčíkovo section the flood would be divided between the bypass canal, the Danube riverbed and the side arm system, thus allowing some dissipation of flood waters in the Danube and its branches instead of the mere channelling of the flood downstream to the next problem area. In addition, appropriate safety margins had been incorporated in the design so that water levels could always remain comfortably below the retaining levels of the various constructions. Thus, for example, the sides of the reservoir were to be 2.5m above the level of water during normal operation conditions when flows were at 4,000 m³/s and the bypass canal allows for a 2.0 m margin.

2.81 Upstream of Sap (Palkovičovo), the System was to handle the 10,000 year flood, that is a flood, the likelihood of occurrence of which is 0.01%. This compared very favourably with the existing structures which, at the time of the 1965 flood, were only capable of handling the 100 year flood. Downstream, the existing dykes were to be reconstructed with particular attention being given to the problem of the underwater erosion of the foundations of these structures. This would enable protection against the 1,000 year flood (the likelihood of which is 0.1%). In any event, it is clear that the designed level of flood protection was to be, once more, in accordance with or even superior to international standards. These points are confirmed in the HQI report by means of its conclusion to a detailed study of the System's constructions:

"La revue des infrastructures de retenue présentée plus haut, permet de constater qu'à l'état actuel le projet de Gabčíkovo offre déjà une protection accrue contre les crues. En exploitation, bien que ces ouvrages aient été conçus pour la crue millénaire, la revanche prévue devrait permettre, moyennant certaines vérifications ou ajustements mineurs, de se protéger des crues plus élevées de l'ordre du décimillénaire en accord avec le dimensionnement des ouvrages hydrauliques. La protection contre les crues exceptionnelles est ainsi en accord avec les règles généralement utilisées pour des évacuateurs de crue. Le projet assurera donc un niveau de protection nettement amélioré vis-à-vis de la période avant 1965, niveau que l'on devra s'efforcer de conserver lors des modifications éventuelles, en particulier lors de l'aménagement de l'ancien lit du Danube envisagé dans les travaux de mitigation⁵⁶."

Translation:

"The review of the dyke structures given above leads to the conclusion that in its actual state the Gabčíkovo Project already offers an increased

⁵⁶ HQI report, *op. cit.*, p. 77 (emphasis added).

protection against flooding. In operation, although the structures have been designed for the 1,000 year flood, taking into account certain verifications and minor adjustments, the safety margin allowed should entail protection against more severe floods of the order of the 10,000 year flood, in accord with the dimensions of the hydraulic structures. The protection against exceptional floods thus meets with the generally applicable regulations for flood control works. The Project will thus assure a level of flood protection greatly superior to that of the period before 1965, a level which one must endeavour to maintain at the time of possible modifications, particular at the time of the improvement of the old Danube riverbed envisaged in the mitigation works."

Navigation

2.82 One of the main objectives of the G/N Project was to improve the navigation along what was the only remaining difficult stretch of the Danube. Such difficulty was primarily in terms of the restricted width of the navigation channel and the insufficient water depth, which meant that the Bratislava - Budapest sector was only useable subject to severe restrictions for around 120 days a year. Moreover, the maintenance costs of this section were very significantly higher than in any other section of the Danube, whilst operation costs of navigation were high due to the fact that barges could only be partially loaded. The solution to the navigation problems had to comply with the required minimum waterway width of 100 - 180 m (depending on the individual stretch of river) and water depth of 3.5 m in impounded sections, established by the Danube Commission. The parties to the 1977 Treaty had expressly agreed to this by means of Article 18(1). This compliance was to be achieved by the bypass canal, the Gabčíkovo system of locks, the sections of impounded water and the dredged sections of riverbed both downstream of Sap (Palkovičovo) and Nagymaros. As a result, available navigation time would be increased to 330 days per year and nighttime navigation would be possible on a permanent basis due to the reduction of obstacles. A 100% increase in ship traffic on the river could be handled without problem and such an increase has been predicted within ten years⁵⁷.

2.83 These benefits would to a degree accrue to the Parties. Each would receive greater revenue in terms of the greater through traffic, and the increased availability of cheap transport would be of obvious benefit to industry located in Slovakia or Hungary. Such benefits would also be of obvious importance to all Central European countries, which would benefit not merely economically from the cheap transport provided by an easily navigable Rhine-Main-Danube system, but also in environmental

⁵⁷ Bechtel report, op. cit., p. 1-18.

terms due especially to reduced road haulage. These important benefits were stressed in a resolution passed on 16 February 1990, by Union Ouest-Européenne des Chambres de Commerce et d'Industrie des régions rhénane, rhonadienne et danubienne, requiring inter alia the completion of the G/N Project:

"Au cours de sa séance du 16 février 1990 au Luxembourg, l'Union Ouest-Européenne des Chambres de Commerce et d'Industrie des régions rhénane, rhonadienne et danubienne, dont font partie 90 chambres de 7 pays, a exigé ... la reprise des travaux de construction du projet commun tchécoslovaque-hongrois Gabčíkovo-Nagymaros. Fin 1992 le canal Main-Danube sera mis en exploitation. De cette façon sera réalisé le trafic ininterrompu entre le Main et la région danubienne... L'Union exprime ses regrets [au sujet de la non-réalisation], d'autant plus qu'une grande artère navigable, celle de la liaison Rhin-Main-Danube, pourrait jouer un rôle décisif dans le problème de l'ouverture vers une coopération économique plus intensive entre les états membres du CAEM et ceux de la Communauté européenne... Qui plus est, le transport par voie navigable est le plus avantageux du point de vue de l'écologie. Une telle voie pourrait contribuer d'une façon importante au déchargement du trafic routier en Europe. L'infrastructure des voies de transport des états danubiens n'est encore développée qu'en partie et quant au réseau des états rhénans il se trouve surchargé⁵⁸."

Translation:

"During its session of 16 February 1990 held at Luxembourg, the West-European Union of the Chambers of Commerce and Industry of the Rhine, Rhone, and Danube Regions, which comprises 90 chambers from 7 countries, has requested... the continuation of construction works relating to the joint Czechoslovak-Hungarian project, Gabčíkovo-Nagymaros. At the end of 1992, the Main-Danube canal will be put into operation. Thus traffic may run without interruption between the Main and the Danube region... The Union expresses its regrets [with regard to the non-realisation of works] more especially as a great navigable artery, that is the Rhine-Main-Danube link, would be able to play a decisive role in relation to the problem of the opening towards a more intensive economic cooperation between Member States of the CMEA and of the European Communities... What is more, transport by waterway is the most advantageous from an ecological viewpoint. Such a waterway could contribute in an important way to the lessening of road traffic in Europe. The land transport infrastructure of the Danube States is still only partially developed whilst the networks of the Rhine States are overburdened."

Energy Production

2.84 It has already been seen in Chapter I above that the majority of the countries on the Danube have decided to make use of its waters in hydroelectric power production. Both Czechoslovakia and Hungary relied to a large extent on imported gas and nuclear fuel for the production of electricity and had failed to make use of the constant and emission free flow of the Danube. Therefore they had a need for increased electricity output, and the G/N System, as designed, was capable of supplying 3,675 GWh on an annual basis. Although this would have been no more than a portion of each country's total power production, it nonetheless presented a clean alternative to the combustion of the thermal plant equivalent of 4.3 million tons of coal or 1 million tons of oil and provided an opportunity for the closing down of old fossil fuel plants or the modification of nuclear power plants. The Bechtel report concludes its section on this issue:

"The GNB provides an inexhaustible, clean source of energy, does not require imported goods, and relies on a new and as yet unused resource⁵⁹."

By contrast, the burning of the coal equivalent to produce the same power produces 1.25 million tonnes of ashes, consumes 1.58 million tonnes of oxygen (for the reproduction of which 458,000 hectares of coniferous forest is required) and emits 141,000 tonnes of sulphur into the atmosphere along with many other poisonous gases.

Erosion of Riverbed

2.85 The erosion of the Danube riverbed, caused by reduced levels of sediment and the increased velocity of the river, has meant that prior to 1992 the river was effectively sinking in the Bratislava to Sap (Palkovičovo) section - in recent years by as much as 20 cm per year. As depicted in Illus. No. 18 (at paragraph 1.43 above), water levels at Bratislava had sunk by around 2 m, creating obvious access problems to the port. In the area of the town bridge, as little as 1 m of gravel riverbed remained, under which there was only soft sand and silt. Once this remaining 1 m layer of natural protection was eroded, large holes would develop in the sands, creating dangerous rapids and making navigation hazardous, in addition to undermining the foundations of the bridges and other structures bordering the river. Even more importantly, such erosion had the subsequent effect of lowering the local water table. Downstream, this had led to

⁵⁹ Bechtel report, op. cit., p. 2-87. The Bechtel report refers to the G/N Project as "GNB".

the drying out of the meadows and forests in the adjacent terrain and side arm areas. Thus, during the growing season drought conditions were experienced in two out of every three years because ground water did not reach the topsoil layer, which was necessary so as to enable the roots of plants and trees to receive the water by means of capillary action.

2.86 Riverbed erosion therefore constituted a severe environmental problem. As a result of the G/N System this would be eliminated. Upstream of Dunakiliti the river velocity would be reduced and erosion would cease, whereas in the old riverbed the proposed underwater weirs, would prevent further cutting into the terrain. By means of the dredging works in the remaining stretches of river, a stable riverbed and water level would be achieved.

The Mosoni Danube and the Side Arms

2.87 It must be stressed that, due to the erosion of the Danube riverbed, the Mosoni Danube (which lies solely on Hungarian territory) did not, prior to the inception of the G/N Project, receive any flow from the Danube for 300 days in each year. As explained above, this was due to the fact that the water level in the Danube only reached the level of the intake into the Mosoni Danube level at higher flows. This led to poor water quality in certain areas. The parties therefore planned to resolve this deficiency by dedicating a minimum of 20 m³/s to the Mosoni Danube by means of an intake from the Dunakiliti-Hrušov reservoir. This flow would not only be constant but would be substantially higher than the previous average flow from the Danube. The side arm system, which had become stagnant in places, was also planned to receive greatly increased flows, principally from outlets constructed in the bypass canal and in the Dunakiliti weir, but also from the reservoir's seepage canals. The beneficial nature of these greater flows is clear. The Bechtel report notes:

"Water quality in the side arms will be improved. The currently stagnated side arms waters will be replaced by the steady 50 m³/s or more flow released from the upstream reservoir.

The water quality in the Mosoni will be equal to or better than the past water quality ...⁶⁰."

⁶⁰ Bechtel report, *op. cit.*, p. 2-8.

This benefit would be enjoyed both in terms of the local environment and in human terms. The water received from the seepage canals would be clean, having undergone a natural filtration process. It would lead to an extended and more natural growth of riverbed vegetation, better conditions for local wildlife (land based or aquatic), not to say the increased beauty of the immediate area and its greater suitability for recreational activities.

B. The Impact of the G/N System Would Not Be to Create a New Series of Insoluble Problems

2.88 In its 1992 Declaration as well as elsewhere, Hungary has made a series of unsubstantiated allegations that the G/N Project would result in something approaching an environmental catastrophe. The purpose of this Section is not to deal with such allegations in detail. The aim is rather to show that the Project's impact on the immediate environment was properly of concern to both parties and that this concern translated itself into both the desire for independent confirmation as to the extent of environmental problems and the undertaking of a series of mitigation measures⁶¹. It was this concern that led to the commissioning of the HQI and Bechtel reports - reports that, quite simply, did not support Hungary's claim prediction that the G/N System would have a disastrous impact on the environment.

2.89 Four main areas of concern will be examined, being the impact of the G/N System on: first, surface water *i.e.*, the waters of the reservoirs, the bypass canal, the Danube, its branches and side arms; second, ground water, which includes of course drinking water supplies; third, the natural environment; and, fourth, the cultivated environment, that is land devoted to agriculture or forestry. All of these areas are interrelated and, in one sense, each of the last three areas is subsidiary to the principal area of concern, which is surface water. It is the quantity and location of surface water that dictates local ground water levels and, similarly, surface water quality dictates the quality of ground water.

Surface Water

2.90 The importance of the protection of water quality was recognised by the parties to the 1977 Treaty who, by means of Article 15(1), were obliged to ensure "that the quality of the water in the Danube is not impaired as a result of the construction

⁶¹ The Bechtel report notes: "The project has expended substantial efforts to develop data to be used to implement mitigation of project - related environmental impacts." *Ibid.*, p. 1-20.

and operation of the System of Locks". In addition, Article 15(2) provided for the monitoring of water quality. A priority was accorded to these obligations and, indeed, these were restated shortly prior to Hungary's first indication that it would breach the 1977 Treaty. At the 23rd session of the Czechoslovak-Hungarian Committee for Economic, Scientific and Technical Cooperation (the "ESTC Committee"), held in April 1989, it was accepted that it was to be a basic requirement of the implementation of the G/N System that there should be no deterioration of the water quality in the Danube⁶². In the light of such a joint resolve it is not surprising that such a large amount of research was devoted to hydrological issues. In terms of such research, the Bechtel report concludes:

"GNB surface and ground water conditions have been thoroughly studied by VIZITERV and other experts⁶³."

This research has led to the conclusions summarised below.

2.91 Fast flowing bodies of water, such as the Danube in its upper reaches, tend to have a naturally high water quality because the rapid movement prevents algae growth and also leads to a high dissolved oxygen content. The main threat to this quality is not caused by the G/N System, but rather by the use of the Danube as a convenient conduit for the disposal of untreated industrial and human waste. The cessation of this practice forms one of the central recommendations of the Bechtel report (which also shows that Hungary is hardly immune to the charge of failing to respect the need for good water quality in the Danube):

"One of the most effective ways of improving the quality of both surface and ground water and its attendant effects on ecological conditions is to clean up the sources of the pollution. It is not the intent of this report to discuss such concerns, but some of the more critical areas of concern are the sewage discharge into the Mosoni at Győr; the leaching of bauxite red muds, and the asbestos cement plant, near Komárom; and the excessive amounts of farm fertilizers seeping into the ground water in the Szigetköz and along the lower reaches of the project⁶⁴."

2.92 The creation of the reservoir and the headwater section of the river upstream of Nagymaros could nonetheless have an effect on surface water quality,

⁶² See, para. 3.14, *et seq.*, below.

⁶³ Bechtel report, *op. cit.*, p. 1-9.

⁶⁴ *Ibid.*, p. 1-19 and 1-20.

although this might be beneficial rather than otherwise. Reservoirs, by slowing down water flows, lead to increased deposition of sediments and therefore the clarification of water in the reservoir. In addition, the increase in water surface area - by about four times in the case of the Dunakiliti-Hrušov reservoir - also increases oxygen absorption and thus the dissolved oxygen content of the water. Finally, the longer retention time allows the breaking down of the organic load in the river. The Bechtel reports states: "These three factors will improve the water quality⁶⁵."

2.93 However, during the summer months the increased water temperature could lead to greater algae production and a resultant drop in dissolved oxygen in the reservoir and therefore its water quality. The Bechtel report proposes two solutions to this problem : increased flows over the Dunakiliti weir during the summer months to reduce the detention periods and the operation of Gabčikovo during this time as a run-of-river plant, *i.e.*, on a constant flow basis, thus also reducing detention time⁶⁶. Both these solutions have been taken into account. Increased flow rates during the growing season were always planned for. Moreover, the flow rate over the Dunakiliti weir being considered in 1990 was 350 m³/s instead of 50 - 200 m³/s as originally envisaged and, as will be seen in Chapter IV below, in October 1989, Czechoslovakia was willing to consider a Project modification to the effect that peak production at the Gabčikovo plant would under certain conditions be modified or postponed.

2.94 A further area of concern was the deposition of heavy metals in the reservoir. Metal such as iron and zinc are not dangerous when they are absorbed by other sediments. But, if anaerobic conditions develop, *i.e.*, when there is no dissolved oxygen at the bottom of the reservoir, such metals can become soluble and thereby pass into ground water supplies which, to a degree, may become contaminated (although the contaminated water does not then pass directly into the greater depths used for fresh water supply). The simplest and best method of eliminating this problem is by eliminating the discharge of heavy metals at the source, for industrial effluent is the major source of heavy metal load in the Danube. Alternatively, sediments containing heavy

⁶⁵ *Ibid.*, p. 2-4.

⁶⁶ *Ibid.*, at p. 2-5. A third solution, incorporated in the Variant "C" reservoir, was to construct underwater directional weirs that kept water flowing. These reduced sedimentation in the navigation channel and, moreover, directed excess sedimentation to the right side of the reservoir where a layer of plastic sheeting prevents the seepage of deposits into the ground water below.

metals can be dredged which, since the build-up of such sediments is a slow process, can be carried out at 3-5 year intervals⁶⁷.

2.95 As mentioned above, it was anticipated that the water quality in the Danube side arms and the Mosoni Danube would improve due to the increased flow. The water quality in the Danube riverbed would also improve due to the aeration effect as the water passes through the Dunakiliti weir. Thus, it appears from the Bechtel report that this weir would have an overall beneficial impact on water quality:

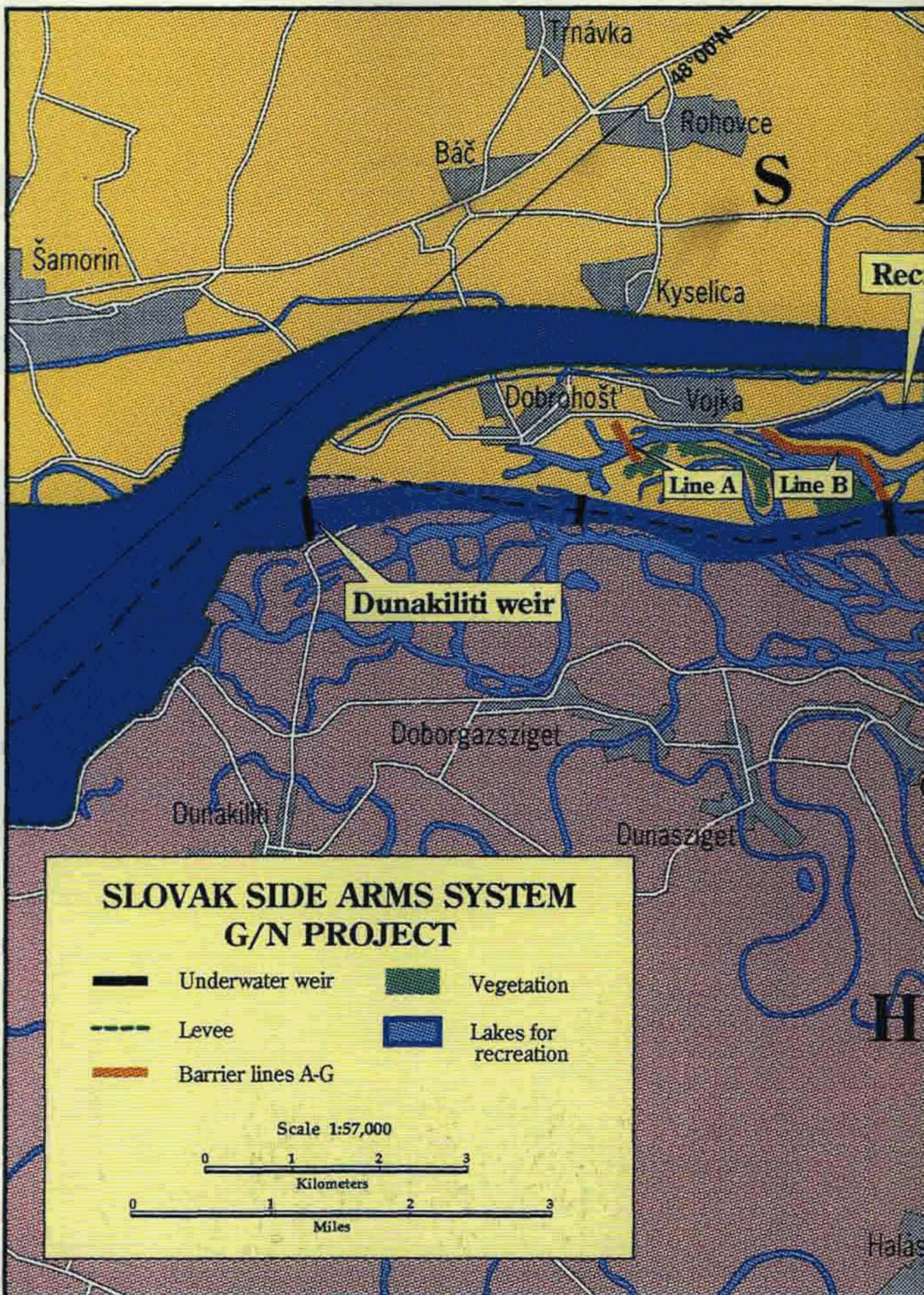
" Water quality. The old Danube river channel will receive flows from the upstream reservoir. As previously discussed, the water quality in the Hrušov-Dunakiliti reservoir will be improved, except for possible seasonal degradation problems. Concerning flows released over the Dunakiliti weir, the water quality will be improved because of the aeration induced when the flow tumbles over the concrete energy dissipation blocks⁶⁸."

2.96 In terms of surface water levels, the reservoir seepage canals would prevent waterlogging in the adjacent terrain and channel the water into the side arms to help maintain the surface water levels in the surrounding regions. The functioning of this recharge system may best be seen by means of Illus. No. 29. On the left bank, seven water impoundment structures (marked as lines A - G on the illustration) were designed to enable water levels to be raised and maintained as desired, forming a descending cascade from Dobrohošť to near Gabčíkovo that would ensure that maximum benefit accrued to the local environment. Similar works were designed on Hungarian territory, the intake structure for this recharge system being part of the Dunakiliti weir. Moreover, Hungary was planned to benefit (and now benefits) exclusively from the additional flow in the Mosoni Danube.

2.97 The quality of water downstream of Dunakiliti would depend to a large extent on the quality of the water leaving the reservoir. However, a substantial impact on the water quality in the downstream section is also the result of pollution coming from the various tributaries, together with the waste waters of communities and industry found especially on the right bank in this region. As with the Dunakiliti weir, a constant flow over the Nagymaros weir would reduce the production of contaminating algae. The flow through the weir would again have an aeration effect but, in general

⁶⁷ Ibid., at p. 2-6.

⁶⁸ Ibid., at p. 2-7 and 2-8.

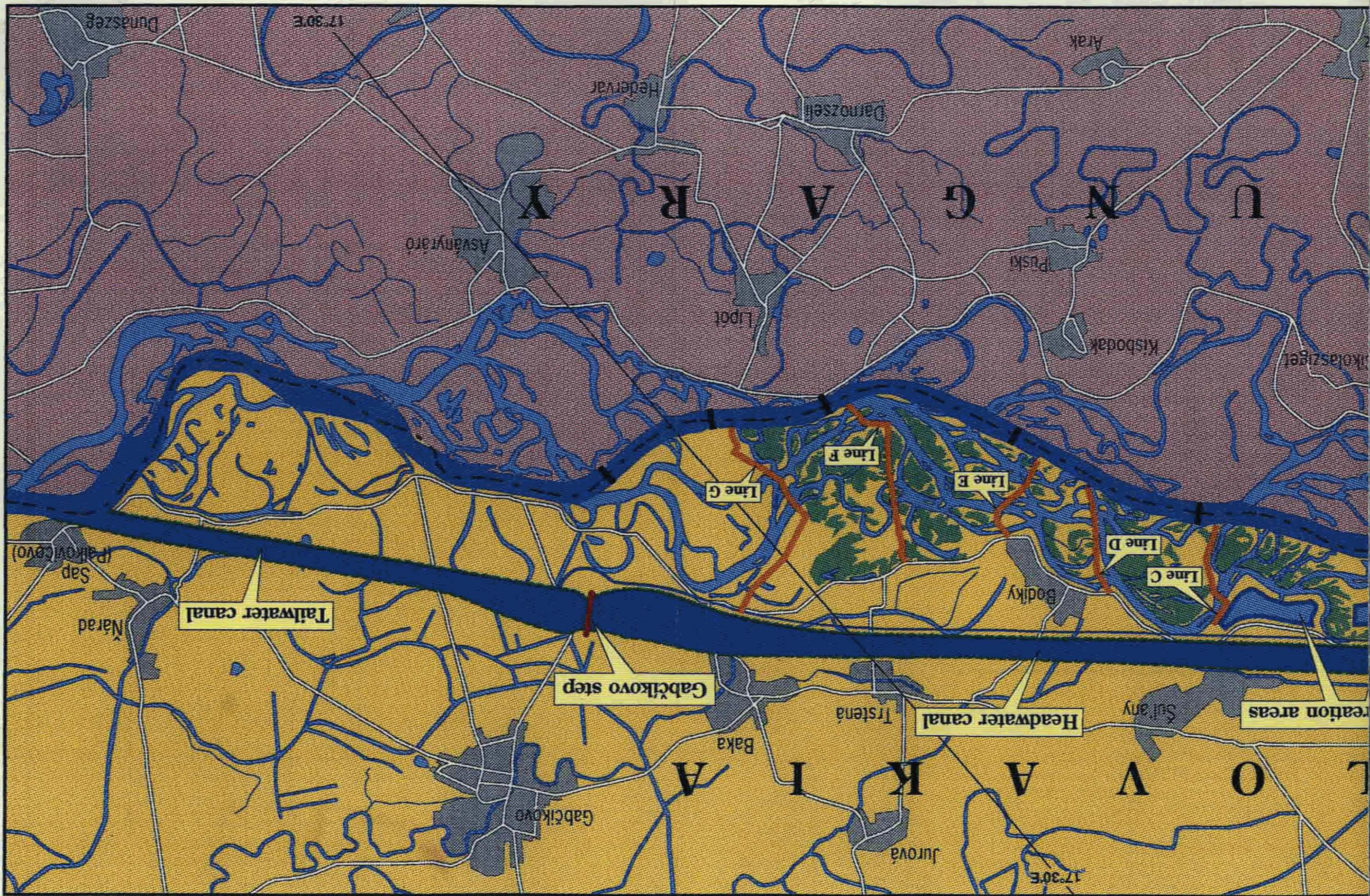


**SLOVAK SIDE ARMS SYSTEM
G/N PROJECT**

-  Underwater weir
-  Levee
-  Barrier lines A-G
-  Vegetation
-  Lakes for recreation

Scale 1:57,000





terms, downstream of Nagymaros the impact of the G/N System on surface water would be minimal. This is confirmed by the Bechtel report:

"Downstream of Nagymaros. The planned operation of the project will not significantly alter the flow characteristics or hydrology of the river downstream of Nagymaros⁶⁹".

2.98 It will be remembered that Article 15(2) required the parties to the 1977 Treaty to monitor the condition of the Danube's waters. This requirement has been fulfilled and a sophisticated monitoring system has been put into place. This surpasses international norms because of the array of environmental parameters sampled. Thus the Bechtel report notes:

"In comparison with U.S. hydropower monitoring systems, the proposed GNB monitoring system is unique because it monitors more parameters than the Columbia River Basin, Ohio River Basin, or Tennessee Valley Authority (TVA). Hydropower facilities on these rivers monitor water quality and/or minimum streamflows for fish and recreation, but do not monitor the array of environmental parameters sampled in the GNB monitoring system. With a few additions, this system will represent a state-of-the-art monitoring program for integrating environmental considerations with operations⁷⁰".

Ground Water

2.99 The issue of the impact of the G/N System on ground water levels and quality has received great attention, both public and expert, in Hungary and Slovakia, as might be expected. Reduced ground water levels could lead to the aridification of certain areas, while any contamination of ground water might also contaminate drinking water supplies. The specific fears of the local population are noted in the HQI report and, indeed, an assessment of the validity of such fears formed one of the central objectives of this report:

"En effet, le projet est construit sur un important aquifère qui fournit l'eau de consommation à une partie importante de la Slovaquie et en particulier à Bratislava. Dans cette région, des événements passés ont rendu la population très sensible aux risques éventuels ou appréhendés de détérioration de la qualité des eaux souterraines. Dans ce contexte, et en sachant que le projet aura un impact indéniable sur la nappe, des craintes

⁶⁹ Ibid., p. 2-18.

⁷⁰ Ibid., p. 1-8.

spécifiques ont été formulées face au projet. C'est afin de répondre à ces craintes que plusieurs études ont été entreprises dans le cadre du projet et c'est aussi dans ce contexte que certains objectifs de la mission d'HQI visent à donner une opinion extérieure et impartiale sur les résultats des études et sur les effets appréhendés du projet⁷¹."

Translation:

"In fact, the Project is constructed above an important aquifer which supplies drinking water to a significant part of Slovakia and, in particular, to Bratislava. In this region, past events have left the populace very sensitive to possible risks or apprehensive of deterioration in the quality of underground waters. In this context, and knowing that the Project would have an undeniable impact on the water table, specific fears have been formulated in face of the Project. It is in order to respond to such fears that several studies have been carried out within the Project framework and it is also within this context that certain objectives of HQI's mission have been aimed at giving an external and impartial opinion on the results of studies and their anticipated effects on the Project."

2.100 In examining here in detail the impact of the Project on ground water levels and quality, the external and impartial opinion referred to in the above citation and later provided by the HQI report is first considered. The HQI report considered only the ground waters located in Slovak territory but, as will be seen later, the Bechtel report also came to the conclusion that fears of the deterioration of ground waters in Hungarian territory were unfounded. The conclusion of the HQI report was as follows:

"Evaluation qualitative de risque de contamination

Dans les sections précédentes, nous avons décrit sommairement les conditions physiques de la nappe de Žitný Ostrov dans la zone du projet de même que la qualité de l'eau et les modes de contamination possibles. Nous avons aussi revu et discuté divers aspects du projet de même que les processus géochimiques susceptibles d'affecter la qualité de l'eau.

Suite à cette analyse sommaire, il nous apparait que les risques de détérioration de la qualité de l'eau sont faibles. Les principaux arguments en faveur de cette opinion sont les suivants.

- l'eau infiltrée du Danube sur de courtes distances est de bonne qualité (voir captages de Bratislava)
- la mobilisation éventuelle des métaux dans les sédiments sera contrecarrée par la baisse de perméabilité des sédiments et l'apport

⁷¹

HQI report, *op. cit.*, p. 19.

- d'eau rapide et massif dans l'aquifère à partir des fouilles au fond du réservoir
- aucune évidence d'hydrocarbures mobiles n'a été décelée [sic] dans la zone du réservoir
 - les nappes alluviales comparables montrent peu de cas de contamination dans ces conditions.

Le seul phénomène susceptible de détériorer la qualité serait la mobilisation du fer et manganèse et cette éventualité peut n'être que lointaine en raison de l'apport rapide d'eau au fond des fouilles d'infiltration. Dans la pire des éventualités, le fer et le manganèse sont faciles à retirer de l'eau et ne posent pas de risque pour la santé ⁷²."

Translation:

"Qualitative evaluation of the risk of contamination.

In the preceding sections, we have described in summary the physical conditions of the Žitný Ostrov water table in the Project zone, as well as the water quality and the possible forms of contamination. We have also reviewed and discussed diverse aspects of the Project and also the geochemical processes which may affect water quality.

As a result of this concise analysis, it appears to us that the risks of a deterioration in water quality are very low. The principal arguments supporting this opinion are as follows:

- the water infiltrated from the Danube over short distances is of good quality (see the water-catchment of Bratislava);
- the possible transfer of metals in the sediments will be countered by the drop in permeability of the sediments and the rapid and massive injection of water into the aquifer through the excavations in the bottom of the reservoir;
- no evidence of mobile hydrocarbons has been detected in the reservoir zone;
- comparable alluvial water tables show few cases of contamination in such conditions.

The only phenomenon susceptible to lead to a deterioration in the water quality would be the mobilisation of iron and manganese and this possibility can only be distant due to the rapid flow of water at the bottom of the infiltration channels. In the worst possible case, iron and manganese are easy to recover from water and do not pose a risk to the health."

2.101 In terms of ground water levels, one of the principle aims of the hydrological studies carried out in the construction period has been to identify means of maintaining the water table in Žitný Ostrov, Szigetköz and the side arm areas. It has already been seen at paragraph 2.87 above that the side arms would receive more water as a result of the G/N System, as would the Mosoni Danube. As the Bechtel report notes, any negative impact in other areas of Szigetköz (and, indeed, Žitný Ostrov) would be reduced due, inter alia, to the water received from the seepage canals:

"These interception channels will transport the reservoir seepage to the Szigetköz side arm channels and will maintain the local ground water near historic levels. No additional mitigation is required⁷³."

This benefit would naturally be felt in the whole of the Szigetköz region. Analog model studies carried out by Hungary have indicated that, due to the artificial recharge plan, the ground water table level could be maintained within 50 cm of the pre-Project level in 80%-90% of the Szigetköz⁷⁴. It must, of course, be remembered that such studies were carried out and evaluated when the planned discharge from Dunakiliti into the Danube riverbed was 50 - 200 m³/s. Given that by mid-1989 the construction of underwater weirs and a discharge of 350 m³/s were envisaged for the Danube riverbed, it could have been expected that the impact on Szigetköz ground water levels would have been minimal. It will be shown in Chapter V below, that this expectation has effectively been confirmed insofar as is possible, bearing in mind the Project's incomplete state.

2.102 The Malý Danube would also receive an increased and constant flow. An average increase in discharge of around 10 m³/s was planned by the parties and would again maintain and indeed increase historic water levels in Žitný Ostrov. This again has been confirmed⁷⁵.

2.103 The effect of ground water levels on the aquifers underlying the Danube basin has also been carefully studied. Important sources of drinking water for the local population are located in the area of the Hrušov-Dunakiliti reservoir and

⁷³ Bechtel report, op. cit., p. 2-15.

⁷⁴ Ibid.

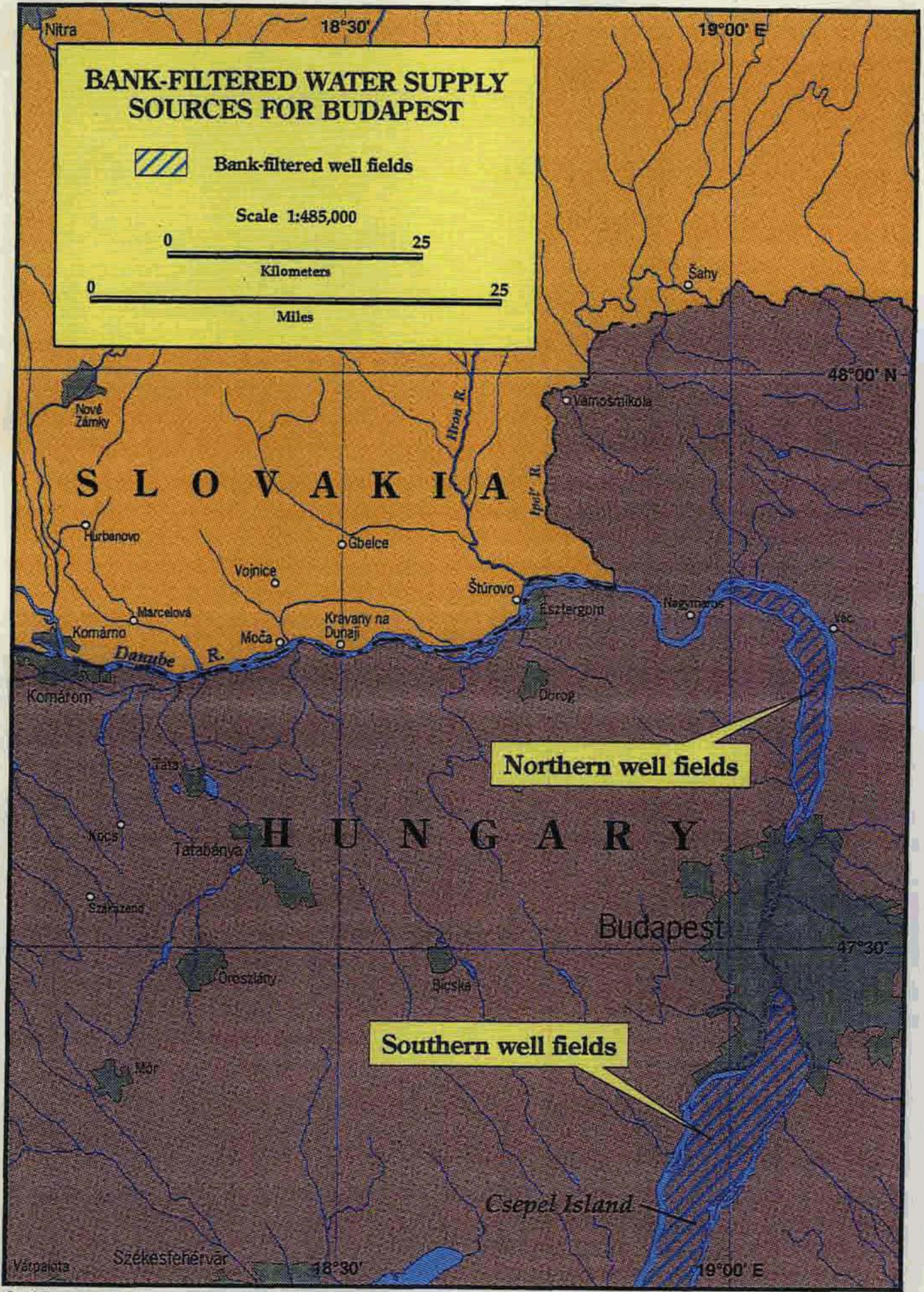
⁷⁵ See, para. 5.52, below.

**GROUND WATER WELL FIELDS
SUPPLYING BRATISLAVA AND
SURROUNDING REGIONS**



Specially prepared for presentation to the International Court of Justice.

ILLUSTRATION NO. 30A



Specially prepared for presentation to the International Court of Justice.

downstream of Nagymaros, supplying Bratislava and Budapest, respectively⁷⁶. These, together with the location of other drinking water and monitoring wells, are mapped on Illus. No. 30(A) and (B). The G/N System would not have a substantial impact on the Bratislava drinking water supplies. The recharge of the supply wells from the area upstream of Dunakiliti would increase, while it would be expected that the downstream recharge would diminish slightly. The overall effect is an equilibrium:

"The net change to the aquifer ground water supply due to the altered recharge regime will be minimal - possibly increasing or decreasing slightly⁷⁷."

2.104 A part of the supply of drinking water to Budapest is taken from bank-filter water supply wells, located downstream of Nagymaros, that are dug in permeable and shallow gravel close to the Danube (Illus. No. 30(B)). There is a link between the quality of the waters in these wells and the water quality in the Danube because the wells are recharged indirectly from the Danube. But, neither the Bechtel report nor the HQI report predicts a decline in this quality. Indeed, the Bechtel report points to the possibility of a slight improvement and, in any event, predicts that the Project will not have a measurable impact on the performance of these wells:

"The planned operation of the project will not significantly alter the flow characteristics or hydrology of the river downstream of Nagymaros ...

Because the project will not alter the flow of the river in this area, the project can not have a measurable impact on the performance of the wells. From a water quality standpoint, as discussed in the section on surface water, the project operation might result in an improved water quality except for a few months during the summer⁷⁸."

2.105 Nonetheless, Hungary's 1992 Declaration gives the clearest impression on its very first page that the G/N Project seriously threatens the quality of drinking water supplied to the population of Budapest, which exceeds 2,000,000 people⁷⁹. A more balanced explanation of the quality and sources of harm to Budapest's drinking water is to be found in a report on the "State of the Hungarian Environment"

⁷⁶ There are, of course, wells located along the Danube between these two sectors of water supply. The impact of the Project on such wells will be beneficial, if anything. See, Bechtel report, op. cit., p. 2-17.

⁷⁷ Ibid., p. 2-15.

⁷⁸ Ibid., p. 2-18 (emphasis added).

⁷⁹ Annex 17.

prepared by the Hungarian Academy of Sciences, the Ministry for Environment and Water Management and the Central Statistical Office in 1990⁸⁰. This report brings out the following points:

- First, the water supply sources for Budapest are from well fields to the north and south of the city, the further of these northern well fields from Budapest lying over 50 km downstream of the aquifers that underly the region of the G/N Project, and in any event downstream of Nagymaros (Illus. No. 30(B));

- Second, a test of the water in 103 wells in the northern and southern fields supplying Budapest shows that water drawn from the southern fields was of substantially poorer quality than that drawn from the fields north (upstream) of Budapest: 8.7% of the well water in the northern fields was of consistently poor quality whereas the figure for water from the southern fields was up to 47%;

- Third, the quality of well water south of Budapest has deteriorated drastically since 1963 largely due to the "untreated wastewater discharged from sewer outlets in Budapest", a situation not expected to improve for at least 5-10 years from the date of the report.

2.106 Thus, the poor quality of Budapest's water is largely the result of pollution from Budapest. The wells in the region of the G/N Project supply water mainly to Bratislava and the regions surrounding the Project, and are upstream of Budapest. The location of these wells appears on Illus. No. 30(A). The quality of the drinking water from these wells is generally good - and it has not deteriorated since Variant "C" has been put into operation. This is no less true for the ground water in the region on Hungarian territory. As was predicted by the Bechtel and HQI reports and as has been confirmed by the evidence collated by the EC Working Group of Independent Experts, there has been no deterioration of the water in the Danube as a result of the G/N Project:

"In general no ground water quality changes can be identified after the damming of the Danube According to the Hungarian Data Report (ref/3/) no significant changes have been detected in the ground water quality⁸¹."

⁸⁰ Annex 32.

⁸¹ EC Working Group report of 2 November 1993, Annex 19, p.40 (emphasis added).

2.107 By way of conclusion, it is obvious that any dam project will have an effect on ground waters. This was well-known to the designers of the G/N System, who therefore incorporated a comprehensive system of measures aimed at monitoring and, where necessary, at correcting this effect in order to optimise the impact of the Project on ground water conditions. Put simply, the solutions envisaged to resolve problems from these changes were wholly sufficient:

"The extensive mitigation measures planned by the project to control the impacts on ground water conditions appear adequate⁸²."

The Natural Environment

2.108 The multiple studies carried out prior to the 1977 Treaty led the parties to consider that the proposed development of the Danube was sustainable from an environmental point of view. Active steps had been taken to safeguard the environment - for example, the bypass canal had been located to the north of the side arm system so that this ecosystem could be preserved. In terms of the actual drafting of the 1977 Treaty, environmental impact remained a major concern of the parties. The development was to be carried out alongside an obligation to protect the environment, for Article 19 provided:

"The Contracting Parties shall, through the means specified in the joint contractual plan, ensure compliance with the obligations for the protection of nature arising in connection with the construction and operation of the System of Locks."

2.109 It is self evident that the implementation of the 1977 Treaty involved a change in land usage and a consequent effect on the environment in the areas of construction. Indeed it may be said that the major impact of the G/N Project on the environment of the Danube basin had already been felt by 1989. In terms of change of use of the local terrain it is undeniable that the environmental impact of the construction had been high. For example, the building of the bypass canal and the Gabčíkovo step had meant to the Slovak people the loss of over 3,000 hectares of forest. Such a loss cannot be reversed. However, the change in land use was a conscious decision taken in the light of the positive development and environmental benefits to be offered by the Project. Similarly, the creation of the Dunakiliti-Hrušov reservoir required the clearing of 1,100 hectares of managed poplar forest and at least 200 hectares of natural vegetation. But these losses must be kept in perspective. The serious problems in this section of the

⁸²

Bechtel Report, *op. cit.*, p. I-10.

Danube necessitated adequate solutions. In order to alleviate the risk of flooding in Bratislava, the other option would have been to create an inundation strip 250 m wide on both sides of the Danube. This would have led to the loss of some 1,500 hectares of hardwood forest and would not have provided a permanent solution to the danger of severe flooding in any event.

2.110 Bearing in mind the losses arising from the change in land use, it is natural that the parties should have wished to keep any further adverse effects to the absolute minimum. But, before examining the steps taken to restrict these effects, it is essential to see the ecological risks in perspective, that is to understand the existing land use of this area of the Danube. Žitný Ostrov and Szigetköz are not nature reserves. Of Szigetköz's 40,100 hectares, some 84% are devoted to agricultural and managed forestry use. The remaining 16% (approximately 6,500 hectares) is made up of industrial land, residential land and by natural habitat.

2.111 Placing the G/N System in its historical perspective, it is quite clear that the major "environmental impact" has already been felt⁸³. Žitný Ostrov and Szigetköz are heavily cultivated areas and are significantly populated. It may be remembered that one of the major sources of pollution of the Danube is agricultural fertiliser from Szigetköz. This is not to say that remaining areas of natural habitat are not significant - quite the reverse. The location of these areas and the positive steps required to maintain their natural condition were well known to the Project's design engineers. The areas are small, they are manageable and will actually benefit from the Project, which will not only guarantee the required water flows in some areas but will also halt the damaging sinking of the Danube riverbed that was drying out the region's natural meadow and forest land.

2.112 The vegetation in the Danubian floodplain consists of approximately 80% artificial (i.e., managed) poplar trees. The remaining areas consist of willow thicket, willow-poplar gallery forest and ash-oak-elm gallery forest. It was anticipated that the floodplain would be affected by the change of water level in the Danube riverbed. With a discharge reduced to 50 - 200 m³/s unaccompanied by underwater weirs, it was calculated that a 250-300 m wide zone of floodplain vegetation would be subject to aridification from the Dunakiliti weir to the backwater confluence with the bypass canal. This would result in the areas of willow and willow-poplar being replaced by vegetation adapted to drier soils such as oak-steppe.

⁸³ See, also, the HQI report, at para. 2.116, below.

2.113 The principal means of mitigating this loss was already envisaged in 1989 - to increase the flow into the Danube riverbed to 350 m³/s. According to the Bechtel report:

"Three types of mitigation are possible for this impact on natural vegetation. First and preferably, the impact could be reduced by increasing the flow released continuously to the main channel of the Danube⁸⁴."

As a result of the proposed increased flows, aridification effects would be minimal especially if this were accompanied by underwater weirs to raise the water levels further. The remaining two mitigations referred to in the Bechtel report depended solely on the goodwill and intent of Hungary. They comprise the establishment of a revegetation plan in the Szigetköz and the implementation of the unfunded plan to expand the remnants of native forest along the Mosoni Danube. Far from being adversely affected by the Project, such forest would anyway benefit from the new, steady flow of 20 m³/s into the Mosoni Danube. Similarly, the side arm area would not be threatened due to the artificial recharge plan:

"Natural vegetation occurring in the vicinity of the Danube side channel/oxbows is not expected to experience significant adverse impacts⁸⁵."

This applies equally to both the Hungarian and the Slovak side arm systems. In fact, the channelling of constant water flow into these areas would bring an end to the process of stagnification, would be of net benefit to the environment and would encourage a return to a more natural ecosystem.

2.114 Downstream from Sap (Palkovičovo), large settlements and industrial areas have developed along the Danube with a resultant reduction in natural vegetation. Some further vegetation would be lost due to the construction of flood protection dykes, and the increased water level in the Danube of, for example, 2 m at Komárno would result in some changes in species type. In low-lying areas, increase in water level would be controlled by dykes, seepage canals and pumping stations, reducing the impact on the vegetation. Where the Danube's banks and surrounding terrain dominate the river, there

⁸⁴ Bechtel report, *op. cit.*, p. 2-23.

⁸⁵ *Ibid.*, p. 2-24.

would be some increase in local ground water levels, which would lead towards the colonisation of more hydrophilic species.

2.115 In the region just above Nagymaros there is a higher concentration of natural vegetation. The effect of the Project on this vegetation would again be some reduction due to construction works and change to more hydrophilic species where water level increases are planned. The most effective mitigation here would be revegetation programs. This has been considered by the parties. Downstream of Nagymaros there would be no significant impact either on natural vegetation or local wildlife⁸⁶.

Agriculture and Forestry

2.116 Both Szigetköz and Žitný Ostrov are highly fertile and cultivated tracts of land:

"En sus de ce qui a été dit en détail plus haut, concernant le milieu naturel, il faut ajouter que ce milieu traversé par le Danube est mixte et para-urbain. On y pratique l'agriculture de façon intensive de même que l'exploitation forestière. La région comprise entre le Danube (Dunaj), le Petit Danube (Malý Dunaj) et le Váh se dénomme "Ile de Blé" (Žitný Ostrov), et on considère ses sols à l'échelle nationale comme étant les plus fertiles pour des fins agricoles.

Bien que l'urbanisation ne soit extensive qu'à Bratislava, on retrouve une quinzaine de villes et villages dans la portion tchécoslovaque des rives du Danube, pour une population de plus d'un demi-million d'habitants, en incluant la ville de Bratislava⁸⁷."

Translation:

"In addition to what has been said in detail above concerning the natural environment, it must be added that the environment crossed by the Danube is mixed and partly urban. It is an area of intensive farming and exploitation of forestry. The region comprised between the Danube, the Malý Danube and the Váh is called "Wheat Island" and in national terms its lands are considered as the most fertile for agriculture.

⁸⁶ Bechtel report, op. cit., p. 2-49.

⁸⁷ HQI report, op. cit., p. 85.

Although the urbanisation is not intensive save for at Bratislava, there are fifteen towns and villages in the Czechoslovak side of the Danube's banks, giving a population of more than half a million including Bratislava."

The Project would undernably have had an effect on the productivity of these important regions if no plans had been made to maintain water levels: without the dedication of new flows, further productivity would have been reduced by one third⁸⁸. But due to the artificial recharge system, impacts on agriculture and forestry would be insignificant or beneficial

2.117 Losses due to floods, previously suffered in terms of both forestry and agricultural production, would be reduced and agricultural land, especially, would benefit from the reduction of areas subject to waterlogging. Thus, the HQI report states:

"Le rabattement de la nappe à l'aval du projet pourra être bénéfique pour l'agriculture dans cette région où le drainage est requis⁸⁹".

Translation:

"The decrease in the watertable in the downstream section of the Project may benefit agriculture in this region where drainage is required."

The Bechtel report predicts a net benefit to agriculture and an opportunity for increased crops production. Its general conclusions are as follows:

"The project will provide several benefits to agricultural and forestry production in the Szigetköz with installation of the artificial recharge system. These benefits include increases in arable land with more control of ground water levels and floods, as well as a more stabilized water supply for irrigation⁹⁰."

C. Conclusion

2.118 Slovakia has shown above, first, that the G/N Project constitutes a very thoroughly researched and environmentally sustainable development of this section of the Danube and, second, that it was wholly unrealistic for Hungary to claim in 1989-

⁸⁸ Bechtel report, *op. cit.*, p.2-52. It is estimated, for example, that only 300 of the Szigetköz's 7,800 hectares of forest would be adversely affected, which impact could be mitigated by a move away from poplar plantations others species.

⁸⁹ HQI report, *op. cit.*, p. 36.

⁹⁰ Bechtel report, *op. cit.*, p. 1-13.

1990 that its withdrawal from the Project was due to newly discovered environmental problems. Environmental impacts had been carefully and extensively studied by both parties to the 1977 Treaty both before and after the conclusion of the Treaty. It had been found that the environment would benefit to a high degree from the Project and that any negative impacts could be mitigated at the same time as the parties' development goals were realised. The parties' conclusions have been confirmed by two independent sources (the HQI and Bechtel reports): quite simply, there was no environmental disaster in the offing.

2.119 However, there now exists even better evidence that the design of the G/N System is environmentally sound. This is in the form of the actual operation of the System in modified form and its careful monitoring by the EC Working Group of Independent Experts, both of which are considered in Chapter V below. Unsurprisingly, the evidence shows that the voluminous research into the Project was solidly based. Thus, to take one important example, the System has had absolutely no negative impact on the drinking water supplies for either Bratislava or Budapest. By contrast, the unsubstantiated allegations that were offered as the reasons behind Hungary's withdrawal from the Project have now been confirmed to be wholly unfounded.

CHAPTER III. CONDUCT OF THE PARTIES TO THE 1977 TREATY PRIOR TO 13 MAY 1989

3.01 In this Chapter, the attitude and actions of Czechoslovakia and Hungary towards carrying out their obligations under the Project are examined up until Hungary's suspension of performance under the 1977 Treaty in May 1989, with particular emphasis on Hungary's conduct and the reasons for it. The following are some of the major conclusions to be drawn from the examination in this Chapter of this phase of the Project's history:

- First, from the outset, Hungary was a difficult Project partner; due to economic problems (not environmental concern) Hungary sought delays in the agreed time schedule as well as changes in the work distribution;
- Second, negotiations between the parties succeeded, nevertheless, in arriving at agreements to amend the 1977 Treaty and its related treaty documents so as to reflect time schedule extensions in deference to Hungary's economic difficulties;
- Third, these amendments, which were made in 1983 in the form of Protocols, had the effect of reaffirming both the validity of the 1977 Treaty and the objects of the G/N Project; until its suspension of performance in May 1989, the Hungarian Government repeatedly assured Czechoslovakia of its firm intention to fulfill its obligations to complete the Project in accordance with the 1977 Treaty;
- Fourth, soon after the 1983 Protocol delaying the Project's timetable had taken effect and was being carried out, Hungary's attitude towards the Project began to change and, instead of seeking to delay the Project, it requested that the Project's schedule be accelerated; in spite of the financial difficulties this caused Czechoslovakia, steps to speed up the schedule began to be taken as early as 1985-1986, leading ultimately to the Protocol of 6 February 1989, which formally

shortened the schedule by 15 months; the 1989 Protocol, like the 1983 Protocols, was a reaffirmation of the 1977 Treaty and the G/N Project;

- Fifth, in spite of the delays and accelerations in the schedule, by early 1989 Hungary, like Czechoslovakia, had accomplished a large part of its construction obligations as required by the 1977 Treaty;
- Sixth, in the mid-1980s, environmental groups began increasingly to single out the G/N Project as a target; in Hungary, opposition to the Project gained the political support of the party that in May 1990 was elected to lead the Hungarian Government, with the result that the Project became a highly volatile political issue in Hungary.

SECTION 1. The Period 1977-1984: Delays in the Project Due to Hungary's Economic Difficulties

3.02 After signature of the 1977 Treaty, work on the Project was started by both parties in accordance with the Treaty and the 1977 Mutual Assistance Agreement. At the 17th session of the Joint Czechoslovak-Hungarian Committee for Economic, Scientific and Technical Cooperation, 24-26 February 1981, it was concluded that during the years 1978-1980 construction under the Project had been accomplished according to the Treaty and the Mutual Assistance Agreement and that work had begun on all the main parts of the Project¹.

3.03 Since in this and the next Chapters reference will be made to various committees and technical groups, it may be helpful to set out here a brief definition of them:

- Joint Czechoslovak-Hungarian Committee for Economic, Scientific and Technical Cooperation (the "ESTC" Committee): the senior competent joint authority, reporting directly to the top of the Government of each State; responsible for all questions concerning cooperation between the States; also supervised the Plenipotentiaries.

¹ Annex 39.

- Joint Czechoslovak-Hungarian Broader (Enlarged) Technical Group ("BTG"): responsible for preparing the text of the 1977 Treaty and Mutual Assistance Agreement under the supervision of the ESTC Committee.
- Plenipotentiaries: the two senior delegates to the G/N Project named, respectively, by each State; responsible for construction and operation of the Project; assumed the duties of the BTG; were supervised by the ESTC Committee.
- Joint Operating Group: set up by the Plenipotentiaries as the working group to resolve technical problems.
- Czechoslovak-Hungarian Commission for Boundary Waters ("Joint Boundary Waters Commission"): established pursuant to the 1976 Boundary Waters Management Agreement; responsible for monitoring and taking measures to guarantee the quality of the Danube waters; the Commission's Plenipotentiaries reported directly to the top of the Government of each State.

A striking feature of these committees and groups making the basic decisions concerning the G/N Project was the high governmental level at which they operated.

3.04 Even at this early stage, in spite of the positive tone of the protocol of the 17th session of the ESTC Committee, Hungary began to fall behind schedule; and it soon requested a slowdown in the works due to the economic problems the country was then experiencing. This led to a series of meetings in 1981, including a meeting of the Vice-Chairmen of the ESTC Committee on 10 September² and a meeting of the Chairmen of the Committee on 21 September³. Hungary sought a delay of as long as five years, while Czechoslovakia attempted to restrict the delay to two years, later increasing the acceptable delay to three years. At the same time, Czechoslovakia asked that it be reimbursed in some fashion for the costs to it of any such delay. Discussions continued into 1982 without this

² Annex 40.

³ Annex 41.

question being resolved⁴. The ESTC Committee subsequently visited the site and saw for itself the advanced state of construction on the Czechoslovak side, including the clearing of some 5,000 hectares of farm land and forest for the Project, with several thousand workers located on site.

3.05 At the 18th session of the ESTC Committee held during 31 May - 1 June 1982, it was agreed to draw up a new construction schedule and timetable postponing the putting of the Gabčíkovo section into operation until 1990⁵. The start of construction of the Nagymaros section would be delayed until 1989-1990, with operation of the first turbine/generator unit to commence by 1993 if possible. It was stipulated that the parties would adhere to the basic principles of the 1977 Treaty. At this session, certain proposals of Hungary for the revision of the Project based on Hungary's re-examination of the technical aspects of the Project were referred to, including its ecological impact. There is no indication in the protocol of the session just what these proposals were, but Hungary agreed to hand over the results of its studies to Czechoslovakia, who agreed in turn to consider them provided they did not change the concept of the Project as agreed in the 1977 Treaty. Czechoslovakia was never given any such Hungarian technical studies or proposals for revision.

3.06 As the discussions continued into 1983, it became clear that Hungary was in fact seeking to improve its financial position under the Project. In the end, Czechoslovakia elected not then to pursue the remedies to which it might be entitled, provided that a speedy conclusion could be reached to implement the decisions reached at the 18th session of the ESTC Committee.

3.07 On 23 May 1983, in response to the Czechoslovak Prime Minister's letter of 3 May⁶, the Hungarian Prime Minister reassured Czechoslovakia that, in spite of difficult economic conditions, Hungary was doing all it could to fulfil its obligations under the 1977 Treaty⁷. Then, a turning point in the negotiations occurred, on 9 July 1983, at the

⁴ See, Annex 42, a letter dated 26 April 1982, in which the Hungarian Vice-Prime Minister Mr. Marjai assured his counterpart that Hungary was not in violation of the 1977 Treaty.

⁵ Annex 43.

⁶ Annex 44.

⁷ Annex 45.

meeting of the Chairmen of the ESTC Committee⁸. It was agreed to adhere to the original apportionment of work between Czechoslovakia and Hungary, as set out in the 1977 Treaty and in the Mutual Assistance Agreement, and to adopt the delay in the schedule as approved at the 18th session of the Committee, that is, to put the Gabčíkovo section into operation in 1990 and the Nagymaros section into operation in 1993. The final paragraph of the memorandum referred to the question of protection of the environment:

"The Committee chairmen stated that the [1977 Treaty and Mutual Assistance Agreement] took into consideration, with regard to the then knowledge level, the measures concerning the environment protection and nature protection. Both parties, however, consider necessary to keep on finding reasonable solution of contingent in favourable phenomena in the course of the realization of the construction and to find ways leading to improvement of the environment quality. With regard to this, it will be necessary to enable necessary modification of the technical projects. To this purpose to create conditions for effective cooperation."

This was a confirmation that the environment had already been carefully considered but that Project modifications might still be found desirable in the light of any new findings so as to improve the quality of the environment.

3.08 In order to reflect the change in schedule, the Plenipotentiaries were charged with preparing the necessary Protocols to amend the 1977 Treaty and Mutual Assistance Agreement. The Protocols were promptly drawn up and signed on 10 October 1983⁹. The effect of the Protocol amending the 1977 Treaty was to delay the Project by roughly four years. The Protocol amending the Mutual Assistance Agreement changed the deadlines on various parts of the Project and adopted a new timetable. The Protocol amending the Treaty was approved by both Parliaments, and instruments of ratification were exchanged in February 1984. As amendments that modified only the Project schedule but not other basic elements of the Project itself, the Protocols were clearly a reaffirmation of the 1977 Treaty and the G/N Project.

3.09 The ESTC Committee again visited the sites in connection with the Committee's 19th session held during 20-22 February 1984¹⁰. The Plenipotentiaries were

⁸ Annex 46.

⁹ Annexes 7 and 8.

¹⁰ Annex 47.

instructed to maintain progress under the Project in accordance with the 1977 Treaty, under the revised schedule.

SECTION 2. 1985-May 1989: Acceleration of the Project at Hungary's Request

3.10 Soon after the adoption of the new schedule, the Hungarian Government began to consider the possibility of speeding up the Project and, in particular, the section relating to Nagymaros and the tailwater section of the bypass canal. This shift in attitude is reflected in the protocol of the 20th session of the ESTC Committee held on 10-12 April 1985¹¹. Hungary brought in Austrian and Yugoslav contractors to carry out the works¹², and it asked Czechoslovakia to advance the schedule on the parts of the Project for which it was responsible. The Czechoslovak Government found it could accelerate work at Gabčíkovo by substituting certain equipment manufactured in Czechoslovakia for equipment to be purchased from the U.S.S.R. In 1986, Hungary awarded to two Austrian enterprises the contract for the whole Nagymaros step, to be completed within 33 months. The contract was financed by a consortium of Austrian banks to be repaid by the supply of electricity starting in 1996.

3.11 At the 21st session of the ESTC Committee on 19 May 1986, the proposals of the two governments for accelerating the Project were discussed¹³. Hungary sought to advance the schedule for putting into operation the last turbine/generator unit of the Nagymaros section to 1 February 1993 at the latest, a shortening of the schedule by about 15 months. It is of particular interest to note that, according to the record of this session, the Hungarian proposal for acceleration was based in part on the "protection of [the] environment and the surrounding countryside". It was considered that the suitable legal instrument to carry out this change would be a Protocol amending the 1977 Mutual Assistance Agreement only. Further discussion of the acceleration of the Project continued at the 22nd session of the ESTC Committee, 6-9 July 1987¹⁴.

¹¹ Annex 48.

¹² The weir at Dunakiliti was largely to be built by Austrian companies, financed by Austrian bank loans; the downstream dredging operation was to be carried out by a Yugoslav company.

¹³ Annex 49.

¹⁴ Annex 50.

3.12 Preparatory work at Nagymaros under the Austrian contract started in 1987. This indicated that Hungary had begun to organise the works on its part of the G/N Project according to the shortened timetable many months before the implementing Protocol was signed and took effect on 6 February 1989. The delay in the signing of the Protocol was due in part to the extensive economic and financial adjustments that advancing the schedule required of Czechoslovakia. The 1989 Protocol terminated the 1983 Protocol amending the 1977 Mutual Assistance Agreement but the provisions of the 1977 Treaty remained untouched¹⁵. Thus, in February 1989, both parties again reaffirmed the 1977 Treaty and the G/N Project, except as modified in respect to the time schedule. The initial test of the first turbine/generator in the Gabčíkovo hydroelectric power plant was scheduled for 2 July 1990¹⁶, and agreement was reached that the damming of the Danube and the filling of the reservoir and the bypass canal would take place during October - December 1989, the only time of the year in which this operation was feasible¹⁷.

SECTION 3. The Issue of Water Quality

3.13 At the 5-7 October 1988 session of the Hungarian Parliament, a report of the Hungarian Government on the progress of construction under the G/N Project was considered. By a substantial majority¹⁸, the Parliament confirmed the decision to finalise the G/N Project jointly with Czechoslovakia on the basis of the 1977 Treaty, including the Nagymaros section, as well as the acceleration of the schedule by 15 months. However, it directed that the quality of the Danube's water must not be allowed to deteriorate and therefore that the peak operation of the Gabčíkovo plant should begin only after completion of sewage plants by both countries. The Parliament resolved that an agreement between the two States should be drawn up setting out the principles of environmental protection to govern the Project.

3.14 At the 23rd session of the ESTC Committee on 2-3 March 1989, the Plenipotentiaries were called upon to submit a report on the fulfillment of the work schedule

¹⁵ Annex 9.

¹⁶ Annex 51.

¹⁷ See, para. 4.02, below.

¹⁸ See, Chap. IV, fn. 8.

before the end of the year¹⁹. Paragraph 1.3 of the protocol of this meeting indicates that the Committee also considered the question of environmental protection:

"The Parties agreed on the fact that the operation of the Gabčíkovo-Nagymaros System of Locks must not worsen the environment in the territory concerned, the basic request is that by the operation of the System the quality of water of the Danube river must not be worsened."

This clearly reflected the actions of the Hungarian Parliament just mentioned. The Slovak Minister of Forestry and Water Management and his Hungarian counterpart, in cooperation with the Plenipotentiaries for the Project, were instructed to draw up by 15 April 1989 concrete proposals to safeguard the environment and the quality of the water of the Danube.

3.15 The matter of regulating the purity of the boundary waters of the Danube had been specifically addressed in the 1976 Boundary Waters Management Agreement²⁰. Article 11 of that Agreement provided that the parties would do their best to "guarantee the purity of boundary waters" and to lower pollution by constructing or reconstructing purification plants. The Agreement also provided for the systematic checking of water purity and for the re-establishment of the Czechoslovak - Hungarian Commission for Boundary Waters. Article 15 of the 1977 Treaty had also dealt specifically with water quality, requiring (in paragraph 2) that the parties ensure "that the quality of water in the Danube is not impaired as a result of construction and operation" of the G/N Project. It also provided that "monitoring of water quality in connection with the construction and operation of the [G/N Project]" was to be carried out on the basis of the 1976 Boundary Waters Management Agreement.

3.16 The Joint Boundary Waters Commission appointed under the 1976 Agreement adopted a number of measures in implementation of the water purity provisions of the Agreement²¹. Water taken from the Danube was tested 12 times a year, taking 48 samples for examination against 26 parameters (23 physiochemical, 1 biological, 1 microbiological and 1 radiological). As provided in Article 15 of the 1977 Treaty, the G/N Project was intended to follow the technical measures on water quality established by this Joint Commission.

¹⁹ Annex 52.

²⁰ Annex 4.

²¹ Annex 53.

3.17 After the action taken at the October 1988 session of the Hungarian Parliament, the Hungarian members of the Joint Boundary Waters Commission put together a more rigorous set of guidelines for the extended testing of the waters of the Danube after the G/N Project had gone into effect. The frequency of water sampling was to be increased to 26 times a year, tested against 54 profiles on the Hungarian side and 45 profiles on the Czechoslovak side. In addition, the method of testing was to be aimed at locating all significant sources of pollution. These proposals were discussed at meetings of the Joint Commission in December 1988 and February 1989²². The reach of the Danube affected by the G/N Project was defined to be the part of the river lying between the Devin Gate, where the Morava River flows into the Danube, and Nagymaros, including the left and right hand branches of the Danube-the Malý Danube and the Mosoni Danube. Agreement was reached on the frequency of sampling (24 times a year), the parameters (61) and the location of sampling (12 different locations), modifying slightly the Hungarian proposal.

3.18 At the same time as it was considering the option of more stringent measures for the monitoring of water quality, the Joint Commission also turned its attention to measures for protection of water purity through sewage treatment already taken or planned by each State. This involved essentially an up-dating of an earlier report of the Commission in March 1985 summarising the measures taken by each State up to the end of 1984, and planned to be accomplished by 1995, in the area of the Danube shared in common. According to the 1985 report, 620 sewage treatment plants had been constructed on the Czechoslovak side of the common Czechoslovak-Hungarian section of the Danube, and 77% of all sources of water pollution had their own sewage treatment facilities. The location of the then existing sewage treatment plants is set out in the following table compiled from the 1985 report:

<u>River</u>	<u>Municipal</u>	<u>Industrial</u>	<u>Total</u>
Danube/Czechoslovakia	14	14	28
Váh	59	269	328
Hron	11	152	163
Ipeľ/Czechoslovakia	6	95	101
<u>Total</u>	90	530	620

²²

Ibid.

3.19 In the Hungarian area of the common Czechoslovak-Hungarian section of the Danube, 213 sewage treatment plants had been constructed up to the end of 1984, and 78% of all sources of water pollution had their own sewage treatment facilities. This is summarised in the following table:

<u>River</u>	<u>Municipal</u>	<u>Industrial</u>	<u>Total</u>
Danube/Hungary	6	8	14
Mosoni-Dunube	51	54	105
Cuhai-Bakony-ér	2	3	5
Conco	3	6	9
Altal-ér	12	32	44
Kenyérmezei-patak	10	14	24
Ipeľ/Hungary	6	6	12
<u>Total</u>	90	123	213

3.20 As to water purity measures programmed up to the end of 1995, the Joint Commission's 1985 report indicated that Czechoslovakia planned to construct, between 1985 and 1990, 25 sewage treatment plants, and between 1990 and 1995, 95 more plants. On the Hungarian side, the figures were 40 plants between 1986 and 1990 and 43 plants between 1991 and 1995.

3.21 In the up-dated report of the Joint Commission approved at its 20-24 February 1989 session, it was noted that, during 1985-1988, Czechoslovakia had in fact constructed 11 new sewage treatment plants in the relevant area and that 37 more were already under construction. The measures planned by both States for the period 1990-1997 were also submitted. These figures showed Czechoslovakia to have exceeded its planned construction of sewage treatment plants.

3.22 Following the 23rd session of the ESTC Committee²³, representatives of the Ministries of each State charged with preparing a precise water protection plan, together with the Plenipotentiaries for Boundary Waters of each State on the Joint Commission, met on 7-8 April 1989²⁴. They had before them the results of the work of the Joint Commission at its meetings in December 1988 and February 1989 concerning the extension of the water purity program for the period following the putting into operation of

²³ See, para. 3.14, above.

²⁴ Annex 53.

the G/N Project. They agreed to start such a program as of 1 April 1989, and they put in motion a proposed program for safeguarding the environment and the quality of the water of the Danube, as they had been charged to do at the 23rd session of the ESTC Committee.

3.23 The joint recommendations issued by the Boundary Waters Plenipotentiaries on 8 April 1989 emphasised the importance of protection of the environment and, as a result, they recommended that a special agreement between Czechoslovakia and Hungary be concluded to deal with the matter and that the preparation of such an agreement be completed by the end of June 1989²⁵. The proposed elements of such an agreement were the following:

- That each State should take appropriate measures for follow-up and evaluation of the water quality of the Danube, as agreed at the 7-8 April meeting, to be put into effect as of 1 April 1989;
- That the values resulting from testing the water quality against the agreed parameters taken from the results of the joint long-term follow-up of the water quality of the Danube, as well as from tests just prior to filling the Dunakiliti-Hrušov reservoir at the end of 1989, should serve as the basis for evaluating variations in water quality after putting the Project into effect;
- That peak operation should start only after the construction of the necessary facilities for the protection of water purity, and that the operation of the G/N Project should be governed by the condition of protecting water purity;
- That to carry out the above, the two States should agree on a program of construction of the necessary sewage plants before starting the peak operation; and

²⁵

Annex 54.

- That both States should inform the public about the adoption of these measures to protect the environment and, especially, the quality of water.

3.24 The recommendations of 8 April 1989 of the Boundary Waters Plenipotentiaries constituted one of the major items taken up at the meeting of the Chairmen of the ESTC Committee held in Bratislava on 3 May 1989²⁶, preparatory to a meeting between Prime Ministers on the subject of economic and technical cooperation. The agreed record of these discussions contained the proposal to conclude a special agreement for the protection of water quality as recommended in the Ministers' Report of 8 April. The Hungarian Chairman refused to sign the protocol of the meeting, stating as his reason that the Hungarian Government was not in a position to sign such an agreement before the Hungarian Parliament had decided whether to call for a national referendum on the question of construction of the Nagymaros section of the Project. In retrospect, this was a clear signal of Hungary's intention to breach the 1977 Treaty, an action taken 10 days later when the Hungarian Government announced its suspension of work at the Nagymaros site due to what it claimed to be an ecological emergency.

SECTION 4. The Parties' Observance of their Construction Obligations

3.25 The history of the Project up to May 1989 is not only one of negotiation and Treaty amendment; it is also a history of construction. As noted at paragraph 2.73 above, and shown by Illus. No. 28, Article 5(5) of the 1977 Treaty assigned to each party specific construction obligations. During the period 1977-1989, these obligations were for the greater part performed. The status of completion of the Project as at May 1989 - the date of Hungary's suspension of work at Nagymaros - is shown by Illus. No. 31. Insofar as Czechoslovakia was concerned, by the spring of 1989 its obligations to construct the left bank Hrušov-Dunakiliti reservoir dykes was 98% fulfilled, to construct the headwater section of the bypass canal was 95% fulfilled, and to construct the Gabčíkovo system of locks and power plant was 85% fulfilled. The flood protection measures in the Sap (Palkovičovo)-Nagymaros sector under its responsibility were 60% complete.

²⁶ Annex 55.

3.26 But Hungary, had not been idle either during this period. The Dunakiliti weir was 90% complete. Construction of the right bank dykes of the Dunakiliti weir was 85% complete in Hungarian territory and 70% complete in Czechoslovak territory. Hungary had fulfilled its obligations to construct flood protection dykes in the Ipeľ region of Czechoslovakia up to 80%. The tailwater section of the bypass canal was 60% complete, as were the flood protection measures on the right bank of the Palkovičovo-Nagymaros sector of the Danube. Construction of the Nagymaros step was also well underway.

3.27 Thus, as shown on Illus. No. 31, by May 1989 the Gabčíkovo section of the G/N system was approaching completion and a significant portion of the works on the Nagymaros section had been carried out - at the cost of a very substantial investment by both parties. The significance of this is twofold. First, as with the 1983 and 1989 Protocols, it confirms that the question of the status, importance and validity of the G/N Project under the 1977 Treaty had not been called into question (and would not be prior to May 1992). Second, as noted in greater detail in Chapter V below, by implementing its unilateral suspension after May 1989, Hungary left Czechoslovakia in what was quite simply an impossible and wholly unexpected position.

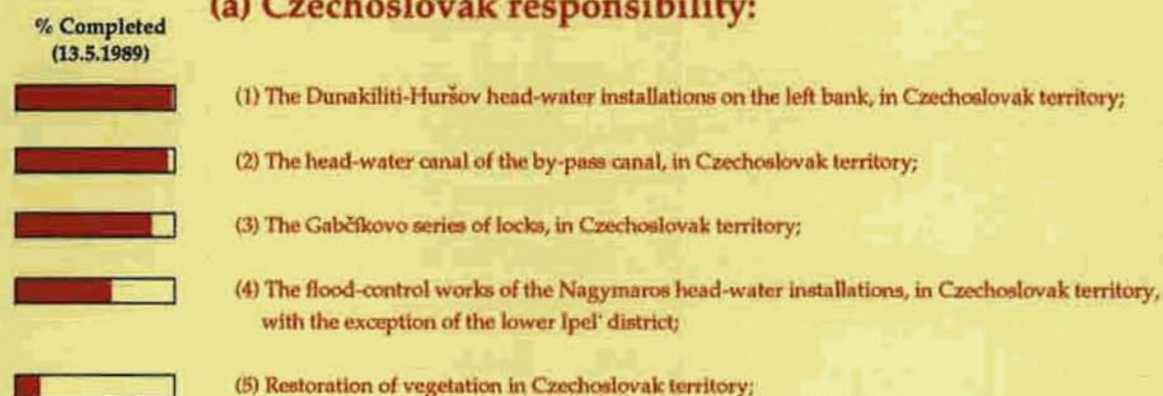
SECTION 5. Hungary's Subsequent Distortion of these Events

3.28 In Hungary's 1992 Declaration²⁷, there is a short discussion of the period covered by this Chapter, starting with the signing of the 1977 Treaty and ending with Hungary's suspension of performance under the Treaty on 13 May 1989. It contains important omissions and serious misstatements. For example, in mentioning the initial delays in the Project, in paragraph 2, it attributes them to "economic difficulties arising simultaneously in both countries", whereas it was only Hungary's economic difficulties that led to these delays. In the same paragraph, the Declaration states that in the negotiations entered into as a result of Hungary's request to extend the Project's schedule, the possibility of renouncing the Project was considered. This assertion is wholly without substance. Such a possibility was certainly not considered by Czechoslovakia; and as for Hungary, it repeatedly affirmed to Czechoslovakia its intention to observe the provisions of the 1977 Treaty. The Protocols of 1983 and 1989 amending the 1977 Treaty and Mutual Assistance Agreement reaffirmed the continuing validity of the Treaty and the intention of both Parties

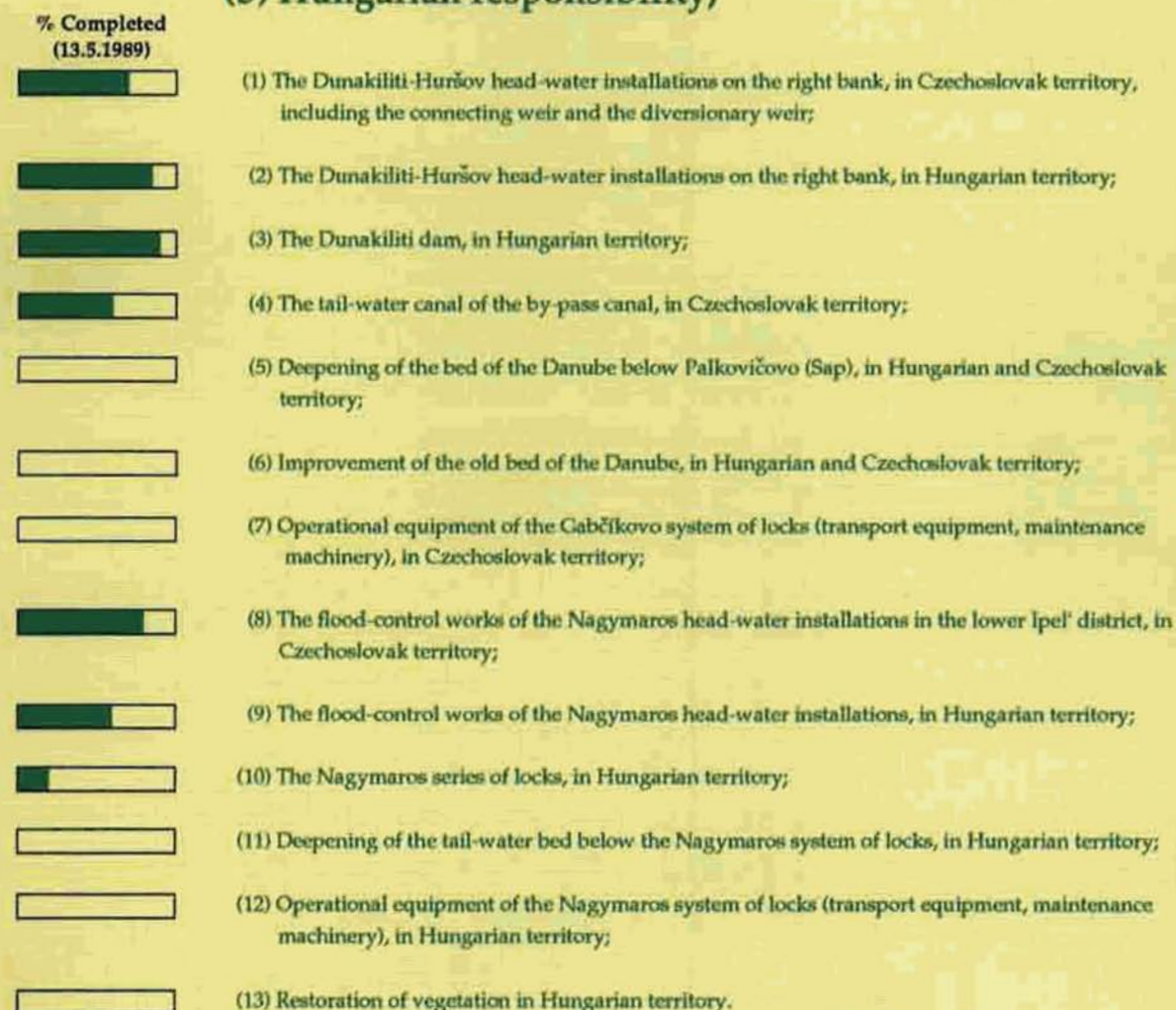
²⁷ Annex 17.

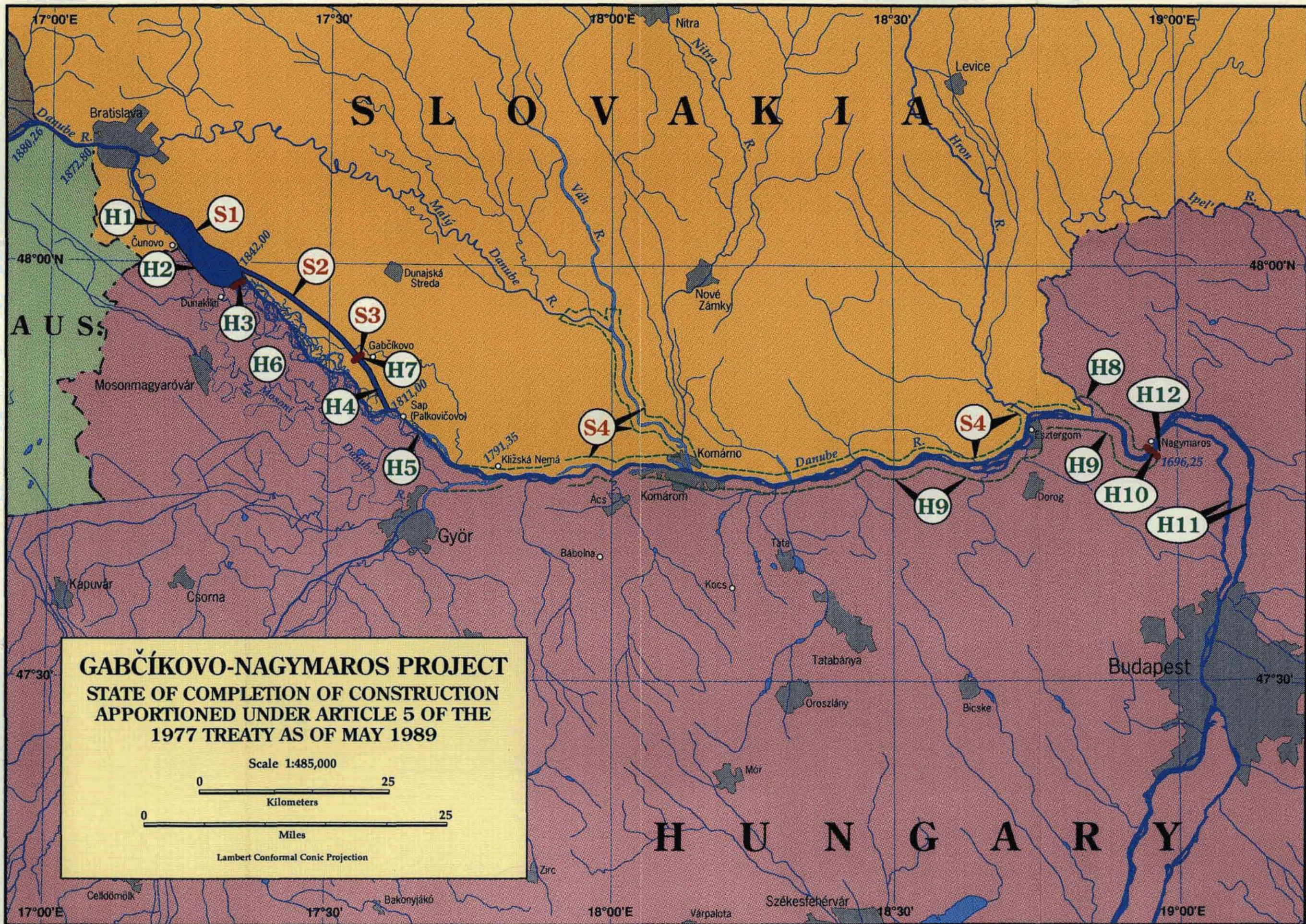
ARTICLE 5. Responsibility for the costs of the joint investment, apportionment of labour and supplies.

(a) Czechoslovak responsibility:



(b) Hungarian responsibility:





Specially prepared for presentation to the International Court of Justice.

to carry out its provisions, as did the parties' fulfillment of a substantial part of their construction obligations. This statement in the Declaration is simply wrong.

3.29 The 1992 Declaration (in paragraph 5) refers to a report of an ad hoc committee of the Hungarian Academy of Sciences, formed in 1981, which was approved by the Presidium of the Academy in a Statement issued in December 1983. It is alleged that this Statement criticised the lack of any comprehensive study of the ecological effects of the G/N Project or assessment of its risks, and recommended postponement or even cancellation of the Project. At the time, Czechoslovakia was aware of no such report and was not given any such Statement of the Academy. The conclusions allegedly contained in the Academy's statement are not reflected in the records of the numerous joint meetings of the various groups and committees that were concerned with the Project, including meetings at the Prime Minister level. It can only be concluded, in the light of this silence, that the Hungarian Government rejected these views. This is confirmed by an important Hungarian document discussed starting at paragraph 3.37 below. It is, of course, not uncommon for projects of this magnitude to have their critics. But if such views had had serious support at the governmental level they would certainly have appeared in the records of the meetings that openly discussed these very issues; and they would have shown up clearly as the considered view of the Hungarian Government - which we know they were not, for they simply were not discussed according to the available record.

3.30 Hungary's 1992 Declaration does not attempt to explain the Hungarian shift in attitude that resulted in its request to speed up the Project, nor the actions taken by Hungary as early as 1985-1986 to shorten the timetable, nor the 1989 Protocol that formally modified the Project schedule, including notably the Nagymaros section, so as to accelerate it by 15 months. Instead, the Declaration alleges that in 1988 and 1989 Hungary's supposed review of the construction program revealed "serious insufficiencies ... in the preparatory work carried out in the 70's" mentioning, *inter alia*, the lack of hydrobiological and water quality studies. Aside from the obvious inconsistency between Hungary's request and actions to accelerate the Project's schedule and any such alleged findings, none of the records of the large number of meetings held during 1988 and 1989 contain any mention of this sort of criticism of the Project. Water quality testing, as discussed above, had been conducted from the outset of the Project under the supervision of the Joint Boundary Waters Commission and was given increased attention as time went on, culminating in the recommendations of 8 April 1989 for the conclusion of a formal agreement between the two

States on water quality. What is more, Hungary's 1992 Declaration fails to mention that Hungary refused to sign the protocol of the meeting of the Chairmen of the ESTC Committee on 3 May 1989 at which the 8 April recommendations were approved²⁸.

SECTION 6. The Underlying Reasons for Hungary's Actions

3.31 It has been shown in the preceding sections that there was a fundamental lack of consistency in Hungary's performance of its obligations under the 1977 Treaty up to May 1989. The motives behind Hungary's actions assume an importance because they serve as evidence either to validate or undermine the subsequent defences offered by Hungary to excuse its breach of the 1977 Treaty. The principal evidentiary sources that point to the real reasons for Hungary's actions are: (i) the economic factors existing at the time; (ii) certain documentary evidence from the Hungarian side; and (iii) the explanations that the Hungarian Government itself gave for its actions.

The Economic Factors Behind the Decisions to Delay the Project

3.32 In Chapter II above, Slovakia has shown that the G/N Project offered significant benefits to the parties in many different areas such as navigation and flood control. But just as flood control acquired a new significance after the 1954 and 1965 floods, so the availability of sources of hydroelectric energy became more important after the 1973 oil crisis. Alongside other developed Eastern and Western countries, this crisis encouraged Hungary to further its attempts to strengthen its domestic energy base. In terms of the utilisation of its hydroelectric power potential, the G/N Project was particularly important because, unlike its neighbours such as Austria and Czechoslovakia, and such other European countries as Germany, Switzerland and France, Hungary's hydroelectric power potential is relatively low. Other than along the northern stretches of the Tisza River, the Danube was and is the only attractive potential source of hydroelectric power and then primarily in the joint sector between Hungary and Czechoslovakia where there is the more substantial gradient in the river. Added to the gradient advantages of the sector of the Danube between Czechoslovakia and Hungary, discussed in Chapter I, was the fact that Czechoslovakia was rich in technical experience in the building and operation of

²⁸

See, para. 3.24, above.

hydroelectric power plants, for it had already for some time started to utilise its hydroelectric power potential along its other rivers.

3.33 Of course, by the time of the 1973 oil crisis, the G/N Project had been under consideration for two decades. Hungary was therefore in the position of being able to proceed with a well-researched and well-established joint project that would increase its domestic energy production at low operational cost. Alternatively, it could turn away from the potential benefits, leaving Czechoslovakia to pursue such a hydroelectric project alone - to build its own hydroelectric power works on the part of the Danube running solely through Czechoslovak territory or to enter into a joint project with Austria, or to combine the two, in order to create a system of hydroelectric power works (but excluding Hungary).

3.34 It appears self-evident that the best alternative for Hungary was to enter into a joint project with Czechoslovakia. But it must be stressed that the economic difficulties that Hungary then faced made it difficult to undertake such a substantial investment as the G/N Project.

3.35 Hungary attempted to meet these economic difficulties at the time of the 1977 Treaty by providing in the 1977 Mutual Assistance Agreement that the initial investment under the Project would be made by Czechoslovakia. Hungary's expenditure was thus delayed until the early 1980s. But in 1981 the Hungarian Government realised that its problems were more severe than previously thought, and the possibility was raised by Hungary of postponing work under the Project until 1990. It was at this time, during the negotiations with Czechoslovakia that led to the 1983 Protocols extending the Project's schedule, that the spectre of an allegedly negative environmental impact was first used as a tool in the discussions between the parties.

3.36 This coincided with the beginnings of the environmental movement in Hungary. However, there is compelling documentary evidence to show that the environmental arguments used by Hungary against the G/N Project were developed as a pretext to support Hungary's economic motives for delaying the Project.

The Marjai Letter

3.37 This evidence consists of a letter from the Hungarian Vice-Prime Minister József Marjai to Dr. János Szentágothai, President of the Hungarian Academy of Sciences, dated 19 March 1984 (hereinafter referred to as the "Marjai letter")²⁹. It is a document of the greatest interest, particularly when read alongside paragraph 5 of Hungary's 1992 Declaration.

3.38 The purpose of the Marjai letter was, according to its opening paragraph, to comment on the "standpoint" (or position) of the Presidium of the Hungarian Academy of Sciences concerning "scientifically disputable questions" relating to the G/N Project. This "standpoint" is a reference to the "Statement" of December 1983 issued by the Presidium of the Academy that is mentioned in paragraph 5 of Hungary's 1992 Declaration³⁰. Before considering the Marjai letter, it is necessary to return to paragraph 5 of the Declaration, which describes the background of the Academy's statement in the following way:

- The "necessity of a scientific investigation of the environmental effects" of the G/N Project arose in 1981 when Hungary was conducting a "re-examination" of the Project;

- An ad hoc committee was set up by the Hungarian Academy of Sciences to investigate the "scientifically contested problems" of the Project;

- The report of the ad hoc committee, compiled from a number of different technical and scientific studies, was approved by the Presidium of the Academy in its Statement of December 1983.

3.39 Paragraph 5 of Hungary's 1992 Declaration quotes this passage from the Presidium's Statement:

²⁹ Annex 56.

³⁰ See, para. 3.29, above.

"The Joint Agreed Plan did not consider in any comprehensive way the ecological effects and consequences of the Gabčíkovo-Nagymaros Barrage System. No assessment has been made of the technical, ecological, economic risks of the project as a coherent and interactive system. On the basis of the enumerated and other factors, the Presidium of the Hungarian Academy of Sciences considered it justified and, at least reasonable to postpone significantly the construction work, to make changes in the plans, or rather to cancel the construction once for all."

The Declaration goes on to say:

"It was characteristic for the political circumstances at that time, that the statement was completely neglected by the government and by party officials and its publication was simply prohibited."

3.40 The Marjai letter tells a very different story. The statement of the Presidium had been given to Vice-Prime Minister Marjai by Hungary's Prime Minister to study. Far from being "completely neglected by the government" as paragraph 5 of the Declaration asserts, the Presidium's statement was given close attention at the top echelons of the Government. Indeed, Mr. Marjai begins his letter by stating that the G/N Project is a matter of such importance that decisions of the Government in respect to it should be taken with the greatest care. He then recalls some important background information:

- Economic difficulties, believed at the time of entering into the 1977 Treaty to be temporary, led the parties to provide in the companion Mutual Assistance Agreement that Czechoslovakia would perform the initial works, rather than Hungary, so that Hungary's investments would only start at the beginning of the 1980s;
- In early 1981 Hungary realised that its economic difficulties were long-term in nature and, hence, Hungary pressed for a suspension of investments until 1990 in the negotiations that ensued with Czechoslovakia;
- Since it realised that it would be difficult to gain Czechoslovakia's agreement, the Hungarian Government sought to strengthen its hand in these negotiations by adding to its economic justification for the delay some arguments based on the need for further research of environmental impacts;

- Accordingly, in March 1981, the Government asked the Academy for some help by providing scientific support of the need for further environmental research.

3.41 Thus, the 1981 re-examination of the Project referred to in paragraph 5 of Hungary's 1992 Declaration was due to economic circumstances, and the request for scientific investigations was simply in order to develop environmental arguments to support Hungary's negotiating position as it sought to delay the Project (the relevant negotiations with Czechoslovakia opened in February 1981).

3.42 The Marjai letter then goes on to reveal that the scientific commission established by the Academy provided no help, making it necessary for Mr. Marjai to take the matter up again with the Chairman of the Academy in January 1982. As the Marjai letter recalls:

"... I called on you referring to these written materials and our personal discussions and I asked you to accomplish further researches and elaborate a number of materials which would make possible real and practical consideration of ecological impacts [on] the Government decision making."

But, once again, this request met with disappointment:

"Unfortunately the Hungarian Academy of Sciences gave us no utilizable material for interstate negotiations."

3.43 Mr. Marjai then refers to all the earlier studies conducted by the "research institutes and different commissions of the Academy". He comments:

"These studies have in general confirmed that the concept and projects concerning the [G/N Project] represent the most mature solution based on the actual scientific knowledge. It is true and possible that some more or less important worries can arise which were not sufficient for concrete measures or project modifications, we have nevertheless approached them with [the] greatest [caution]."

3.44 Mr. Marjai discloses that he did in fact use in the negotiations two arguments that he had come upon in one of the scientific reports. These concerned the water balance at Szigetkötz and the change of designed navigational locks. But both

arguments were found invalid after the Plenipotentiaries had convened scientists on both sides to study them. As he says in his letter:

"In both cases it became evident that such arguments don't exist, they confirmed the existing valid concept and well-thought-out character of the [G/N Project]."

In the end, Hungary did not reach its goal of interrupting the construction of the G/N System. By that time, the letter concludes, works in Czechoslovakia had progressed to the point where interruption would have caused great damage, which Hungary could not have contemplated reimbursing; but at least the Project had been postponed for four years without any claim for damages.

3.45 Having explained the reasons behind Hungary's request for the intervention of the Academy in 1982, the Marjai letter proceeds to make some specific comments about the Presidium's Statement produced in December 1983:

- All the works for protection of the environment envisaged in the resolutions of the Council for Environmental Protection adopted on 21 June 1983 had been carried out;
- As to the Presidium's finding of a "general threat to the environment, worsening of the quality of groundwater and surface water, farm land", etc., to a degree even worse than had been predicted, the letter comments:

"I must state that I am not informed about prognoses indicating the worse tendency. Such prognosis could be done only on the basis of researches accomplished by the institutes of the Academy of Sciences. Except studies done previously, there are no newer studies which could confirm it. I don't consider it decisive but the latest analysis of our and foreign experience confirm that in such water works the quality of the discharged water is better than the quality of water entering the retention area."

It is evident from the letter that a change in Hungary's attitude concerning the G/N Project was occurring; for by March 1984, the date of the letter, negotiations with Austria were already underway to provide financing and technical assistance to Hungary to assist it in

fulfilling its obligations under the G/N Project. As a result, Hungary believed it had found a way around its economic difficulties in carrying out the Project and was, in fact, about to request that the Project's schedule be accelerated³¹.

3.46 It is appropriate to pause here in this discussion of the letter to observe how truly unusual it is that a Government official at this high level - Mr. Marjai was Hungary's Vice-Prime Minister - should have such a firm grasp of scientific and technical matters as his letter reveals. It is evident that Mr. Marjai had a thorough knowledge of the Project and, as the senior Hungarian official at the ESTC Committee meetings, he continued to participate in the discussions of the Project during much of this period³².

3.47 The letter then turns to a second point raised in the Presidium's Statement, which concerned the costs of preventing ecological damage, which he said should be shared. He concludes that it could be "asserted with certitude that we have no substantiated claims against Czechoslovakia".

3.48 Mr. Marjai then addresses the view of the Presidium that waste waters on the adjacent territory should be biologically treated before putting the Dunakiliti-Hrušov reservoir into operation. Mr. Marjai may be seen to have been in favour of such treatment, as would be expected, but he notes that, although the "treatment of sewage waters in the whole country is very undeveloped", the problem could not be solved in such a short time. Furthermore, both countries had committed themselves to treat sewage water in the region to the extent that pollution of the Danube would not increase and, thus, the quality of water should be improving considerably. He states that he had been informed that Czechoslovakia already had a number of such sewage plants under construction³³.

3.49 After taking up some of the economic conclusions expressed in the Statement of the Presidium, Mr. Marjai reaches the conclusion that a long term postponement of the investment, or its suspension, as the Presidium advocated, would not be possible or justified:

³¹ See, para. 3.10, *et seq.*, above.

³² See, para. 3.03, above.

³³ This was of course correct. See, paras. 3.18 to 3.21, above.

"The Presidium should take into account the existing situation as well as the fact that its arguments rely in great extent only on presumptions, due to the lack of scientific research required earlier several times by the government. Behind the majority of objections there are mostly contradictory scientific or expert opinions, the confrontation, comparison and scientific evaluation of which - at least on the existing level of knowledge - was not yet done."

The Economic Factors Behind the Decision to Accelerate the Project

3.50 The reason behind Hungary's decision to seek agreement to speed up the Project was once again primarily economic. For once Austrian financing became available, and an agreement with various Austrian companies for the completion of much of the construction had been reached, there were economic reasons to complete the Project as quickly as possible. The sooner electricity could be produced by the Project, the sooner Hungary could benefit from the peak power electricity shared by the parties under the G/N Project.

Environmental Protests in Hungary

3.51 Hungary has a history of environmental protests dating back to the late 1970s/early 1980s, when protests were directed at such targets as lead pollution on the outskirts of Budapest (1977) and waste dumping that was polluting the drinking water at Vác (1981)³⁴. Later protests were made against the dumping of hazardous wastes at Paks (Illus. No. 13 at para. 1.15) and elsewhere and against the bauxite mining that threatened the thermal lake at Héviz³⁵. According to one Hungarian observer of the scene at the time:

"The main reason for these environmental protests is not deep-seated ecological concern. In some cases, concern over health effects is the motivating factor, but whether this reflects an environmental conscientiousness is questionable. Rather, these demonstrations reflect the grievous economic, political and cultural injustices that society has suffered and that have made it distrustful of the centers of power and its technocrats³⁶."

³⁴ See, Persanyi, M., "Red Pollution, Green Evolution" in Environmental Action in Eastern Europe - Responses to Crisis, N.Y., London, 1993, M.E. Sharpe, pp. 140-141. For the location of Vác (on the Danube east of Nagymaros and north of Budapest), see, Illus. No. 30(B) referred to at paras. 2.103-2.106, above.

³⁵ Ibid.

³⁶ Ibid.

3.52 As noted earlier, there were indeed serious environmental problems in Hungary in the 1970s and 1980s - and they remain today - such as water pollution, that were fitting targets for environmental protest³⁷. Why then, did the G/N Project suddenly become a special target of environmentalist attack? The answer is primarily political. The G/N Project was an easy target in that it was readily definable and that blame for the Project could be placed on Czechoslovakia as well as on an unpopular Hungarian regime. The everyday problem of Hungary's internal water pollution, though more pressing in real terms, was a problem for which the responsibility and Hungary's own shortcomings could not be easily shifted. It was easier to focus attention on the supposed effects of the G/N Project on water quality, and in large part to blame Czechoslovakia, than to address squarely the major problem:

"Water pollution is probably the single most serious environmental problem in Hungary ... The largest water consumer is industry, which accounts for 81% of the country's total water consumption ... Although sewage treatment has improved in the last 10 to 20 years, it is still far from sufficient³⁸."

3.53 To remedy this problem would involve an enormous investment. The G/N Project, in contrast, was an easy target that held out the promise of eliminating a major investment at a time when Hungary was undergoing serious economic difficulties and had made heavy investments in alternative sources of electric power, such as the nuclear facility at Paks.

3.54 The best-known of the Hungarian environmental groups, the "Danube Circle" led by János Vargha, focused its attention on the G/N Project using quasi scientific arguments claimed to establish the Project's adverse ecological effects. Although these arguments were superficial and misleading as directed at the G/N Project, the environmental groups were able to attract national and, then, international attention and to rally considerable nationwide support. But this was essentially a political movement with the protection of the environment as its message. As the Marjai letter demonstrates, such scientific and technological arguments were not based on scientific studies by the outstanding specialised institutions in Hungary, but they provided more ammunition to the

³⁷ See, para. 2.103, *et seq.*, above.

³⁸ See, Salay, J., "Environmental Management: Current Problems and Prospects" in Report on Eastern Europe, Vol. 1, No. 40, 5 Oct. 1990, p. 23.

opponents of the Project than Mr. Marjai had been able to obtain to support him in his negotiations during the early 1980s when economic factors only were involved. The G/N Project ultimately became "hostage" in a struggle between the political parties in Hungary when in February 1989 the ruling Hungarian Socialist Workers Party agreed to introduce a multi-party political system. The Hungarian Democratic Forum (MDF), like other opposition parties, had adopted the environmentalist views of the Danube Circle and, hence, its opposition to the G/N Project. The decision of the Hungarian Government under Prime Minister Németh, announced on 13 May 1989, to suspend work at the Nagymaros site was warmly applauded by the MDF and resulted in MDF support for Mr. Németh in the struggle between factions then underway. This helps to explain how the same government headed by Prime Minister Németh that had agreed to the 1989 Protocol to speed up the Project could take action soon after to suspend operations at Nagymaros and then at Dunakiliti.

3.55 Regrettably, starting in the mid-1980s, there was a good deal of manipulation of public opinion in Hungary and in the Slovak region of the G/N Project that contains a large population of Hungarian origin. Unsupported claims of serious ecological threats and even devastation caused by earthquakes, dam breaks, and the like, were circulated. It was claimed that the potential poisoning of the drinking water of Budapest was threatened, although this ignored the fact that the wells supplying Budapest were far away from the region whose ground water would be affected by the G/N Project - and were already seriously contaminated from industrial and agricultural sources that had nothing to do with the Project.

Conclusions

3.56 From the above discussion, a number of conclusions appear to be warranted as to the reasons behind Hungary's conduct during this period:

- Hungary's requests in the early 1980s that the G/N Project be delayed appear to have been due entirely to economic factors; environmental arguments were advanced for negotiating purposes and their lack of merit and artificiality are evidenced by the Marjai letter; the environmental arguments advanced to support Hungary's request to accelerate the schedule are unclear and seem contrived; they support

the conclusion that the supposed environmental effects of the Project were not seriously put forward by Hungary;

- When arguments were directed against the G/N Project based on environmental factors, such as those expressed in the Statement of the Presidium of the Hungarian Academy of Sciences of December 1983, they were carefully examined at the most senior level of the Hungarian Government and rejected for lack of a scientific basis;
- The G/N Project was an easier and more attractive target for the developing environmentalist movement in Hungary seeking national, and then international, recognition than the truly serious environmental problems in Hungary such as water quality; but the opposition to the Project was not based on new scientific studies and lacked a valid scientific and technical basis; it soon degenerated into a campaign to frighten the Hungarian people on the basis of incorrect and misleading information;
- After the political changes in Hungary, opposition to the G/N Project became an idée fixe in the political program of the party that assumed power, because such opposition had played an important role in the struggle for power in 1989 and 1990 and in its outcome.

CHAPTER IV. ATTEMPTS TO FIND A SOLUTION TO THE DISPUTE

SECTION 1. Preliminary Points

4.01 The events affecting the G/N Project dealt with in this Chapter cover the period from May 1989 to the end of 1992. The following chronology of the principal events during this period provides an overview of the development of the dispute:

- 13 May 1989: Hungary announces a two-month suspension of work on the Nagymaros part of the Project because of alleged ecological risks; the announcement came only three months after the Protocol of 6 February 1989 shortening the Project's schedule by 15 months;
- 15 May 1989: the Czechoslovak Government rejects Hungary's suspension of work on Nagymaros as having been taken unilaterally, without consultation, and in violation of the 1977 Treaty;
- 8-9 June 1989: Hungary reaffirms its intention to continue on schedule with work on the rest of the G/N Project other than at Nagymaros;
- 26 June - 12 July 1989: Hungarian and Czechoslovak scientific evaluations of the G/N Project are exchanged revealing a fundamental difference in views as to supposed ecological risks;
- 17-19 July 1989: Czechoslovak and Hungarian experts meet to consider the scientific evaluations just exchanged;
- 20 July 1989: the Hungarian Prime Minister specifically indicates, in contradiction to Hungary's earlier assurance (8-9 June 1989), that work on the Gabčíkovo section also fell within the scope of Hungary's suspension and that the scheduled damming of the Danube is not to occur in 1989;

- August 1989: in the light of Hungary's suspension, Czechoslovakia begins an examination of alternative provisional measures as well as scientific studies into the environmental effects of such measures; Hungary is kept informed;
- This leads to a series of exchanges between the parties during September and October 1989;
- On 30 October 1989, Hungary informs Czechoslovakia that it has abandoned the Nagymaros part of the Project as conceived under the 1977 Treaty;
- Towards the end of 1989, sufficient progress is made in the negotiations between the parties to hold out real hope of a compromise solution;
- November 1989 and June 1990: Hungary cancels its contracts with Austrian and Yugoslav firms for work on the Project at, first, the Nagymaros site and, then, the Dunakiliti site and elsewhere;
- 10 January 1990: the Hungarian Prime Minister, who had participated in the 1989 negotiations, suddenly puts an end to the earlier attempts to reach a compromise solution; and he makes it clear that abandonment of the Nagymaros section of the Project and peak hour operation were no longer matters for further negotiation - they had been unilaterally decided by Hungary;
- During this period political changes are taking place in both countries reflecting the events then occurring throughout Central and Eastern Europe;
- 6 March 1990: the Hungarian Prime Minister informs the Prime Minister of Czechoslovakia that Hungary will suspend all work on the G/N Project, except conservation and flood protection

work, until the completion of scientific studies, and he invites Czechoslovakia to do likewise; he calls the G/N Project a "gigantic investment fiasco";

- 22 May 1990: the general political program of the new Hungarian Government is published in which it announces that, on the basis of the opinion of experts, the G/N Project was a mistaken project and that negotiations would be started aimed at ending the Project and the allocation of damages;
- 26 October 1990: Czechoslovakia takes the initiative of participating in developing a Danubian Lowland - Ground Water Model as part of the EC's "PHARE Project" for the evaluation, inter alia, of the G/N Project's effects on ground water¹; Hungary fails to join in this study;
- At the same time, Czechoslovakia continues to study alternative ways of achieving the aims of the 1977 Treaty, and their possible environmental effects;
- End of 1990, early 1991: the proposal to broaden the bilateral negotiations into tripartite meetings chaired by the EC is discussed by the two Governments;
- 22 April 1991: a high-level meeting of delegations of the two countries takes place to review their respective positions concerning the Projects;
- 23 April 1991: the Hungarian National Assembly instructs the Government to negotiate to terminate the 1977 Treaty;
- 14-15 July 1991: in the course of further negotiations, Czechoslovakia again proposes broadening the negotiations to include EC participation; the Hungarian delegation reveals

¹ See, para. 4.02, below, for an explanation of the PHARE Project.

that its hands are tied by the 23 April action of the Hungarian Parliament;

- 30 July 1991: the Czechoslovak Government formally advises Hungary of its plans to proceed with a provisional solution (Variant "C");
- 13 April 1992: the EC accepts to participate in negotiations to settle the dispute if jointly requested to do so;
- 7 May 1992: the Hungarian Government decides to declare the 1977 Treaty terminated to take effect on 25 May, and Hungary officially advises Czechoslovakia of its decision on 19 May; a Declaration explaining its actions is issued on 16 May²;
- 23 October 1992: Hungary submits an application to the International Court of Justice challenging the legality of Czechoslovakia's proceeding with Variant "C"³;
- 24 October 1992: after a three-year delay, the damming of the Danube is begun by Czechoslovakia under Variant "C".

4.02 The Project's schedule, as advanced by 15 months on 6 February 1989, called for the damming of the Danube to start at the end of October 1989 - it was not possible to carry out this operation except at one period during the year, in the autumn, when the water level of the Danube was at the optimum low level for this operation. Hungary's actions, as summarised above, had the effect of successively delaying the damming of the river for three years, allowing ample opportunity to conduct up-dated scientific studies into the ecological risks claimed by Hungary to be unacceptable. During this period, Czechoslovakia undertook a series of new scientific studies aimed at all aspects of the effects of the G/N Project, carrying forward and updating the many scientific

² Hungary's "1992 Declaration".

³ There was no basis for the Court's jurisdiction; and on 15 September 1993 Hungary informed the Registrar that it considered the Application as having "become without object" and, hence, as "having lapsed".

studies that had both preceded and followed the signing of the 1977 Treaty⁴. In October 1990, it agreed to participate in the EC's PHARE project to examine the likely effects of the G/N Project on ground water, one of the principal elements of ecological risk cited by Hungary to justify its acts, but Hungary turned down Czechoslovakia's proposal to join in this project⁵. None of the contemporaneous Czechoslovak studies substantiated any of Hungary's predictions of an ecological catastrophe; and none pointed to adverse environmental effects that could not satisfactorily be remedied.

4.03 Repeatedly, the Czechoslovak Government asked the Hungarian Government to let it have the scientific data resulting from Hungarian studies allegedly establishing the ecological risks claimed to exist by Hungary. No such data have been furnished to this day by Hungary, and Slovakia has no reason to believe that any in-depth ecological studies were conducted by Hungarian scientific groups at the time. What Hungary did produce were politically motivated internal evaluations that raised the same questions as had been considered when the Project was conceived and adopted in 1977 and were subsequently addressed as the Project proceeded.

4.04 However, in 1988-1989, the Hungarian Government did proceed to commission studies by two outside groups: an American team, assisted by an environmental component of the University of Massachusetts, which issued two reports, in March and May 1989; and a study by Bechtel Environmental, Inc. of San Francisco, whose report was delivered in February 1990. These studies have been analysed above in Chapter II⁶. Like the Hungarian reports given to Czechoslovakia on 26 June 1989⁷, neither of these studies was aimed at producing up-to-date scientific data concerning the ecological effects of the G/N Project. The Bechtel report was based on earlier Hungarian scientific studies, whose

⁴ Annexes 23, 24 and 36.

⁵ The PHARE Project (an acronym composed of the initial letters of Poland and Hungary, Assistance for the Restructuring of the Economy) is a Program of the EC, which came into existence in 1989 to assist the countries of Central and Eastern Europe, with assistance to Poland and Hungary as its initial goal. Czechoslovakia elected to participate in 17 PHARE Projects of which the Danubian Lowland-Ground Water Model is one. See, Annex 57, for selected pages from the official booklet describing the PHARE Project.

⁶ See, para. 2.23, et seq., above.

⁷ See, para. 4.12, et seq., below.

high quality and thoroughness it praised. It warned of no ecological catastrophes of any kind if the Project were to go forward.

4.05 If, during the three years 1989-1991 in which it succeeded in putting off the damming of the Danube, the Hungarian Government had wished to proceed to carry out its obligations under the 1977 Treaty, but considered that it was prevented from doing so because of serious ecological risks, it must be assumed that it would have acted differently. In its own scientific laboratories or through outside scientific and technical sources, it most certainly would have studied the matter intensively, updating the earlier scientific studies on which the Project was based and producing new scientific data and findings. This did not happen. It seems clear that Hungary had no interest in proving that the threat of ecological disaster existed; it wished to settle the issue at the political not the scientific level, and the claim of ecological catastrophe was expressed in terms calculated to have a political effect. Thus, the implementation by Czechoslovakia of Variant "C" presented a danger not to the environment, but rather to Hungary's allegations of ecological disaster: for once Variant "C" was in operation, the ecological risks on which Hungary had based its abandonment of the G/N Project would be shown to be nonexistent or satisfactorily addressed or, at worst, capable of being adequately remedied. As Chapter V shows, that is precisely what happened.

4.06 It is necessary to take a closer look at the period from May 1989 onwards in order to understand the actions of the two Governments and the substance of the negotiations that took place between them. The discussion that follows is separated into four periods: (i) the period of Hungary's breaches of the 1977 Treaty during 1989 and the ensuing negotiations that held out considerable promise of a compromise solution up to the end of 1989; (ii) the period between January 1990 and 23 April 1991, when changes in the composition and structure of both Governments occurred, Hungary's position hardened and attempts were made to broaden the negotiations so as to enlist the aid of the EC, the period ending with the Hungarian Parliament's decision to instruct the Government to negotiate to terminate the 1977 Treaty; (iii) the period up to and including October 1992, during which time the Czechoslovak Government began to put into operation the provisional solution under Variant "C" of the Project, the Hungarian Government announced its purported termination of the Treaty and filed an application with the Court seeking to halt Variant "C", and the final damming of the Danube by Czechoslovakia under Variant "C" took place after

a three year delay; and (iv) the period of increased EC involvement in the dispute up to the end of 1992.

SECTION 2. Hungary's Suspension of Work: 1989

A. The Suspension of Work at Nagymaros

4.07 On 13 May 1989, Hungary announced a two-month suspension of the Nagymaros works without consultation with the Czechoslovak Government as required under the 1977 Treaty. The decision was made known only three months after the parties had entered into the Protocol of February 1989 shortening the Project's schedule by 15 months - an action that had been overwhelmingly endorsed by Hungary's Parliament by a vote taken in October 1988⁸. The procedure followed to inform Czechoslovakia of the decision was as follows: the Czechoslovak Ambassador in Budapest was summoned to the Ministry of Foreign Affairs and told orally of the decision to suspend; he was handed no confirming document of any kind either then or afterwards. This must be regarded as an extraordinary way to make known such a radical change of position.

4.08 Shortly afterwards, the Hungarian Plenipotentiary to the Project assured his Czechoslovak counterpart that the decision of his Government was strictly limited to Nagymaros. Then Hungary's Prime Minister - less than two months later - revealed that the suspension was intended to apply to Gabčikovo as well and that the expanded suspension was not just for two months but was to run until at least the end of October 1989, thus effectively postponing the damming of the Danube for a year.

4.09 Czechoslovakia's response to the 13 May announcement of Hungary was immediate: at a meeting on 15 May 1989 between the Czechoslovak Foreign Minister and the Hungarian Ambassador in Prague, the Czechoslovak Foreign Minister stated:

⁸ The vote in the Hungarian Parliament on the question of whether to continue the Project on this basis was 317 votes in favour, 19 against, with 31 abstentions. At the time, the environmental groups in Hungary had fully articulated their reasons for opposing the G/N Project. Prior to the debate in Parliament, an on-site visit was made during September and October 1988 by nearly all the members of the Hungarian Parliament.

- That the Hungarian decision communicated on 13 May had been taken without consultation and was a unilateral act in violation of the 1977 Treaty;
- That the action to suspend was, thus, rejected and the Czechoslovak Government insisted on proceeding with the G/N Project in accordance with the Treaty;
- That such a unilateral suspension of work would have serious financial consequences, and hence Czechoslovakia reserved the right to present a claim for damages; and
- That the Czechoslovak Government offered to begin talks to attempt to find common ground for avoiding these difficulties.

4.10 These matters were taken up at a meeting of Prime Ministers on 24 May 1989 in Prague⁹. It was agreed that Hungary would furnish in writing its reasons for suspension and that experts from both countries would then meet to study the situation and make recommendations.

4.11 A meeting between Plenipotentiaries followed on 8-9 June 1989, and this meeting was summarised in a signed protocol¹⁰. The protocol specifically records, first, the Czechoslovak Government's refusal to accept the suspension of work at Nagymaros and, second, its urgent request to be given the technical data on which the Hungarian decision was allegedly based - for study by a specially constituted joint group of experts. Hungary's assurance that its announced suspension was limited to Nagymaros is reflected in the following passages of the protocol:

"The Hungarian Government Commissioner and the Hungarian Plenipotentiary stated, that the Hungarian side will complete construction of the Gabčíkovo Project in the agreed time and in accordance with the project plans. Directives have already been given to continue works suspended in the area due to misunderstanding."

⁹ No agreed record of this meeting was made.

¹⁰ Annex 58.

This assurance was repeated in a letter from the Hungarian Plenipotentiary to his Czechoslovak counterpart dated 9 June¹¹.

The Two Hungarian Documents Presented On 26 June 1989

4.12 At a meeting of Plenipotentiaries on 26 June 1989, Hungary handed over to Czechoslovakia two documents¹². These were: (i) a document prepared by an ad hoc committee of the Hungarian Academy of Sciences, on the effects of the implementation or the non-implementation of the Nagymaros section of the Project, considering in this regard land ecology, water quality, geology and seismology¹³; and (ii) a document, designated as a "professional summary" of risk factors and ecological hazards, said to have been considered by the Ministerial Council of Hungary in reaching its decision to suspend work at Nagymaros¹⁴. The second document is unsigned and undated; and the source of the report is nowhere indicated. Czechoslovakia agreed to translate and study these materials and then to schedule a meeting of experts of both countries to discuss them.

4.13 On 13 July 1989, Czechoslovakia confirmed to Hungary its agreement to schedule a scientific discussion of the temporary interruption of the Project at Nagymaros for 17-19 July 1989, the discussion to be conducted by experts divided into three groups: hydrology and ecology; geology and seismology; and pedology, agriculture and hydrogeology¹⁵. To this letter was appended a list of the Czechoslovak experts scheduled to participate in the meeting and a Statement responding to the documents presented by Hungary on 26 June¹⁶. Before turning to the 17-19 July meeting, it is appropriate to consider the nature and content of the two Hungarian documents as well as the comments on them contained in the Czechoslovak Statement.

¹¹ Annex 59.

¹² Annex 60.

¹³ Annex 61.

¹⁴ Annex 62.

¹⁵ Annex 63. "Pedology" is a science related to the study of soil.

¹⁶ Annex 64.

The Paper of the Hungarian Academy

4.14 As noted above, the Hungarian Academy's paper dealt with the questions of land ecology, water quality, geology and seismology. The stated objective of this document was to assess the impact in these areas of the discontinuance of the Nagymaros section of the G/N Project.

4.15 In its discussion of water quality, the Academy's paper is contradictory and the analysis of problems largely theoretical. Whilst the elimination of Nagymaros would remove the risks to water quality that might be associated with it, the paper complains generally of a lack of study and data. It is admitted that some experts were of the view that the G/N Project as a whole would not negatively influence the quality of water withdrawn from the wells supplying water to Budapest. But it is also stated that "new studies" - not identified - reveal that, even if all the scheduled water treatment plants were in operation, deterioration of the water quality of the Danube could not be avoided. In its final conclusion, the paper asserts, without explanation, that the greatest risk arising from the Project was to the quality of drinking water endangering living conditions of three million people¹⁷. It has been shown in Chapter II above that this cannot possibly be so and that the quality of Budapest's water is dictated by quite different factors¹⁸.

4.16 The discussion in the Academy's paper of land ecology is also largely theoretical, and it is claimed that expensive secondary investments would be necessary to avoid a number of possible harmful effects. For example, it is assumed that the G/N Project would cause a drop in ground water level down to the gravel subsoil, thereby preventing capillary action to supply water to the root zone above. No attempt is made to establish that this pivotal assumption is correct. To take another example, the paper states that it is "to be expected" that due to "changed hydrodynamic conditions a considerable degradation of living communities will occur". There is no attempt to discuss why this is "to be expected" or to deal with the many preliminary and ongoing scientific studies of the means of avoiding such a result, as undertaken in connection with the G/N Project. In essence, what was provided was no more than the most summary analysis of the problem although expressed using scientific terminology.

¹⁷ Clearly a reference to drinking water in Budapest.

¹⁸ See, para. 2.103, et seq., above, and Illus. No. 30 (B).

4.17 As to seismology and the risk of earthquakes, the paper, after incorrectly stating that there had been a lack of seismic study of the Nagymaros site, comes to the surprising conclusion that the expected earthquake intensity value in both the Nagymaros and the Gabčíkovo areas would be in the range of Grades 9 to 10 MSK. As will be discussed below in considering the Czechoslovak Statement evaluating this report, the evidence points to seismicity of a considerably lower range at Nagymaros, a conclusion reached (among many others) by Hungary's prominent geologist, Réty¹⁹.

The "Professional Summary"

4.18 The so-called "professional summary" - the second Hungarian document - sets out in its first seven pages a series of conclusions that are unsupported by specific reference to any recent studies or new data, such as that:

- The G/N Project would decisively change the hydrologic, hydrobiologic and ecologic character of the entire reach of the Danube between rkm 1842 (the Dunakiliti weir) and rkm 1696 (the mouth of the Ipeľ River); this was obviously a gross exaggeration, but in any event the summary takes no account of the fact that the ecology of this sector of the region of the Danube had been deteriorating for a long time prior to the inception of the G/N Project;
- The G/N Project would "influence the living communities along the river", such as the forests and the flora and fauna; but again the summary takes no account of the serious deterioration that had already set in affecting these communities;
- Pollution of the Danube would increase and seriously affect the quality of drinking water - a conclusion totally at odds with prior studies and with the independent study of the Bechtel environmental group that Hungary was to receive some six months later²⁰,

¹⁹ See, para. 4.30, below. See, also, para. 2.60, et seq., above, for a fuller discussion of the seismology of the area.

²⁰ See, para. 2.27, et seq., above.

and subsequently disproved by the testing that followed the putting into operation of Variant "C".

4.19 From these unsupported and largely theoretical conclusions the report (at page 7) makes this sweeping indictment of the Project:

"The project is in contradiction with our responsibility to provide [a] healthy, safe and acceptable environment for [the] present inhabitants of the country and for future generations. Thus, it is not possible to construct the [G/N Project] according to the original conception and to operate it."

4.20 The "professional summary" then proceeds to state (at page 7) - without any supporting arguments or specific reference to studies or relevant data - that the major part of the unfavourable environmental impacts was caused by the peak operation at Gabčíkovo and that, therefore, Nagymaros should be eliminated. Yet, the discussion of impacts in the first seven pages of the summary is in no way tied or related to peak operation. Neither is the conclusion of the summary that the Hrušov-Dunakiliti reservoir should not be filled until after the completion of sewage treatment plants or after obtaining uniform and suitable Danube water quality. In any event, this is a very misleading statement, for later in the summary (at page 11) - completely pre-judging the question - it is concluded that even with such treatment the water quality of the Danube would inevitably be impaired.

4.21 This document then discusses the question of the Project's effect on the quality of drinking water (page 10). It states that the reservoir would cause a doubling of plankton growth "according to experts". The experts are not identified. It adds that the VITUKI experts have a similar view, but cites no reference. To this the summary adds the possible dissolution of magnesium and iron in wells supplied by river bank infiltration, as well as the problem of bad taste and odour, concluding: "all these circumstances would considerably increase the cost of drinking water in Budapest". But no effort is made to explain how the wells that supply Budapest might be affected by the Project. As already shown, these wells lie downstream of the Project - the quality of the drinking water of Budapest is in fact adversely affected by pollution from the city,

in addition to industrial and other sources immediately to the north and south²¹.

4.22 The summary discusses the treatment of waste waters (or sewage) in the Hungarian city of Győr (near the Danube), said to be a major source of pollution, noting that the required facilities for treatment would not be in operation before 1995 or even 2000. It also points to the problem of the expense of providing residential areas with sewage systems, concluding:

"Under present economic conditions of the country neither the population nor the state budget can cover these expenditures. Another open issue are the problems of treatment, disposal and storage of sludge from wastewater treatment plants, which is very often hazardous."

What the summary seems to say here is that Hungary cannot afford to stop this pollution of the Danube, except in the long term, for economic reasons.

4.23 The "professional summary"'s discussion of geology and seismology and the risk of earthquakes fails to take account of the extensive study of this problem both before and after the 1977 Treaty was entered into²².

4.24 It must be said this second document provided by Hungary on 26 June 1989 has all the earmarks of a report prepared to achieve certain political ends. A 1992 article on water quality management in Hungary (based on data completed before mid-1991) written by László Somlyódy, General Director of VITUKI, Hungary's Research Centre for Water Resources Development, supports the conclusion that a political bias rather than a professional scientific evaluation was affecting Hungary's views concerning the G/N Project²³. Near the end of this very current and authoritative article, the author makes this statement:

²¹ See, para. 2.103, *et seq.*, above, and Illus. No. 30(B).

²² See, para. 2.60, *et seq.*, above; see, also para. 4.30, below.

²³ L. Somlyódy, "Water Quality Management in Hungary: Past Development and Future Needs", Chap. 10 in Coping with Crisis in Eastern Europe's Environment, International Institute for Applied Science Systems, Parthenon, New York, 1992.

The [G/N Project] was handled by previous governments as a political issue. The judgment of the new government is just the opposite to that of the earlier ones, but often questions and doubts related to the environment have not been analyzed scientifically just as in the past. The only acceptable professional way of treating the project would be to conduct an environmental impact assessment starting from the current situation, as recommended by a Committee of the Hungarian Academy of Sciences in early 1990. However, there seems to be very little support for such systematic analysis. The issue is still too politically and emotionally confused; while cancelling the project is the only acceptable political step, it does not reflect a good decision-making procedure²⁴."

4.25 Appended to the end of the second Hungarian document is a long bibliography listing a variety of recent articles and studies from all kinds of sources. However, statements in the text of the document are not footnoted to specific sources cited here; the whole list seems to have been thrown in at the end of the papers as if it supported the "professional summary" en masse. But, as Czechoslovakia's Statement points out, the list is highly selective²⁵; and not all of the sources cited support the statements found in paper. To take one example, the second Massachusetts Report dated May 1989 is cited, mentioning the contribution of Professor Harry Schwarz. Yet, as pointed out in Chapter II above²⁶, the findings of Professor Schwarz do not support the findings contained in the "professional's summary". For example, Professor Schwarz found the main problem of pollution affecting Hungary's water quality to be, not the G/N Project, but contaminants from Hungary's own agricultural activities and from untreated sewage.

The Czechoslovak Statement of 12 July 1989

4.26 The third document to be considered here is Czechoslovakia's Statement of 12 July 1989, which directly addressed the two Hungarian documents just considered above. Its first four pages are devoted to a history of the scientific studies concerning the environment conducted both before and after the Project was initiated under the 1977 Treaty, emphasising in particular the Biological Project of the region of the G/N Project prepared by URBION in 1975-1976 and subsequently updated (the "Bioproject")²⁷.

²⁴ Ibid, p. 159. Emphasis added.

²⁵ See, para. 4.26, et seq., below.

²⁶ See, para. 2.26 and 2.59, et seq., above.

²⁷ See, para. 2.17, et seq., above.

It brings out the fact that the ESTC Committee in 1982 called upon the Academies of Sciences of both countries to organise a joint geoscientific, hydrological and biological research program as part of their 1981-1985 programs with the aim of improving or conserving the environment to the maximum extent possible. This recommendation was adopted and carried out and had started to bear fruit by 1989.

4.27 The Czechoslovak Statement concludes this survey of the past by saying:

"... during all these - always jointly performed - works no report on new aspects has appeared, nor were new scientific findings presented until May 13, 1989 and in fact until today"

And this was the case at all levels of scientific and technical discussion:

- At meetings of the ESTC Committee;
- At meetings of the Plenipotentiaries of the two Governments; and
- At regular meetings of the Joint Operating Group.

4.28 The Statement adds that Czechoslovakia:

"... had no information on any scientific results [on the basis of which] the Ministerial Council has on the 13th May 1989 resolved to temporarily [and] unilaterally interrupt work at Nagymaros stage for the duration of two months in order to verify new data."

It then turns to a specific examination of the two documents presented by Hungary on 26 July 1989 which, the Statement says:

"... present no new or previously unknown professional scientific arguments or documents which may have been left out of ... the project documentation, or left unconsidered by scientific research conducted hitherto in the course of gradual supplementation of the [Joint Contractual Plan]. The material contains no new viewpoints for an intervention as radical as stoppage of construction of Nagymaros Stage."

4.29 Czechoslovakia's Statement expresses the view that it would be impossible to accept the complaint of the Hungarian Academy of Sciences in its paper (the so-called "judgment") that Hungarian scientists had not had the opportunity to study the relevant data. Since 1982, the two Academies, following the ESTC Committee's recommendation, had been conducting a joint scientific program into the environmental impact of the Project. The Statement also notes that, as to water management, the Joint Commission under the 1976 Boundary Waters Management Agreement had been closely monitoring the water quality of the Danube for several decades²⁸. How, therefore, could Hungary now claim that it lacked data on this question?

4.30 After exposing the fundamental defects in Hungary's discussion of the water quality of the Danube and of drinking water, the Statement (pages 9-11) turns to the discussion of earthquakes appearing in Hungary's two documents. It notes that the area of Nagymaros had been evaluated for seismicity under the Joint Contractual Plan and that the geological structures in that locality had been verified during the course of the earthworks that opened up a huge ditch exposing the geological cross-sections for examination. Moreover, it added, the Austrian experts carrying out this work under contract would certainly have verified the critical factor of earthquake risk and issued warnings had they discovered any discrepancy between design and the actual seismic data (page 10). As to the Hungarian finding that seismic intensity in the area was of Grade 9 or 10 MSK, the Statement said:

"All information up to now ... has been based on data of a seismic rest area around the Nagymaros stage, with its seismicity evaluated as Grade 5 [MCS]. It was general knowledge that according to the Hungarian geologist, Réty, a seismo-tectonic line runs in the vicinity of the Nagymaros waterwork. Réty's work and data indicate that neither here nor in the broader neighbourhood were earthquakes in excess of 3-6° MCS observed over the last millennium."

The Statement then cites three specific references bearing out these conclusions and points out that expert opinions on seismic risk in the pre-design stage of the G/N Project during 1960-1965 had been confirmed in 1981 by independent experts and that no geological observations performed during 1965-1989 had challenged the validity of these expert opinions²⁹.

²⁸ See, para. 3.13, et seq., above.

²⁹ See, also, para. 2.60, et seq., above.

4.31 The Statement goes on to consider the discussions by Hungary of the effect of the G/N Project on ground water levels and, hence, on soils, pointing out that the analysis in the Hungarian Academy's paper was excerpted from one particular scientific report, but that only the negative risks mentioned in the report appeared in Hungary's paper and not a full and balanced discussion of the problem. Under Czechoslovakia's analysis of effects on soils, mainly positive changes were forecast, and most of the soil effects would be experienced on Slovak territory, in any event.

4.32 The Czechoslovak Statement then notes the shortcomings of the list of references attached to Hungary's "professional summary" (page 15), pointing out that the list failed to include references to many works of Hungarian scientists and experts of international reputation and that only a minor part of the relevant studies and other references appeared on the list.

Meeting of Experts 17-19 July 1989

4.33 The meeting of experts to consider these documents took place during 17-19 July 1989, broken down into the three working groups mentioned above³⁰. Agreed summaries of the discussions occurring in each working group were prepared, setting out the areas of agreement and disagreement:

- **Ecology and hydrology.** The essence of the disagreement between the two sides was that Czechoslovakia considered that the various problems in these areas had been and were continuing to be studied, that there was abundant scientific data available, and that acceptable solutions had been or could be found. Hungary's view was that sufficient data was lacking and that some five years of investigation was required.

- **Geology and seismology.** The basic difference between each side in this area came down to the following: Hungary stated that there were insufficient data and studies concerning the earthquake risk at Nagymaros and that, in any event, a monitoring system should be put into operation before completion of the Project. The Czechoslovak view was that the joint investigation of earthquake risk was entirely adequate and that the

³⁰ Annex 65.

geological findings had been confirmed when on 17 July 1989 the expert group visited and examined the rock formations in the large open construction pit. This examination showed there was no active fault system and that the bedrock was a suitable formation to provide total stability for the planned structures. Czechoslovakia favoured extending the monitoring system during construction of Nagymaros to embrace the entire reach between Bratislava and Budapest. It was also noted that the discussions were hampered by the fact that none of the Hungarian team of experts had been involved in the design and construction of Nagymaros and, hence, they lacked the necessary practical knowledge.

- Pedology, agriculture and hydrology. In this area the Czechoslovak view was that the various problems raised by Hungary were all well known when the Project had been formulated and during the time of its implementation. They had been directly addressed in the Project, and Hungary had produced no new data or information not known when the 1977 Treaty was entered into that would justify interruption of work at Nagymaros.

4.34. At this and subsequent meetings, the Czechoslovak scientists started to notice a change in the composition of the scientific teams advising Hungary, and they sensed a disturbing shift in attitude. The Hungarian experts most familiar with the Project started not to attend, and the meetings were participated in by experts not informed of the past studies or of the details of the G/N Project. The Hungarian positions seemed tinged with considerations of a more political than scientific character. Of course, this might be explained after May 1990 by the fact that, in the new Hungarian Government's statement of its general political program of 22 May 1990, the new government appeared to have prejudged the issue of the Project's environmental impact and intended to abandon the Project. But quite apart from these disturbing features of Hungary's attitude, there is an important issue of principle. If two States negotiate a treaty, is it open to one of them to call for suspension or termination of that treaty on the ground that it now believes it ought to have studied the implications of the treaty more carefully? What would remain of the principle pacta sunt servanda if the Parties were able to suspend or terminate the treaty because they had had "second thoughts"? Where States enter into treaty commitments they must be assumed to have considered carefully the implications of those commitments before accepting the treaty. Neglect of prior study - a situation that certainly did not exist in the case of the G/N Project - cannot be admitted as a new ground for the termination of treaties.

B. The Extension of Hungary's Decision to Suspend to the Whole of the G/N System

4.35 On 20 July 1989, the day after the meeting of experts had ended, the Czechoslovak Prime Minister paid an official visit to Budapest. It was during his meeting with the Hungarian Prime Minister that the latter contradicted the assurances given to Czechoslovakia in early June by the Hungarian Commissioner Extraordinary (that the decision to suspend work on the Project involved only Nagymaros). There is no officially agreed record of this visit, but it is known that in the discussion of the G/N Project, the Hungarian Prime Minister made it clear that Hungary's suspension also applied to the Gabčíkovo part of the Project and, in particular, to the work remaining to be done at Dunakiliti; and, consequently, that the scheduled damming of the Danube in 1989 would not take place - resulting in at least a year's delay. He also presented alternative scenarios that would have had the effect of suspending the entire Project for periods from one to five years. The Czechoslovak Prime Minister responded that he would have to give the proposals careful study and could not give Hungary an answer to them at the meeting.

4.36 Immediately afterwards, the Hungarian Government approved the position taken by the Prime Minister at the meeting, apparently on the false assumption that the Czechoslovak Prime Minister - because he had not formally objected - had agreed to delay the Project for at least a year and to not proceed with the damming on schedule in 1989. Czechoslovakia rejected immediately this abusive interpretation of the Hungarian Government concerning the Czechoslovak position:

- The Czechoslovak Ambassador in Budapest presented an Aide-Mémoire on 25 July correcting some of the Hungarian misstatements³¹;
- A meeting between Plenipotentiaries was held in Bratislava on 3 August at which the Czechoslovak Plenipotentiary reiterated the position of his Government as initially stated on 15 May, expressed astonishment at the extension of the 13 May decision of Hungary to the entire Project, and again reminded Hungary of Czechoslovakia's

³¹ Annex 66.

intention to claim damages for these unilateral acts of Hungary in conflict with the 1977 Treaty³²;

- The meeting was followed on 8 August by a letter from the Czechoslovak Plenipotentiary to his Hungarian counterpart protesting against the unilateral act of Hungary which caused the postponement of the damming of the Danube and reserving Czechoslovakia's right to claim compensation and damages³³.

4.37 Following these communications, a Czechoslovak Note Verbale of 18 August set out the official position of Czechoslovakia³⁴, from which key paragraphs are quoted below:

"Without waiting for the response of the Czechoslovak side to its proposals of July 20, 1989, the Hungarian side has taken measures to realize them. This concerns in particular the decision not to dam the old riverbed of the Danube which the Hungarian side was to carry out in the Gabčíkovo section in October 1989 in tune with the timetable of work.

The Federal Ministry of Foreign Affairs deems it necessary to point out that the Czechoslovak side has so far always proceeded from the fact that the decision of the [Hungarian Government] of May 13, 1989 on the temporary two-month suspension of work on the part of the Hungarian side applies only to the Nagymaros stage. This was being confirmed by the Hungarian side at all talks held so far.

The [Czechoslovak Government] has not changed its position of May 15, 1989 and continues to insist on the honouring of the Treaty.

* * *

The [Czechoslovak Government] at the same time reserves itself the right to claim compensation for the damage which will be caused in the future as a result of unilateral decisions of [Hungary].

* * *

The [Czechoslovak Government] requests that the Hungarian authorities take such measures that would provide for the fulfilment of all obligations included in the [1977 Treaty] in terms so far agreed."

³² Annex 67.

³³ Annex 68.

³⁴ Annex 69.

4.38 Then in a strongly-worded letter to the Hungarian Prime Minister dated 31 August 1989, the Czechoslovak Prime Minister responded specifically to the 20 July proposals of Hungary³⁵. He started off by saying that:

"The common denominator of all the variants contained in your proposals is that they are all aimed at marring the completion of the Gabčíkovo-Nagymaros system of locks or of its Nagymaros part in accordance with treaty documents in force."

He then informed the Hungarian Prime Minister that, after a thorough examination of all the variants contained in his proposal by the appropriate Czechoslovak bodies and its scientific, technical and economic institutions, Czechoslovakia insisted that the construction of the G/N System continue in accordance with the 1977 Treaty. As to the alleged ecological risks he stated:

"On the basis of a comprehensive evaluation of the entire problem, we concluded that all the alleged principal risks you point to were taken into consideration already before and during the course of construction of the Gabčíkovo-Nagymaros system of locks. Negotiations between Czechoslovak and Hungarian scientists, technicians and economists following the suspension by the Hungarian Government of work on the construction of the Nagymaros part after May 13 of this year failed to produce any arguments for postponing the realization or for changing the concept of construction of the system of locks as agreed in the treaty documents."

This of course was a reference to the recent meeting of experts discussed above. He went on to say that if Hungary should decide, at variance with its international legal obligations, to proceed unilaterally with any of the variants proposed on 20 July, Czechoslovakia would suffer extensive losses for which it would present a claim. The Czechoslovak Prime Minister concluded this letter with this warning:

"We shall have to take in this context such measures on the sovereign territory of [Czechoslovakia] which will guarantee the amount of water for the Gabčíkovo part specified in the [1977 Treaty]. The measures taken by the Czechoslovak side would be only temporary since [Czechoslovakia] will remain ready to complete the construction of the Gabčíkovo-Nagymaros system of locks under the above Treaty on the condition that [Hungary]

³⁵ Annex 71.

shows the same will and that it compensates [Czechoslovakia] for the damage caused to it by the unlawful steps by [Hungary]."

After receipt of this letter, Hungary was left in no doubt of the seriousness with which Czechoslovakia regarded Hungary's recent decision to suspend performance under the 1977 Treaty.

4.39 On 1 September 1989 Hungary delivered a Note Verbale responding to the Czechoslovak Note of 18 August³⁶. In the Hungarian Note, the following points were made:

- First, Hungary had extended to 31 October 1989 the suspension of work at Nagymaros first announced on 13 May;
- Second, during the period of suspension, further investigation of the ecological risks was to be started, and no irreversible technical measures were to be taken; this implied, therefore, that the preparatory work to dam the Danube at Dunakiliti was to be included within the range of activities suspended;
- Third, the two variants of the Project proposed by Hungary's Prime Minister on 20 July were again proposed to be considered in the course of jointly reviewing whether the G/N Project was feasible: joint research was to be conducted over a period of one year or, alternatively, over a period of three-to-five years, with ecological guarantees and an optimal operational system to be developed; and international scientific organisations would be brought in to help with this work;
- Fourth, during a meeting of the Plenipotentiaries and experts in Budapest held on 21-23 August, the Hungarian side had asked what was meant by references made by Czechoslovak experts to "technical countermeasures" contemplated in the light of the suspension of work at Dunakiliti; the Hungarian Government warned that on the basis of

³⁶

Annex 72.

information it had received from Czechoslovakia the taking of any such measures would be regarded by Hungary as a breach of the 1977 Treaty.

The Hungarian Note Verbale of 1 September complained that 40 days had elapsed since Hungary's proposals had been made and there was still no reply to them from the Czechoslovak side. Of course, as seen above, the Czechoslovak Prime Minister had in fact set out his Government's response to the proposals in a letter to the Hungarian Prime Minister the day before the Hungarian Note Verbale was delivered.

C. Czechoslovakia's Consideration of Provisional Measures

4.40 Although the Czechoslovak Prime Minister's letter of 31 August was the first time that Czechoslovakia formally advised the other side that it was contemplating the taking of "temporary" or provisional measures, there had already been some discussion of such a move among the experts at the meeting of 21-23 August, as the Hungarian Note of 1 September reveals³⁷. What had triggered the Czechoslovak Government's decision to consider provisional measures was the extension of Hungary's decision to suspend work, which initially affected only Nagymaros, to the Gabčikovo section and, in particular, to work at the Dunakiliti site preparatory to the damming of the Danube planned to start in October 1989. This extension of Hungary's breach of the 1977 Treaty had the effect of postponing the scheduled damming of the river by a year and, hence, it postponed the filling of the reservoir and the bypass canal as well as the initial testing of the hydroelectric power plant at Gabčikovo (also by one year). The Czechoslovak Government felt compelled to consider taking provisional measures because it had become increasingly clear that the Hungarian Government was really stalling for time in order to gain another year of delay.

4.41 As the Czechoslovak Note of 18 August 1989 pointed out, steps had been taken by Hungary to implement its unilateral decision to postpone work at Nagymaros and at Dunakiliti even before being advised of Czechoslovakia's reaction to the Hungarian proposals of 20 July³⁸. And, as the Czechoslovak Prime Minister emphasised in his letter of

³⁷ Annex 72. See, also, Annex 70, a protocol of the 21-23 August meetings. In discussing Variant "C" in this Memorial, the term "temporary" is used interchangeably with "provisional", the latter being the term found in the Special Agreement to describe Variant "C".

³⁸ See, Annex 69.

31 August responding to the 20 July proposals³⁹, Hungary had produced no new scientific data or studies during the intervening meetings and exchanges that pointed to risks that had not already been fully examined before or during the course of construction of the Project. This was in fact the conclusion set out in Czechoslovakia's Statement of 12 July 1989 after its study of Hungary's two documents presented on 26 June⁴⁰. It was at this point, then, that Czechoslovakia began to examine alternative temporary measures that might be taken and to initiate scientific studies into the effects of such measures, matters that are taken up in the next Chapter.

4.42 The decision of Czechoslovakia to consider temporary measures of some kind in order to carry out the agreed purposes of the 1977 Treaty - whilst allowing for the possibility of Hungary's resumption of the performance of its treaty obligations - evidently came as a surprise to the Hungarian Government. Until then it seems to have been assumed in Budapest that merely by raising the spectre of ecological disaster - without any new scientific data to back up such predictions and even in the face of the complete disagreement of the Czechoslovak scientists - Hungary could force the Czechoslovak Government to accept postponement of the G/N Project while these allegations were being examined by experts, perhaps over a period as long as five years and, indeed, until they were resolved by agreement, which might never occur. Czechoslovakia's response indicated that agreement would have to be reached over the existence and nature of environmental emergencies posited by Hungary and over whether remedial measures - new or already contemplated by the Project - were adequate to deal with them, before accepting postponement or deciding whether or how the 1977 Treaty needed to be amended.

4.43 Not surprisingly, this move by the Czechoslovak Government led to a flurry of meetings. There were two meetings between the Deputy Prime Ministers as well as meetings of legal experts of both countries, and on 11 October 1989 the Prime Ministers again met briefly. In the meantime, on 4 October, the Hungarian Prime Minister responded to the 31 August letter of the Czechoslovak Prime Minister⁴¹. His letter reflects the fact that Hungary had started to place emphasis on legal as well as scientific reasons in its attempt to block proceeding with the G/N Project.

³⁹ See, Annex 71.

⁴⁰ See, para. 4.12, *et seq.*, above.

⁴¹ Annex 74.

4.44 The Hungarian Prime Minister's letter of 4 October was sent following the unilateral decision taken by Hungary not to proceed to dam the Danube - an operation that Hungary controlled since it involved the Dunakiliti weir, which lay on the Hungarian side of the boundary⁴². The letter is a statement of the Hungarian position at the time, in which the following assertions appear:

- That "many highly regarded representatives of science" - not identified - had pointed to "serious ecological risks" if the Project proceeded as planned;
- That where environmental damages are perceived, States have the right and obligation to suspend work and to commence negotiations and that there are no grounds for claims for damages;
- That for Czechoslovakia to proceed with "technical measures" on its own territory would seriously affect relations between the two countries and lead to international repercussions;
- That the ecological risks were such that they could not be dealt with in the course of carrying out the Project on the basis of monitoring the environmental impacts and taking corrective measures.

4.45 The Hungarian letter then put forward several proposals:

- First, that an agreement be reached "on the preparation and accomplishment of the programme of the comprehensive technical operation and ecological guarantee system protecting protecting

⁴² See, Illus. No. 25, referred to at para. 2.39, above.

the water quality" to be concluded not later than 30 July 1990⁴³;

- Second, that international scientific institutions be asked to check adherence to the system of guarantees of water quality;
- Third, that peak hour operation be eliminated and that negotiations to modify the 1977 Treaty be undertaken so as to make changes in the Treaty reflecting the abandonment of Nagymaros.

D. Possibilities of a Compromise

4.46 The 4 October letter of the Hungarian Prime Minister was followed by a Hungarian Note Verbale of 30 October 1989⁴⁴. On the same day, also in a Note Verbale, the Czechoslovak Government presented its own position in response to the matters taken up at a meeting between Prime Ministers held a few days earlier (on 26 October)⁴⁵. This meeting was the last meeting of importance held prior to the changes in the Governments of both countries arising from the political events affecting Central and Eastern Europe after November 1989.

4.47 In Hungary's 30 October Note Verbale, the Czechoslovak Government was informed of the position just reached by the Hungarian Council of Ministers after reviewing the various talks that had taken place between the parties. The Council's position was submitted to the Hungarian Parliament and approved by it on 31 October, as the Czechoslovak Government was informed in a second Hungarian Note Verbale of 3 November⁴⁶. The following were the principal elements of this position as related in the Hungarian Notes:

⁴³ Hungary's inconsistent conduct is again brought out here, for it will be recalled that the Hungarian side refused to sign the protocol of the meeting of the Chairmen of the ESTC Committee on 3 May 1989, specifically dealing with water quality. See, para. 3.24, above.

⁴⁴ Annex 75.

⁴⁵ Annex 76.

⁴⁶ Annex 77.

- That an "ecological state of necessity" would arise if the G/N Project were to be put into effect in its present form;
- That Hungary proposed that such an ecological emergency be avoided by the abandonment of the peak hours operation system and, instead, that the system be limited to a normal flow operation; thus Hungary had abandoned the Nagymaros part of the Project;
- To "minimise" the risks that a normal flow operation might entail, that Hungary considered it necessary to prepare and conclude an inter-governmental agreement over the various aspects of the rest of the Project, i.e., the Dunakiliti weir, the reservoir, the hydroelectric power station at Gabčikovo, the bypass canal, and the section of the Danube downstream as far as Nagymaros;
- That it was also necessary to consider an inter-governmental agreement on (i) protection of water quality, (ii) technical operational maintenance and (iii) a system of ecological guarantees; and to determine executive responsibilities for creating an ecological system of guarantees to assure safe operation; and
- That, the "precondition of filling up" the Dunakiliti-Hrušov reservoir was the conclusion of such an inter-governmental agreement, but that:

"... in the event of a Czechoslovak statement to be willing to conclude such an intergovernmental agreement, the preparatory work of the damming up of the riverbed at the reservoir can be continued."

4.48 Czechoslovakia's reaction to these proposals was highly constructive. The Czechoslovak Note presented to the Hungarian Government on the same day, 30 October⁴⁷, directly addressed Hungary's proposals discussed at the 26 October meeting:

⁴⁷ Annex 76.

- It accepted the idea of an inter-governmental agreement as outlined by Hungary;
- Provided Hungary started without delay the preparatory work on damming the Danube, the Czechoslovak Government was ready at once to negotiate such an inter-governmental agreement, and it suggested the end of March 1990 as the deadline for signing the agreement;
- With a view to attempting to dam the Danube in 1989, it was proposed that the competent agencies of each party agree on the technical principles of the intergovernmental agreement, to be initialled by the Deputy Ministers of Foreign Affairs within a fortnight, whereupon Hungary would proceed to dam the Danube;
- It was also accepted, in the light of fears on the Hungarian side of the possible ecological effects of peak operations, that a special agreement be concluded in which peak operation would be limited or excluded after technical studies had been concluded, and the Czechoslovak Government proposed to cancel the provisions of the 1989 Protocol advancing the Project schedule by 15 months, insofar as it concerned Nagymaros, in order to give the Hungarian side this additional time in which to study the ecological questions.

4.49 The closing paragraphs of this Note Verbale (of the Czechoslovak Government) made it clear that its position and proposals had been put forward on the basis that they were in conformity with the 1977 Treaty and that Czechoslovakia saw no reason for amending the Treaty as Hungary had proposed. More specifically, Czechoslovakia was not prepared to agree to the simple abandonment of the Nagymaros part of the Project, and if Hungary should do so unilaterally, a claim of compensation for damages would be made. Finally, the Note once again repeated Czechoslovakia's willingness to negotiate an inter-governmental agreement concerning the parts of the Project other than Nagymaros - where the two Parties remained divided. But Czechoslovakia warned that, should Hungary continue to fail to fulfil its obligations as to these other parts of the Project, in breach of the 1977 Treaty, Czechoslovakia would have to proceed to the realisation of a "provisional

substitute technical solution" on its own sovereign territory and to draw the quantity of water from the Danube that had been agreed by the parties under the Joint Contractual Plan.

4.50 The last of the documents in the diplomatic exchanges of 1989 is a Hungarian Note Verbale of 30 November 1989 to which was attached a draft of proposed modifications to the 1977 Treaty⁴⁸. The effect on the G/N Project of the proposed amendments to the Treaty would have been the following:

- In order to avoid an alleged "critical ecological situation", peak hours operation would be eliminated and construction at Nagymaros would be suspended;
- If "ecologically acceptable conditions" were agreed, the rest of the Project would be completed and put into operation;
- Preparatory work to deflect the Danube at the Dunakiliti weir would proceed if Czechoslovakia was willing (i) to accept the proposed Treaty modifications to suspend construction at Nagymaros, (ii) to conclude an agreement on ecological guarantees, and (iii) to enter into the intergovernmental agreement described in earlier dispatches.
- However, the damming of the Danube would occur only after conclusion of the agreement on ecological guarantees.

E. The Position of the Parties at the End of 1989

4.51 Thus, as the end of 1989 approached, the contrasting positions of the parties may be described as follows:

- First, Hungary insisted on amending the 1977 Treaty to reflect the abandonment of peak hours operation and the abandonment of work at Nagymaros; Czechoslovakia was willing to suspend work at Nagymaros and to modify or even eliminate peak hours operation

⁴⁸ Annex 78.

should that be recommended on the basis of studies of the ecological effects during the additional 15 months made available as a result of cancelling the 1989 Protocol in respect to Nagymaros; thus, Czechoslovakia could not accept the Hungarian proposition to amend the Treaty at that time;

- Second, the parties were in general agreement over negotiating inter-governmental agreements concerning the other parts of the Project and in order to deal specifically with ecological guarantees;
- Third, Hungary had effectively gained one year before the damming of the Danube could take place, by making it a condition of Hungary's proceeding with work at Dunakiliti that Czechoslovakia agree to the proposed Treaty amendments concerning Nagymaros.

4.52 The positions of both sides had reached a stage where a compromise solution seemed entirely possible. Hungary had succeeded in securing Czechoslovakia's agreement to study the downstream effects of peak hour operation at Gabčikovo and, in the meantime, at least to delay work at Nagymaros. The Czechoslovak proposal to revert to the earlier schedule would give the parties an additional 15 months for such study. In addition, by its unilateral act of stopping work at Dunakiliti, Hungary had postponed the damming of the river by a year, allowing time for further study of the ecological effects of the various parts of the Gabčikovo operation and also to prepare and enter into separate agreements, including ecological guarantees. Czechoslovakia agreed to accept such a proposal even suggesting a deadline of the end of March 1990 for completion of the agreements. This would ensure that the damming of the Danube could take place the following year, in October 1990.

4.53 There are two other matters to note concerning the events of 1989. First, Hungary's breaches of the 1977 Treaty - initially as to the Nagymaros section of the Project and then as to Gabčikovo - were decisions taken by the Hungarian Government before the change in regime there. Second, the ecological emergency that Hungary claimed to exist if the Project went forward concerned only Nagymaros and the peak hours operation at Gabčikovo. Other environmental and ecological risks were contemplated by both parties as capable of being dealt with by agreements between the two Governments.

4.54 It is important to keep these points in mind as the broadening of Hungary's breaches of the 1977 Treaty after 1989 are reviewed in the pages that follow. For Hungary voiced its concern over the ecological effects of the Project before the occurrence of the historic changes that took place in both countries. The environment was not some new factor discovered - or liberated - after the political changes occurred. Moreover, the real ecological effects that Hungary claimed to fear in 1989 had to do with Nagymaros and the effects of peak hour operations at Gabčíkovo, not with the other parts of the G/N Project.

SECTION 3. The Period from January 1990 to 23 April 1991: Hungary Forecloses Negotiation

A. The Hardening of Hungary's Position

4.55 Not long after the Prime Minister of the new Czechoslovak Government had assumed office, he received a letter concerning the G/N Project from Hungary's Prime Minister, Miklós Németh, who had held the office of Hungarian Prime Minister during the 1989 negotiations. This letter, dated 10 January 1990, adopted a quite different stance from that taken by Hungary in the diplomatic exchanges of 1989 just discussed⁴⁹.

4.56 By 10 January 1990, the new Czechoslovak Prime Minister had had little chance to give the Hungarian proposals of 30 November any real study, for they had been received during the height of the political turmoil in Czechoslovakia, and the new Government had been appointed on 10 December 1989, only a month before the receipt of this letter.

4.57 Hungary's letter of 10 January appears to reflect the assumption in Budapest that, after the political changes, Czechoslovakia would be receptive to a reconsideration of the G/N Project, using environmental factors as the pretext. The opening paragraph of the letter gives a negative account of the 1989 negotiations and fails to give

⁴⁹ Annex 79. See, paras. 4.46 - 4.50, above.

adequate consideration of the movement toward a compromise at the end of 1989. Then, the letter continues:

"I am in receipt of an increasingly greater amount of information regarding the fact that now, in the midst of your significant effort to build a new society, you are finally able to sacrifice some time to the questions concerning our common section of the Danube. The Hungarian government welcomes the commencement of new scientific studies in Czechoslovakia on the questions of the joint reservoir and the Gabčikovo hydroelectric power plant. I believe that the political and social reform process in our nations has finally broken down the wall which obstructed the revelation of the true environmental effects of the Barrage System and for the preparation and execution of a decision which is in the long term interests of the peoples of both our nations.

* * *

"History at the present time offers us the opportunity to reassess the Barrage System in depth governed by natural science, technical and economic considerations, freed from the fetters of the earlier political decisions made by our Governments."

4.58 It was not difficult for Prague to detect in this an attempt by Hungary to abort the G/N Project. Indeed, in the ensuing paragraphs of the letter the Hungarian Prime Minister makes the following proposals:

- Not to hold now the negotiations over the proposals for amending the 1977 Treaty made by Hungary in its Note Verbale of 30 November 1989⁵⁰;
- Instead, to engage in a joint scientific study, with the involvement of "international scientific organizations", of the "complex ecological effects" of the Gabčikovo section of the Project, and to make the commencement of the section of the Project dependent on the results of the study;

⁵⁰

This move by Hungary brings out how misleading is the statement in para. 13 of Hungary's 1992 Declaration that the "Government of the Czechoslovak Socialist Republic never replied to this proposal" of 30 November 1989. It was Hungary, in fact, that withdrew this proposal.

It is necessary to pause here to note that what was to be negotiated was only the Gabčíkovo section of the Project, not Nagymaros. For Hungary, the abandonment of the Nagymaros section and the question of peak hour operation were no longer negotiable subjects. The 10 January letter then goes on to propose:

- To modify the 1977 Treaty or conclude a new treaty based on the results of the study of the ecological effects of the Gabčíkovo section;
- To conduct and assess the results of the joint study within the first half of 1990; and in the second half of the year to start to negotiate Treaty amendments so that the new Governments of both States would be involved in this decision;
- To stop construction work on the G/N Project within this period except for preserving the existing "status quo".

4.59 Further, the letter reported that Hungary had already cancelled its private contracts for the works at Nagymaros and that Hungary's position as to the "permanent" abandonment of the Nagymaros section remained unchanged. In June 1990, Hungary was to cancel its private contracts concerning the work at Dunakiliti and elsewhere. The cancellations of these contracts, thereby incurring substantial termination costs to the Austrian and Yugoslav firms concerned, were irrevocable acts taken by the Hungarian Government to halt the Nagymaros and Gabčíkovo sections of the Project in further breach of the 1977 Treaty. They were hardly actions that preserved the "status quo" and they were taken before new joint research projects had even been commissioned.

4.60 The new Czechoslovak Prime Minister sought to read the Hungarian letter in a positive light in his brief reply of 15 February⁵¹, saying:

"In accordance with the proposals mentioned in your letter and in the [Hungarian Note] of November 30, 1989, I voice support for an immediate resumption of bilateral talks which could lead above all to a joint course so that the Gabčíkovo part could be put into operation during the year 1991⁵²."

⁵¹ Annex 80.

⁵² This would require that the damming of the Danube take place starting in October 1990.

He proposed that any specific changes to the 1977 Treaty or other treaty documents be prepared for discussion in June 1990.

4.61 Of course, Prague's letter could be seen as not entirely responsive to the Hungarian proposal, and this was pointed out in the Hungarian Prime Minister's reply of 6 March⁵³:

"While I welcome the support for the resumption of the bilateral negotiations, I determine with regret your refusal to take part in the decision of the fate of the Gabčíkovo Barrage via well founded and objective scientific and specialist examinations which I had initiated in my letter."

What the Hungarian Government was, in effect, saying was that, not only had Nagymaros been abandoned - and was no longer a subject for negotiation - but the Gabčíkovo works also were no longer to be carried out in accordance with the 1977 Treaty unless and until this was determined on the basis of "well founded and objective scientific and specialist examinations".

4.62 The Hungarian letter of 6 March 1990 cannot be read without concluding that, even before the governmental changes that occurred in Hungary in May 1990, Hungary had virtually written off the G/N Project and was seeking to secure the agreement of Czechoslovakia to abandon it as well. Thus, Czechoslovakia was invited to settle, *i.e.*, to abandon, "a gigantic investment fiasco":

"Let us not squander this historical opportunity provided by the social changes taking place.

The handling of this issue includes not only the settlement of the fate of a gigantic investment fiasco but also a question affecting the social ties of Hungary and Czechoslovakia and the national happiness for the people of the two countries."

This was an argument based not on ecological, but on economic, grounds; and Hungary's position became even more clear after the change in Government in Hungary. In the general

⁵³ Annex 81.

political program announced on 22 May 1990, it was declared that the G/N Project had been "mistaken" and that its abandonment should be negotiated with Czechoslovakia.

B. The First Involvement of the European Communities

4.63 During the remainder of 1990 there were meetings between the Plenipotentiaries and the environmental ministries, but the political events taking place in both countries slowed down any progress towards an attempt to find a solution to the dispute. However, this period did give rise to one important development, in the form of the agreement reached under the EC PHARE Program for a joint project entitled: "Surface Water and Ground Water Model of Danubian Lowland between Bratislava and Komárno: Ecological Model of Water Resource and Management⁵⁴." The project had been initiated and negotiated with the EC PHARE Program by Czechoslovakia, and on 6 September 1990 the Czechoslovak Plenipotentiary proposed to his Hungarian counterpart to file a joint application. On 26 October 1990, the Czechoslovak Plenipotentiary forwarded to the Hungarian Commissioner for Danube Affairs a proposed agreement between the two Governments providing for joint participation in this important study of environmental protection⁵⁵. This was followed by a visit to Budapest on 7 November 1990 by the Czechoslovak Plenipotentiary, together with Professor Mucha, the Czechoslovak hydrology expert, to discuss Hungary's participation.

4.64 The response of the Hungarian Government, as expressed in a letter of 15 November 1990, was carping and negative⁵⁶. The letter misdescribed the proposed agreement as being a bilateral project between Czechoslovakia and the PHARE Program, with Hungary in the position of a mere consultant. The draft agreement forwarded to Hungary by the Czechoslovak Government was nothing of the kind; the two parties were to participate jointly in the study. Although Hungary did not flatly reject participation in the project, it insisted on a restructuring so as to place it under the auspices of the Hungarian Academy of Science or the Technical University at Budapest. Further talks demonstrated

⁵⁴ See, para. 4.02, above, and related fn., as well as Annex 57, for a description of the PHARE Program and of this particular project.

⁵⁵ Annex 82.

⁵⁶ Annex 83.

Hungary's lack of interest in the project and ended in Hungary's failure to participate in this study of one of the most critical environmental aspects of the G/N Project.

4.65 In an attempt to deal with the accusations made by Czechoslovakia at an earlier meeting to the effect that Hungary was not proceeding with research, Hungary's 15 November letter enclosed a list of documents on the basis of which the Hungarian decisions were claimed to have been based⁵⁷. In its reply of 21 November, Czechoslovakia indicated that the list of materials annexed to Hungary's 15 November letter was disappointing and did not fulfill Czechoslovakia's expectations⁵⁸.

4.66 Nevertheless, some indication of progress toward broadening the bilateral talks between the Plenipotentiaries and the environmental ministers to a trilateral format to include the EC is reflected in the letter of the Hungarian Prime Minister of 14 December 1990⁵⁹. He called upon Czechoslovakia also to take steps to appoint members to the proposed joint inter-governmental committee to which the EC would appoint some experts to assist. In his reply of 15 January 1991, the Czechoslovak Prime Minister confirmed that similar steps had already been taken by his Government⁶⁰. He expressed Czechoslovakia's "agreement with talks with the Hungarian side on the comprehensive solution of problems of the [G/N Project] at the level of government delegations" as well as his belief that these measures should help lead to a solution.

4.67 Thus, once again, the parties seemed to be making progress toward getting technical talks underway. But the time for damming the Danube had passed for a second year running; and the promised Hungarian technical studies had yet to be furnished. Although talks were continuing, there remained a very real question as to how productive these talks could be in the light of the statement of the new Hungarian Government in its policy declaration of 22 May 1990 that the G/N Project was a "mistaken project" and that

⁵⁷ It was promised that at the scheduled mid-December meeting Hungary would furnish further materials. This did not happen. The letter also stated that expert working groups had been formed within the framework of the Hungarian Academy of Science, as had been agreed at the September meeting.

⁵⁸ Annex 84.

⁵⁹ Annex 85.

⁶⁰ Annex 86.

Hungary would initiate negotiations in effect to scuttle the Project and to share the resulting damages with Czechoslovakia. It was clear that Hungary had not changed its point of view since then.

4.68 On 22 April 1991, there was a meeting of the recently appointed delegations, at which position papers were exchanged⁶¹. According to the summary of the discussion prepared by Czechoslovakia after the meeting⁶², both sides confirmed the validity of the 1977 Treaty. There followed a candid exchange of views. Hungary insisted that joint research in order to assess the ecological impacts of the Project could only begin after Czechoslovakia had agreed to suspend work on the Project. It proposed that the joint studies be conducted up to the end of October 1991. The Czechoslovak delegation rejected this position on the basis that Hungary had produced no scientific evidence to establish the need for such a suspension, characterising what had been received so far from Hungary in the way of materials as "science fiction". Czechoslovakia was willing to participate in expert studies but insisted that this work be completed by July 1991 so that a joint decision could then be reached on the basis of the scientific evidence. Such a deadline was necessary to avoid the loss of a third year under the original schedule for the damming of the Danube. At the end of the meeting a joint Declaration was issued in which the importance of continuing negotiations was stressed⁶³. It was stated in the Declaration that agreement had been reached that the Academies of Sciences of each country would continue their cooperation and research, bringing in experts and specialised institutions.

C. The Proceedings of the Hungarian Parliament

4.69 It was in this setting, and before any meetings of the governmental delegations had occurred, or any further joint research had been undertaken, that the Hungarian Parliament, on 23 April 1991, *i.e.*, the very next day after this meeting, announced in a resolution its conclusions concerning the G/N Project⁶⁴. Briefly summarised, these were the following:

⁶¹ The new Prime Minister of Slovakia headed the Czechoslovak delegation.

⁶² Annex 87.

⁶³ Ibid.

⁶⁴ Annex 88.

- That putting into operation the G/N Project would "result in serious ecological and economic damage throughout the affected region";
- That the Hungarian Government was charged with the task of negotiating with the Czechoslovak Government regarding the termination of the 1977 Treaty and related instruments by joint agreement;
- That a new treaty should be concluded to settle the issue of the consequences of the non-construction (abandonment) of the Project, according to the following priorities, in the order listed:
 - Restoration and preservation of the ecological and natural values of the region, particularly in respect to protecting the drinking water supply;
 - Flood protection;
 - Development of shipping in accordance with the region's natural conditions.

Pending the carrying out of these tasks, the Hungarian Parliament determined that works aimed at completing the Project should continue to be suspended and it charged the Government to negotiate to reach agreement with Czechoslovakia on this. It also requested the Government to discontinue state investment in the G/N Project and to start an audit of the expenditures made to date. This legislative resolution would appear to have been fully in line with the policy statement of the new Hungarian Government on 22 May 1990.

4.70 As had been the case when some progress toward a solution to the dispute seemed to be occurring at the end of 1989, so in the spring of 1991, when some progress again seemed possible and when Hungary undertook to make available research studies claimed to have been the basis of its decisions in breach of the 1977 Treaty, Hungary abruptly put an end to any such progress by ordering the commencement of negotiations to terminate the Project. In contrast to the suspension announced in the Hungarian Prime

Minister's letter of 6 March 1990, the resolution of the Hungarian Parliament in April 1991 was not made dependent on the outcome of environmental studies yet to be conducted. The outcome was pre-judged before the environmental questions could be examined jointly.

4.71 The decision of the Hungarian Parliament on 23 April 1991 was another turning point in the negotiations between the parties. For by its decision the Hungarian Parliament tied the hands of the Hungarian Government in any future negotiations⁶⁵. Henceforth the sole object of such future negotiations for Hungary was to put an end to the G/N Project.

SECTION 4. The Period between 23 April 1991 and the End of 1992

A. Czechoslovakia's Continued Attempts to Broaden the Negotiations to Include the EC: Postponement of Damming for a Third Year

4.72 In the course of negotiations between the two Governments on 14-15 July 1991, Czechoslovakia again proposed broadening the negotiations by establishing a tripartite commission composed of representatives of Czechoslovakia, Hungary and the EC to consider all the variants to the G/N Project that might be submitted to them by 31 July⁶⁶. The Hungarian side responded that its limited mandate resulting from the Hungarian Parliament's resolution of 23 April 1991 did not permit it to consider any proposal that did not contemplate negotiating over the termination of the 1977 Treaty⁶⁷.

4.73 On 30 July 1991, the Prime Minister of the Slovak Republic sent a letter to the Hungarian Prime Minister⁶⁸. This was shortly after the Slovak Government by Resolution No. 384 of 23 July 1991⁶⁹ and the Government of the Czech and Slovak Federal Republic by Resolution No. 484 of 25 July 1991⁷⁰ had approved preparations for putting

⁶⁵ This is well illustrated by the protocol of the meeting of Plenipotentiaries on 10 July 1991 (Annex 89) at which agreement was reached on relatively few issues. It was at this meeting that Czechoslovakia informed Hungary of its plans to start pumping water from the Danube on 27 July.

⁶⁶ Annex 90.

⁶⁷ See, para. 4.69, et seq., above.

⁶⁸ Annex 93.

⁶⁹ Annex 91.

⁷⁰ Annex 92.

into operation Variant "C", provoking a Hungarian response the following day. The Slovak Prime Minister expressed his regret that during the period of transition which their two countries were undergoing there had not been a complete identity of views on some questions, mentioning in particular the G/N Project. He then informed the Hungarian Prime Minister that Czechoslovakia had decided to put the Gabčokovo part of the Project into operation on the basis of a provisional solution. In this frank and notably courteous letter, the Slovak Prime Minister pointed out that:

"Both [G]overnments⁷¹ made this decision after a thorough evaluation and are convinced that the alternative of not completing of the system of locks is the least acceptable also from an ecological point of view."

The Slovak Prime Minister went on to say that from the start of construction great attention had been given to examining and studying the matter of ecological risks; and he said that they intended to continue to conduct such studies and to inform Hungary of the results.

4.74 The exchanges and meetings continued:

- On 30 July 1991, the same day as the letter of the Slovak Prime Minister, Hungary sent a Note Verbale to Czechoslovakia requesting that work at Gabčokovo be halted and, in particular, the steps taken on 27 July to start filling the bypass canal with water pumped from the Danube⁷².
- On 12 August 1991, the Hungarian Prime Minister responded to the Slovak Prime Minister's letter of 30 July in a letter to the Prime Minister of the Czech and Slovak Federal Republic⁷³. It was moderate in tone, suggesting that further talks should result in a common solution.

⁷¹ I.e., the Government of Slovak Republic and the Government of the Czech and Slovak Federal Republic.

⁷² Annex 94.

⁷³ Annex 95.

- On 27 August 1991, Czechoslovakia presented a Note Verbale to Hungary in response to the Hungarian Note of 30 July⁷⁴. Although expressing appreciation for the efforts of Hungary to keep the talks going, and mentioning the earlier meetings on 22 April and 15 July between governmental delegations, the Czechoslovak Note observed that no constructive conclusions had been reached and noted that the Hungarian delegations now had only the limited mandate of negotiating the termination of the 1977 Treaty. Whilst the Note emphasised that the decision to proceed with a provisional solution did not preclude in any way the continuation of the talks, it rejected the Hungarian argument that continuation of the work in this manner was in violation of international law. The Note also contained this positive suggestion:

"Provided the Hungarian side submits a concrete technical solution aimed at putting into operation the Gabčíkovo system of locks and a solution of the system of locks based on the 1977 Treaty in force and the treaty documents related to it, the Czechoslovak side is prepared to implement the mutually agreed solution."

- On 11 September 1991, at the invitation of the Hungarian Parliament, the Czechoslovak Minister for the Environment addressed a joint session of several committees of that body. He stressed the impossibility of reaching a solution to the dispute whilst Hungary had such a limited mandate governing its participation in negotiations⁷⁵; subsequently, the Chairmen of the three Hungarian Parliamentary Committees issued a joint statement dated 1 October 1991 emphasising the need for further talks stating that the dispute involved an "expert - scientific matter", and declaring that it would be desirable to engage experts from third countries or from international organisations⁷⁶.

⁷⁴ Annex 96.

⁷⁵ Annex 97.

⁷⁶ Annex 98.

B. The Position of the Parties at the End of 1991

4.75 The positions of the parties at the end of 1991 and the start of 1992 were summed up in the letters exchanged between the Prime Ministers on 18 and 19 December 1991 and 23 January 1992⁷⁷. The Czechoslovak position was that a tripartite commission to study the issues be created, with participation of foreign experts named by the EC - a proposal it had already made on 15 July 1991. The Hungarian position was (i) that ecological aspects had been ignored in the planning of the G/N Project, (ii) that it had suspended work at Nagymaros and then at Dunakiliti because of the almost certain ecological emergency that would result if the Project went forward, and (iii) that Hungary would not agree to going ahead with joint research into the expert and scientific problems involved unless Czechoslovakia stopped work on the Project. In his response of 23 January 1992, the Czechoslovak Prime Minister summed up his Government's position in this way:

- He stressed the importance to his country of the G/N Project, asserting that the 1977 Treaty remained in force;
- Therefore, Czechoslovakia was prepared to fulfill its obligations and complete the Project whilst minimising any adverse ecological impacts;
- He reviewed the history of Hungary's unilateral breaches as from 13 May 1989 as well as the ensuing negotiations;
- He pointed out that, although both parties agreed that the final solution of the dispute depended on an expert, scientific assessment, Hungary had failed to furnish any supporting studies whereas Czechoslovakia had, in the meantime, studied the matter, and a list of these expert studies had been given to Hungary in December 1991;
- He informed Hungary of Czechoslovakia's decision:

⁷⁷ Annexes 99, 100 and 102. Annex 101 is a letter dated simply "December 1991", which is similar to the Hungarian Prime Minister's letter of 19 December, and was sent by the Chairman of the Hungarian Parliament to his Czechoslovak counterpart.

"... In order to minimize the spread of economic and ecological damage on the Czechoslovak territory, to optimally exploit the available power potential and to create necessary conditions for navigation on the Danube, the Government of the Czech and Slovak Federal Republic decided on December 12, 1991 to put the Gabčíkovo part into operation and to complete its construction on the territory of the Czech and Slovak Federal Republic.

In any case, this decision does not violate international law and does not exclude further talks on the possibility of finding a joint solution with regard to the construction of the Gabčíkovo-Nagymaros system of locks.

In accordance with the conclusions of talks of government delegations and on the basis of the joint statement of the Committee for the Protection of Environment of the National Assembly of the Republic of Hungary and the Committee for Environment of the Federal Assembly of the Czech and Slovak Federal Republic of October 11, 1991, the Czechoslovak side confirms its interest in creating a joint commission of experts with the participation of experts from the European Communities. The Czechoslovak side is also prepared to take into consideration the results of the commission's activities within the further course of solving the problem of construction of the Gabčíkovo - Nagymaros system of locks. Provided these conclusions and results of monitoring the test operation of the Gabčíkovo part confirm that negative ecological effects exceed its benefits the Czechoslovak side is prepared to stop work on the provisional solution and continue the construction upon mutual agreement.

In this respect I recommend a joint request to the [EC] to speedily appoint its experts to the joint Czechoslovak - Hungarian expert commission so that this body could start its activities as soon as possible⁷⁸. " (Emphasis added).

4.76 In the meantime, the Parliaments of the parties were holding joint meetings of their respective Committees for Environment, as reflected in the letter of 27 January 1992 from Mr. Alexander Dubček, the Chairman of the Czechoslovak Federal Assembly, to his Hungarian counterpart⁷⁹. It expressed the hope that further discussions might lead to a common solution, as the following quotation indicates:

⁷⁸ Annex 102 (Emphasis added).

⁷⁹ Annex 103.

"Mr. President, I believe that our positions are very close ... and that our meeting in Budapest in [the] presence of representatives of our Committees may become an appeal [to] the Governments of both Countries. In my view, the Parliaments should not assume the role of the Governments. But we could open the doors for the Governments to continue the negotiations to prevent a deterioration of our good neighbourly relations."

C. The End to a Possible Compromise Solution: the Purported Termination of the Treaty by Hungary

4.77 The 23 January letter of the Czechoslovak Prime Minister was followed by a Hungarian Note Verbale dated 14 February 1992 calling the decision of the Czechoslovak Government of 12 December 1991 to proceed with Variant "C" a unilateral act that was, inter alia, in violation of the 1977 Treaty and the 1976 Boundary Waters Management Agreement⁸⁰. Czechoslovakia responded by Note Verbale of 18 March 1992⁸¹. There then followed an exchange of long and more detailed letters between the two Prime Ministers on 26 February and 23 April⁸². These exchanges reflected the fact that the dispute had reached a point where further negotiations after almost three years of talks were not likely to lead to a solution. The main points set out in the Hungarian letter of 26 February 1992⁸³ were the following:

- That the G/N Project was approved under the faulty decision-making mechanisms of the former political regimes at a time when both countries were ignorant of the "irreversible, damaging ecological consequences";
- That the evaluation of the "most serious ecological risks" of the Project, by both Hungarian and "the leaders of the foreign experts" - persons or groups unnamed in the letter - was that the commencement of operations at Gabčíkovo would lead to a drastic and considerable interference in the natural order, such as:

⁸⁰ Annex 104.

⁸¹ Annex 105.

⁸² Annexes 106 and 108.

⁸³ Annex 106.

- Irreparable damage to the most significant drinking water resources of Hungary and Czechoslovakia;
- A lowering of the ground water level with the resultant loss of the region's excellent agricultural and forest lands and the "degradation and annihilation of natural and environmental values";
- That the "region's seismological links and the related dangers had not been revealed"⁸⁴;
- That the Czechoslovak experts had produced no study to prove that the expected damages and risks were not realistic.

4.78 The Hungarian Prime Minister adhered to the line that trilateral discussion could begin only if Czechoslovakia suspended construction. He asserted that Variant "C" was a violation of the 1977 Treaty and that Hungary's suspension of work starting in 1989 was not a Treaty violation in the light of the existence of a state of ecological emergency. Finally, he threatened that if Czechoslovakia did not stop work on the Project, Hungary would be placed in a "position of duress forcing it to terminate the Treaty".

4.79 In the reply of the Czechoslovak Prime Minister by letter of 23 April 1992⁸⁵, which supplemented the Czechoslovak Note Verbale of 18 March, a number of key points were made:

"The Government of the Republic of Hungary, since May 13, 1989, when it unilaterally, without any consultations with the Czechoslovak side, and in violation of the 1977 Treaty, suspended the fulfilment of its obligations arising from this Treaty, has not submitted any document based on scientific and technical reasoning which would confirm the fears of the Hungarian side of an ecological catastrophe. In this connection I was astonished by the part of your letter in which

⁸⁴ See, para. 2.60, et seq., and para. 4.30, above, for evidence of the total incorrectness of this allegation.

⁸⁵ Annex 108.

you had stated with surprise that the Czechoslovak experts had not submitted to the Hungarian side any document proving that the fears of the Hungarian side were groundless. It is beyond any doubt that it is the Hungarian side which is supposed to prove its assertions about the threat of an ecological catastrophe and propose a solution which would respect the state of work done within the construction of the Gabčikovo - Nagymaros system of locks as well as the overall ecological situation in the respective area. It is to be regretted that it has so far not done so.

Nearly three years have elapsed since the unlawful decision of the Hungarian Government, during which the Czechoslovak side carried out a whole series of studies and project works aimed at seeking an optimum solution of the problems of the Gabčikovo - Nagymaros system of locks acceptable for both sides. The [Czechoslovak Government], too, considers the protection of underground waters and ecological systems as task[s] of paramount importance. The above-mentioned research, however, has not confirmed the fear of the Hungarian side of an ecological catastrophe."

- The Prime Minister stated that the seismic questions had been actively pursued and settled between the Academies of Sciences of the two countries;

- He stressed the fact that Hungary's suspension of work three years before had posed a series of serious ecological, economic and other problems that required attention:

"As a result of the construction of water dams in the German and Austrian sections of the Danube, the volume of sediments deposited by river has begun to decrease substantially which has led to the development of erosive activity of the Danube in the section downstream of Bratislava. The water level of the Danube has sunk over the past decade by 1 - 1,5 metres thus cutting off a number of its branches, for instance in the Mosoni Danube, and therefore there was no water in it for 300 days in 1991. Unless appropriate measures are speedily taken, the flood plain forests in the area will be doomed to destruction. Another serious ecological problem is the 25 kilometres long and an average of 350 metres wide bypass canal, so far unused, built in our territory not only by Czechoslovak but also by Hungarian organizations on the basis of the 1977 Treaty."

- The Prime Minister pointed out that the flood threat and the navigation problems remained unresolved;

- He stressed the importance of using the Danube as a source of electrical power;
- He accused Hungary of blocking tripartite research with EC participation by imposing the condition that construction on the Project be halted;
- Asserting that Hungary from the very start had not advanced a single constructive proposal, he opened the door for continued negotiations with the following statement:

"[The Czechoslovak Government] is ready to negotiate with the [Hungarian Government] all aspects connected with the implementation of the 1977 Treaty I recommend that scientific and technical questions be discussed above all by the Plenipotentiaries of our two Governments, as provided for in Article 3 of the 1977 Treaty. ... The Czechoslovak side has shown sufficient [willingness] and readiness for negotiations but at present it can no longer accept procrastinations and delaying tactics of the Hungarian side, and thus cannot suspend work on the provisional solution. In my opinion, there is still time, until the damming of the Danube (i.e. until October 31, 1992), for resolving disputed questions on the basis of agreement of both states.

I repeat again that the [Czechoslovak Government], which was the first to have proposed the setting up of a joint Commission of experts, with the participation of experts from the European Communities, continues to be interested in its establishment without any preliminary conditions and is ready to take into consideration its conclusions and recommendations within further decision-making concerning the problem of the construction of the Gabčíkovo - Nagymaros system of locks. The Czechoslovak side expects the Republic of Hungary to make a similar statement."

4.80 On 13 April 1992, Mr. Andriessen, Vice-President of the EC Commission, had confirmed that they "in principle would be willing to assist the two Governments in identifying a technically and economically feasible solution to this serious problem"⁸⁶. Hence, attached to the Czechoslovak Prime Minister's letter of 23 April (just

⁸⁶ Annex 107. The Czechoslovak Prime Minister replied on 24 April (Annex 109) expressing his country's readiness to accept the EC Commission's proposal and attaching a proposed joint letter from the two countries which he had already sent to Hungary.

discussed above) was a proposed joint letter to be signed by the two countries proposing EC participation on the conditions set out by Mr. Andriessen.

4.81 It was in these circumstances, when once again some progress toward fruitful negotiations seemed possible, that on 7 May 1992 the Hungarian Government adopted a Resolution purporting to terminate the 1977 Treaty⁸⁷. This was responded to by a Resolution and Declaration by the Slovak Government on 11 May declaring Hungary's unilateral action of 7 May to be null and void⁸⁸. The decision of Hungary was formally notified to Czechoslovakia by Note Verbale of 19 May⁸⁹ and in a letter of the same date from the Hungarian Prime Minister to the Czechoslovak Prime Minister, attached to which was a 40 page Declaration of Hungary explaining in detail its action⁹⁰. Czechoslovakia responded by Note Verbale of 22 May 1992 reaffirming its view that Hungary had no legal grounds to terminate unilaterally the 1977 Treaty and the Agreements related to it and reserving its rights to respond to Hungary's arguments and to present a claim for damages⁹¹.

4.82 Thus, Hungary's declaration of the termination of the 1977 Treaty, to take effect on 25 May 1992, marked an end to the three-year period of negotiations to resolve the dispute over the G/N Project. Hungary had succeeded in postponing the damming of the Danube for three successive years, during which time no new scientific studies of Hungary to justify its suspension of the G/N Project had been undertaken. In the light of these developments, the Czechoslovak Government had been left with little choice but to go ahead with the completion of Variant "C", as a provisional measure. Once again, Hungary's decision had come at a time when there had seemed to be some movement toward a compromise, for the EC Commission had indicated that it was prepared to join the negotiations and to try and work out a resolution of the conflict⁹².

⁸⁷ Annex 110.

⁸⁸ Annex 111.

⁸⁹ Annex 112.

⁹⁰ Annexe 113. The Declaration (referred to herein as Hungary's "1992 Declaration") was first mentioned at para. 1.53, above, and is Annex 17 hereto.

⁹¹ Annex 114.

⁹² See, the Czechoslovak Prime Minister's letter to the Hungarian Prime Minister of 6 August 1992, Annex 117.

4.83 As a first step, the Czechoslovak Government notified the Vice-President of the EC Commission of the developments that had occurred, in a letter dated 22 May 1992⁹³. The letter still expressed hope of resolving the dispute:

"... Mr. Vice-President, please allow me to convey the opinion of the Czechoslovak Government that the conflict can be resolved on the basis of the 1977 Treaty. I do not see a solution in submitting drafts of new treaties but rather in negotiations on the basis of existing treaty documents in force. [Czechoslovakia] is prepared to demonstrate an appropriately forthcoming and flexible attitude. High Czechoslovak representatives have suggested a willingness to discuss conditions under which work on the substitute technical solution (Variant "C") might be suspended.

I am convinced that the great prestige enjoyed by the European Communities both in Czechoslovakia and in Hungary will allow further assistance and good offices of your Commission to contribute to an acceptable solution."

4.84 The Czechoslovak Government then notified the Danube Commission on 5 August 1992 of its plans to start damming the Danube in the period 15 October to 30 November, which would entail the interruption of shipping for about 10 days during that period⁹⁴. The Hungarian representative on the Danube Commission sent to the Commission letters of protest against this action⁹⁵.

D. The First Steps Toward Going to the Court: August-October 1992

4.85 In a letter from Hungary's Prime Minister of 18 August 1992 to the Czechoslovak Prime Minister, the submission of the dispute to the International Court of Justice was formally proposed for the first time⁹⁶. The question proposed to be submitted concerned only proceeding with Variant "C", as if this alone comprised the dispute between Czechoslovakia and Hungary as to the G/N Project. The response of the Czechoslovak Government came in a letter from its Prime Minister of 23 September 1992⁹⁷.

⁹³ Annex 115.

⁹⁴ Annex 116.

⁹⁵ Annex 118.

⁹⁶ Annex 119.

⁹⁷ Annex 121.

4.86 The 23 September letter recalls, first, that despite repeated requests Hungary had never substantiated with "concrete evidence" the fears and doubts expressed by it over proceeding with the G/N Project. The letter continues, second, to recall the steps taken to involve the EC Commission in the negotiations and how in May 1992 the two sides "were very close to reaching an agreement on involvement of the EC Commission in settling the dispute", but then Hungary refused to take part in the first trilateral talks that were convened, but not held, in Vienna on 18 May. Third, the letter emphasises that Variant "C" - a "provisional technical solution" - did not involve "diverting the Danube", as Hungary's 18 August letter described it, but rather the exploitation of part of the Danube waters, as agreed in the 1977 Treaty, in order to minimise damage caused by Hungary's unilateral acts, starting on 13 May 1989, in violation of the 1977 Treaty.

4.87 Then the letter turns to a fourth point, asking the question whether the proposal to go to the Court was intended to put a "full stop" to further talks aimed at using the good offices of the EC Commission. If so, Czechoslovakia considered it to be a step backwards for:

"It would mean in fact the opening of new talks on referring the dispute to the International Court of Justice ... without any reason for hope that these new talks would be easier than those held so far. The process of seeking means of settlement of the dispute would thus again be prolonged and damages caused to [Czechoslovakia] by the course taken by the Hungarian side would continue to increase."

The Czechoslovak Prime Minister goes on to stress that time was of the essence and that the dispute concerned more than just the legal aspects of the problem - for example, it also concerned the "ecological aspects so much stressed by the Hungarian side", which the EC Commission could help to resolve in the light of research work conducted in the recent past by Czechoslovakia as well as of the partial results under the EC's PHARE project. It was possibly through politeness that the Czechoslovak Prime Minister did not categorise Hungary's new tactic as deliberately dilatory: in fact, the Hungarian proposal to divert attention to a different set of negotiations (in order to frame a compromis as a basis of referring only the question of Variant "C" to the Court) had the additional, if disguised, aim of postponing the damming of the Danube for yet another year. This is brought out in the exchange of letters between Foreign Ministers of 14 and 23 September 1992⁹⁸. In the

⁹⁸ Annexes 120 and 122.

meantime, as the letter of 30 July 1992 from the Vice-President of the EC Commission to the new Czechoslovak Foreign Minister demonstrates⁹⁹, the EC Commission remained ready to help.

4.88 On 28 September 1992, the Hungarian Prime Minister replied to the 23 September letter from the Prime Minister of Czechoslovakia¹⁰⁰. Whilst he made it clear that he would urgently ask for the initiation of negotiations to prepare a compromis to be submitted to the Court, he agreed with the conclusion drawn in the 23 September letter that the dispute included aspects that "could be jointly assessed...through the establishment of a trilateral expert committee including [EC] specialists". The Czechoslovak Prime Minister responded on 2 October 1992¹⁰¹, welcoming the fact that Hungary had accepted:

"... without any preliminary conditions, the proposal for opening talks of experts of our Governments aimed at preparing a joint request to the EC Commission as well as the mandate for the trilateral commission as it corresponds to our previous proposals."

4.89 The 2 October letter commented on the decision to proceed with Variant "C" in the following manner:

"The realization of the provisional technical solution does not involve the diverting of the Danube but only the exploitation of part of the Danube waters in a way envisaged in the 1977 Treaty. The provisional technical solution project is built only on the territory of [Czechoslovakia] and does in no way affect the State border line. Therefore I do not agree with your claim that it jeopardizes the sovereignty and territorial integrity of the Republic of Hungary. The Czechoslovak side has been undertaking on its territory only what has been agreed upon in the 1977 Treaty and the treaty documents related to it. As soon as the Republic of Hungary resumes the fulfilment of its obligations arising from the 1977 Treaty, [Czechoslovakia] is ready to complete the Gabčíkovo-Nagymaros system of locks on the basis of the jointly agreed plan."

The letter continued to address the proposal to refer the dispute to the Court:

⁹⁹ Annex 124.

¹⁰⁰ Annex 123.

¹⁰¹ Annex 125.

"At present when time is a very important factor, I consider it imperative to accomplish above all talks on the participation of the EC Commission in the resolution of the dispute. The opening of new talks on referring the dispute to the International Court of Justice in The Hague would mean impeding the results of the talks held so far between the two sides and the EC Commission. Under the Czechoslovak Constitution the procedure for consideration and approval of the proposal for referring the dispute to the International Court of Justice is very time-consuming."

4.90 It was in these circumstances that the final events occurred bringing to an end this phase of the history of the dispute:

- On 23 October 1992, Hungary filed with the Court an application, dated 22 October, entitled: "Application of the Republic of Hungary v. The Czech and Slovak Federal Republic on the Diversion of the Danube River"¹⁰².
- On 24 October 1992, Czechoslovakia started to dam the Danube.

4.91 However, prior to concluding this history of the dispute up to 1992, it is necessary to address briefly the involvement of the EC during this same period.

SECTION 5. The History of EC Involvement up to the End of 1992

4.92 The repeated attempts by Czechoslovakia to broaden the bipartite negotiations and studies into a tripartite format with EC participation, particularly with respect to scientific aspects, have been described earlier in this Chapter, starting with the participation by Czechoslovakia (but not Hungary) in the EC's PHARE project¹⁰³. During the period November 1990 to the end of 1991, Czechoslovakia presented proposals aimed at expanding the negotiations so as to include experts named by the EC Commission. These proposals, however, encountered the difficulty that after the Hungarian Parliament's Resolution of 23 April 1991, the representatives of Hungary asserted that they had only a limited mandate - to negotiate the termination of the 1977 Treaty - and it did not allow the

¹⁰² See, fn. 3, above.

¹⁰³ See, paras. 4.63-4.68, above.

consideration of such proposals¹⁰⁴. And when EC involvement became increasingly likely to occur, Hungary argued that no discussions could begin until after Czechoslovakia had suspended all work on the G/N Project¹⁰⁵. Less than a month after the very positive exchanges in April 1992 between the Czechoslovak Government and the EC¹⁰⁶, the Hungarian Government adopted a Resolution (on 7 May 1992 with effect from 25 May) to terminate the 1977 Treaty if trilateral negotiations failed to take place by 15 May and if by that time Czechoslovakia had not ceased to perform all work on the Project¹⁰⁷.

4.93 Czechoslovakia informed the EC of these negative developments on 22 May 1992¹⁰⁸; meanwhile the EC had already acted to attempt to bring the parties together. A meeting in Vienna was scheduled by the EC for 18 May 1992 and Czechoslovakia and Hungary were invited to attend. The Czechoslovak Government approved participation in the meeting and accorded its representatives a broad mandate including entering into discussions concerning under what conditions work might be halted on Variant "C", but it rejected the cessation of work as a pre-condition to holding the meeting and starting the negotiations. At the last minute (on 17 May), Hungary announced that it would not attend this meeting; and on 19 May 1992 Czechoslovakia received official notice of Hungary's purported termination of the 1977 Treaty.

4.94 The 30 July letter of Vice-President Andriessen of the EC, which responded to Czechoslovakia's 22 May report concerning the deteriorating situation, affirmed the fact that the EC continued to be willing to offer its good offices¹⁰⁹. This led to an agreement in principle between the Governments of Czechoslovakia and Hungary to establish a tripartite expert commission. The Hungarian Prime Minister's letter of 28 September to the Czechoslovak Prime Minister, agreeing to the establishment of the

¹⁰⁴ See, paras. 4.69-4.71 and 4.75, above.

¹⁰⁵ See, para. 4.78, above.

¹⁰⁶ See, para. 4.80, above.

¹⁰⁷ See, para. 4.81, above.

¹⁰⁸ See, para. 4.83, above.

¹⁰⁹ See, para. 4.87, above, and Annex 124.

commission, for the first time laid down no pre-conditions to the start of discussions¹¹⁰. But this proved to be illusory, for when the two parties met on 13 October to draft a joint request to the EC, Hungary resurrected the pre-condition that Czechoslovakia suspend at once all work to dam the Danube, a condition that the Czechoslovak Government rejected. For the damming had already been put off for three consecutive years (1989 to 1991), and the end of October - only a few days after the meeting - was the only time that this operation could be carried out¹¹¹.

4.95 After the failure of these negotiations, and with the damming of the Danube imminent, Hungary increased its political pressures on members of the EC, accusing Czechoslovakia, inter alia, of unilateral diversion of the navigation route onto Czechoslovak territory and violation of Hungary's frontiers. As a result, when trilateral discussions finally did take place in Brussels on 22 October 1992, Czechoslovakia found itself under pressure from the Commission of the EC to postpone the damming operation until at least mid-December 1992. As the Czechoslovak delegation explained, this was technically impossible: once conditions allowed the damming operation to start, it could not be postponed by even a day without postponing the operation for a fourth year. In the light of the state of the construction works and rising water levels, such a postponement would raise serious risks of flood damage - a fact confirmed a few weeks later when a major flood occurred - as well as risks to the safety of navigation.

4.96 At the 22 October meeting, in an attempt to reach a compromise with Hungary, the Czechoslovak delegation proposed, as confirmed in an Aide-Mémoire tabled at the meeting¹¹², that until the completion of the work of the tripartite commission the flow of the Danube would not be diverted from the main riverbed and the whole natural flow would continue to pass through the riverbed. This, of course, was only a short-term commitment, for the tripartite commission was expected to complete its mission by the end of October - and indeed the commission that was ultimately approved issued its report on 31 October 1992¹¹³. The trilateral discussions failed to lead to any decision to appoint a tripartite

¹¹⁰ See, para. 4.88, above, and Annex 123. It was however implicit in this letter that the tripartite commission's mandate would be limited to Variant "C" and would not comprise an examination of the whole G/N Project.

¹¹¹ See, para. 4.02, above.

¹¹² Annex 126.

¹¹³ Annex 20.

commission, however, because Hungary was not satisfied with Czechoslovakia's commitment as set out in the Aide-Mémoire and continued to insist on suspension of the damming as a condition of even appointing the commission¹¹⁴.

4.97 On 28 October, the United Kingdom, being the presiding country of the EC at the time, organised a meeting in London, attended by the Prime Ministers of the Visegrad Three (Czechoslovakia, Hungary and Poland), the British Prime Minister, Mr. John Major, and the President of the EC Commission, Mr. Jacques Delors. In order to prevent the G/N Project issue becoming an obstruction to the success of this meeting, it was suggested that Czechoslovakia and Hungary continue talks on ways of resolving their dispute, with the participation of the EC, at a separate meeting. Agreed minutes of the meeting were prepared and initialed by Czechoslovakia, Hungary and the EC¹¹⁵. The minutes summarised various conclusions reached:

- First, that all work on Variant "C" would be stopped at a date specified by the EC Commission on the basis of a fact finding mission to be composed of experts from each of the three parties: Czechoslovakia, Hungary and the EC. They were to report back no later than noon on 31 October - a mere three days after the meeting. In carrying out this mission to examine Variant "C", account was to be taken of: (i) risk of damage to existing structures and navigation; (ii) risk of ecological damage to the region; and (iii) risks of flooding (Spring 1993) or sudden surges.

- As part of this first conclusion - which made possible agreement on the three-day fact finding mission - Czechoslovakia undertook to guarantee the whole (defined as not less than 95%) traditional quantity of water into the "old Danube riverbed", including the sector between Rajka and Sap (Palkovičovo), and to refrain from operating the powerplant at Gabčíkovo.

¹¹⁴ See, Statement of Czechoslovak Foreign Ministry of 24 October 1992 (Annex 127). In this Statement, it was indicated that, during the period of the proposed Commission's mission, Czechoslovakia had also offered not to operate the Gabčíkovo power station.

¹¹⁵ Annex 128

- Second, to establish a working group of experts consisting of three experts named by the EC Commission (to be specialists in environmental matters, hydrology and "water architecture"), "assisted by" an expert appointed by each of Czechoslovakia and Hungary. This second group was to report its findings to the trilateral meeting to be held in Brussels "on a date to be agreed by the three parties (within 15 days), and make suggestions on urgent measures to be taken".

- Third, the specific tasks of the working group, all relating to Variant "C", were set out, namely, to consider: its impact on the environment, hydroelectrical and water aspects and navigation; its need and urgency in the light of flooding risk; and its reversibility and the cost of restoring the status quo ante.

- Fourth, to submit all aspects of the dispute relating to the G/N Project (legal, financial and ecological) to binding international arbitration or to the International Court of Justice; and it was stipulated that the findings of the working group of experts would not prejudice evidence produced within the context of these legal procedures.

- Fifth, that the minutes of the 28 October 1992 meeting were not to "prejudice the legal rights of the parties".

4.98 Thus, the fact finding mission (to report by 31 October 1992) and the working group of experts were two separate bodies with different missions or tasks, even though, in fact, some of the same people served on both bodies. It may be helpful to pause here to describe the different groups and reports that played an important role in this part of the history of the dispute. The various reports are considered in some detail in Chapters I, II and V. Listed in chronological order, the reports issued by the three different groups were four in number:

- The EC Fact Finding Mission concerning Variant "C": its report is dated 31 October 1992¹¹⁶;
- The EC Working Group of Independent Experts, just described: its report was issued on 23 November 1992¹¹⁷;
- The EC Working Group of Monitoring and Water Management Experts for the Gabčíkovo system of locks: its report was issued on November 1993¹¹⁸; and
- The same group as immediately above: which issued its "Report on Temporary Water Management Regime" on 1 December 1993¹¹⁹.

4.99 With regard to the London meeting of 28 October, the text of the agreed minutes shows that the commitment of Czechoslovakia to maintain at least 95% of the traditional quantity of water into the Danube riverbed and not to operate the Gabčíkovo hydroelectric power plant was intended to relate to a very short period - the three-day period during which the fact finding mission was completed *i.e.*, until 31 October 1992, when the report was issued. Such an interpretation is confirmed by the text of Czechoslovakia's Aide-Memoire tabled at the 22 October meeting¹²⁰.

4.100 However, it is apparent from the face of the document that these minutes were hurriedly prepared and their status between the parties was not entirely clear. At the EC's request, therefore, the Czechoslovak Government by letter dated 4 November 1992 notified the Commission that it had approved these minutes and went on to add:

"As regards the question of stopping work on the Variant "C" and the maintaining of waters in the original riverbed of the Danube, the Czech and Slovak Federal Republic will respect the positions of the fact-finding mission

¹¹⁶ See, para. 1.72 (and fn. 36), above, and Annex 20.

¹¹⁷ See, para. 1.19, above, and Annex 12.

¹¹⁸ See, para. 1.57, above, and Annex 19.

¹¹⁹ See, para. 5.04, above and Annex 33.

¹²⁰ See, para. 4.96, above.

and the expert working group which will be an important means of interpretation of the commitments arising from the Minutes¹²¹."

4.101 In the meantime, the fact-finding mission issued its report, on 31 October 1992. It confirmed that it would be technically possible to direct most of the water flow of the Danube back into the old riverbed from 1 January 1993: "It is technically possible to direct the main part of the discharge to the old Danube around January 1, 1993¹²²"

4.102 However, this issue was rendered irrelevant shortly afterwards as a result of meetings held in Brussels between Czechoslovakia, Hungary and the EC at the end of November and the beginning of December 1992. At the first such meeting, held on 27 November, it was agreed that Czechoslovakia and Hungary should apply, pending the Judgment of the Court, a temporary regime of management of the Danube waters¹²³. It was agreed that a further meeting should be held to finalise the necessary arrangements. At this second meeting, held 10-11 December, the central agreement in terms of the Danube water flow was that "further detailed technical discussions at experts level would take place in the near future with a view to accelerating the establishment of the temporary water regime¹²⁴". In other words, experts from either side, together with EC experts, would meet to recommend, inter alia, what flow should be dedicated to the Danube riverbed. In the event, this is exactly what happened and, on 1 December 1993, a document was produced entitled "Report on Temporary Water Management Regime"¹²⁵.

4.103 The actual operation of Variant "C" and its impact on the Danube lowlands is considered in detail in Chapter V, which follows.

¹²¹ Annex 129.

¹²² Annex 20.

¹²³ Annex 130.

¹²⁴ Annex 131.

¹²⁵ Annex 33. This report and its specific recommendations at Sections 9.3 were signed by the EC experts, but the Slovak and Hungarian experts signed the report only.

CHAPTER V. THE TEMPORARY SOLUTION: VARIANT "C"

5.01 The Hungarian decision to abandon the construction of Nagymaros and to suspend the work to be carried out in accordance with its remaining treaty obligations came at a time when the works on Czechoslovak territory were around 90% complete. The Czechoslovak side of the Hrušov-Dunakiliti reservoir, the bypass canal and the Gabčíkovo step were virtually finished and work on the protective measures associated with the Nagymaros section of the Project was underway. Thus, by May 1989, a total of US \$ 2.3 billion (CSK 13.8 billion) had been spent by Czechoslovakia on the G/N Project. It is therefore obvious that Hungary's decision placed Czechoslovakia in an impossible position, from a financial, a technical and an environmental point of view.

5.02 The purpose of this Chapter is to explain how and why Czechoslovakia responded to this new situation. In Section 1, the urgent technical problems caused by Hungary's unexpected withdrawal from the Project are examined. It is shown that this withdrawal caused Czechoslovakia immediate financial damage in terms of the measures in mitigation that it was forced to take. It is also shown that, in the context of the pressing need to resolve the technical problems caused by the delayed implementation, Czechoslovakia re-examined the Project by developing six new approaches to the G/N System - in the belief that Hungary might agree to the continuation of the Project in a modified form.

5.03 In Section 2, Slovakia gives some details of the modified version of the Project that it eventually selected, Variant "C". Without discussing the legal implications of Variant "C", it is shown that this modified version of the Project complies with the central aims of the parties to the 1977 Treaty. The selection procedure behind the decision to build a new weir upstream of Dunakiliti is examined as is the manner in which this new construction fits in with the existing structures built by the parties. The measures taken and the necessary modifications in the working of the G/N System are also explained.

5.04 Section 3 explains exactly what the operation of Variant "C" was intended to achieve, *i.e.*, its purpose, and what it has, in fact, achieved, *i.e.*, the result. Slovakia examines the actual impact of the modified implementation of the Project with particular emphasis being placed on the surface and ground water regimes. In this context,

Slovakia relies where possible on the evidence provided by the independent and up to date conclusions of the EC Working Group reports referred to in Chapters I, II and IV above. As already noted, the EC Working Group was formed of three EC appointed experts and one expert from each of Hungary and Slovakia. Its latest reports, "Assessment of Impacts of Gabčíkovo Project and Recommendations for Strengthening of Monitoring System" and "Report on Temporary Water Management Regime" were produced on 2 November 1993 and 1 December 1993 respectively¹. Finally, in Section 4 the temporary nature of Variant "C" is examined alongside the steps necessary to return to the operation of the G/N System as originally envisaged by the parties to the 1977 Treaty.

SECTION 1. The Practical and Necessary Steps Taken by Czechoslovakia as a Result of Hungary's Withdrawal from the Project

A. The Immediate Impact of Hungary's Withdrawal

5.05 In practical terms Hungary's withdrawal from the Project was as complete as it was unexpected. Czechoslovakia was suddenly stranded with a largely finished but inoperative System, which had been very expensive both in terms of financial cost and the cost of land lost for construction purposes. It was receiving no benefit from the System and the expected environmental benefits in terms of the halting of riverbed erosion and the restoration of the Danube side arms could not be realised. In addition, the constructions were exposed to the risk of deterioration through continued inoperation.

Loss of Anticipated Flood Protection

5.06 In its inoperative state the G/N System did offer some increased flood protection in terms of the improved dykes, which had been designed to be able to handle the effect of subsoil erosion. The new dykes were put to a severe test by the summer flood of 1991 which reached a level of 863 cm at Bratislava, that is 30 cm higher than the 1954 flood. These dykes were shown to fulfil their flood control function without excessive seepage or erosion problems, but the weakness of the old dykes was exposed in the section

¹ Annexes 19 and 33. These two reports are referred to as the "EC Working Group report of 2 November 1993" and the "EC Water Management report of 1 December 1993" respectively. It will be remembered that although the experts of both Parties signed the text of this last report, both also made an exception as to the report's final recommendations contained at section 9.3.

downstream of Dunakiliti and at the break in the river gradient at Sap (Palkovičovo). In effect, the efficient G/N System dykes simply channelled the flood problem downstream. However, this channelling effect was even more acute than at the time of previous severe floods due to two principal causes: the riverbed erosion at Bratislava, which increased the velocity of water flow, and the continuing sedimentation downstream at Sap (Palkovičovo), which increased the braking effect in the river. This was a widely acknowledged problem, testified to, for example, by the Hungarian hydrology expert, Dr. Vagas, who in 1991 was interviewed in the Hungarian newspaper, Kurír, and stressed the absolute necessity of the bypass canal in order to prevent devastating flooding in Szigetköz :

"Those who observed the flood of August 1991, were struck by the fact that the measured water levels at Vienna and Bratislava were 120 cm lower than the maximum level in 1954 flood, even in Budapest the level was by 50 cm lower than in 1965 flood. On the contrary, the water level at Dunaremete was of 30 cm higher than the maximum levels measured in the 1954 flood. The time bomb is [ticking]! It means that the section of the Danube near Dunaremete has been gathering and gathers the gravel-sand and this process has been known for hundred years...In the following ten years, a lower backwater of the Danube can cause a big flood catastrophe. A headwater canal was completed at Szigetköz which will protect Szigetköz against floods. Czecho-Slovakia will never dismantle this headwater canal for this reason. If Hungary does not allow that a part of the Danube water is drained to this canal in the event of a flood, thus, it can cause the break of the protection dyke because if gathered suspended load will reach its peak I can say only God save Szigetköz...I would say that this is the opinion of experts - hydrologists. But this is also the opinion of the Commission of water management of the Hungarian Academy of Sciences...The Hungarian Academy has never asked for the opinion of this Commission, even if its competence is indisputable²."

5.07 Put simply, there was an imminent danger of a further serious flood, or floods, unless the G/N Project was put into operation. This existed not only for Szigetköz as noted by Dr. Vagas, but also for the new "island" created between the right bank of the bypass canal and the left bank of the Danube³. In the case of a severe flood, the antiquated dykes protecting the three villages located on this island could have given way, covering this region with several metres of water. The impact would have been devastating because the

² Annex 34. Dunaremete is in Hungarian territory, not far from Gabčikovo.

³ See, for example, Illus. No. 23.

flood would be confined to the north by the bypass canal and would therefore be unable to escape and dissipate its waters⁴. The G/N Project structures were also at risk from flood waters, which were a potential cause of damage to any unfinished work. During high water levels in the Danube the bottom of the empty bypass canal, in particular in its upper section, was exposed to uplift hydraulic pressure from the rising river and ground waters. This pressure was potentially sufficient to lift and burst the canal's plastic sealing and its protective layer. It was thus essential to fill the canal, at least partially, to provide the necessary counter pressure. In addition, temporary flood control measures designed to protect the construction sites were rendered less efficient due to Hungary's inactivity in terms of the necessary excavation of the Danube riverbed downstream of Sap (Palkovičovo) and the resulting backwater effect. The resolution of such problems required the cooperation of Hungary or, at least, the implementation of the G/N Project in a restricted form.

Loss of Anticipated Navigation Capacity

5.08 As a result of Hungary's failure to dam the Danube and put the Dunakiliti weir into operation, the bypass canal was left empty of water. Czechoslovakia and Hungary were therefore forced to take steps to ensure continuing navigation on the Bratislava - Sap (Palkovičovo) stretch. This necessitated the dredging of some 320,000 m³ of gravel and sand from the main channel over the years 1990 to 1992. As a result, international navigation was able to continue to a degree, but the erosion of the riverbed upstream in the Bratislava section, which should normally have been reduced by the creation of the Dunakiliti reservoir, was aggravated. Thus, at the same time, in order to reduce erosion, some 33,000 m³ of stone was put into the Danube in an attempt to stabilise the riverbed. In spite of these remedial measures, it was nonetheless necessary to limit and even to halt navigation during the autumn and winter months due to insufficient water depth in the Sap (Palkovičovo) region. This caused financial loss both to Czechoslovakia and to other users of the international waterway.

⁴ The seriousness of this problem was manifested in August 1991 when these three villages were flooded by seepage water.

Loss of Anticipated Energy Production

5.09 For as long as the G/N System was left idle, it was impossible to produce hydroelectric power. This meant the loss to Czechoslovakia of its share of an annual energy production of 3675 GWh, most of which would have been of peak power quality i.e., of a greater than usual value⁵.

Loss of Environmental Protection

5.10 As the Project was left inoperative due to Hungary's refusal to dam the Danube, the erosion of the Danube riverbed continued unabated, with the resultant decrease in ground water levels. In several areas a critical point was reached at which the ground waters no longer reached the topsoil layer. As there is little or no capillary action in gravel, agricultural land in the upper part of Žitný Ostrov was drying up, although there was water still only a few metres below the surface. This effect was noted in the EC Fact Finding Mission report of 31 October 1992:

"Thus, the riverside vegetation is slowly drying out resulting in significant changes in vegetation species etc., and the conditions for agricultural water supply through capillary rise from the low ground water tables are no longer good enough and hence more irrigation is required⁶."

The region's forests were similarly under threat. The deterioration of conditions in the river side arms continued: the side arm system was left blocked off from the main river channel, the branches in many places being stagnant, silted up or completely dry⁷. The necessary measures in terms of increasing flow into the branches and the construction of underwater weirs in the Danube (to raise the water level and allow dispersal of flow into the side arms) were not feasible without the transfer of navigation into the bypass canal.

⁵ For further details, see, Chapter IX below.

⁶ The EC Fact Finding Mission report of 31 October 1992, op. cit., p. 13.

⁷ The EC Working Group report of 2 November 1993, op. cit., p. 10.

5.11 It cannot realistically be argued that this situation was acceptable from an environmental point of view. Due to man's interventions over many centuries, this stretch of the Danube was subject to severe environmental deterioration and, in the EC Working Group report of 23 November 1992, it was confirmed that simply returning the original discharge back to the Danube channel would not remedy this situation and, hence, that additional measures were required:

"During the last decades the channel system was changed to a quite unnatural stage. A Danube discharge nearly as high as in pre-dam conditions would not be sufficient to improve the ecological situation compared to October 1992. Measures could be taken to reduce sole erosion and to start natural processes.

Shallow under-water weirs in the main channel situated in front of river branches could increase the water level and ensure that the groundwater table will not be lowered.

Removing the thresholds between the main channel and the side branches will then enable splitting up the discharge so that the flow velocity and the pulling power will reduce.

Removing the fortifications from the banks of the main channel will allow the river to saturate its bed load deficiency by lateral erosion.

All these measures together will initiate natural processes that guarantee a sufficient ground water recharge, a high diversity of ecosystems and a reduction of sole erosion⁸."

Potential Deterioration of the G/N System Constructions

5.12 The G/N structures were designed to bear water. Concrete structures, such as the Dunakiliti weir, would not deteriorate due to lack of contact with water, but the bypass canal with its layers of concrete, plastic sealing and asphalt was not designed for long term exposure to atmospheric conditions and to possible vegetation growth. As the HQI report noted:

⁸ The EC Working Group report of 23 November 1992, *op. cit.*, at p.p 28-29.

"Le maintien prolongé hors de l'eau des parties conçues pour un fonctionnement submergé risque d'en diminuer la durée de vie et d'augmenter les risques de dégradation. Dans ce sens, une mise en eau anticipée du canal d'aménée paraît une disposition à considérer fortement⁹."

Translation:

"The prolonged exposure of those structures conceived so as to function in a submerged state to an out of water state risks to reduce the lifespan and to increase possibilities of deterioration. Thus, the inundation of the headwater canal would appear an arrangement to be strongly considered".

The bottom of the headwater section of the bypass canal is designed so as to form one continuous and impermeable surface. Continued exposure to atmospheric influence and to vegetation growth posed a real risk to the water retaining capacity of this surface.

5.13 According to the modified 1977 Treaty schedule, the canal should have been filled by December 1989. This, of course, did not occur. By the summer of 1991, Czechoslovakia was left with the simple choice of witnessing an irreversible deterioration of the canal or pumping water into the canal to protect at least the bottom surface. Thus, in July 1991, pumping from the Danube into the headwater canal began, a costly and time-consuming process which lasted more than one year, at the end of which a layer of water several metres deep protected the bottom surface. This could not be regarded as anything but the most temporary of solutions. Some means of implementing the G/N Project was thus urgently required.

B. Czechoslovakia's Reasoned Reaction: the Consideration of the Variants of the G/N System

5.14 Czechoslovakia's response to Hungary's withdrawal from the Project was to devise and offer for consideration a series of alternatives based on the G/N System. For the majority, these variants assumed that some form of continuation of the Project would be feasible, even if this involved its completion in a modified format or at a later date than originally agreed. However, two variants provided respectively for the indefinite postponement or cancellation of the Project. In total, Czechoslovakia considered six main variants of the agreed G/N System, which itself became known as Variant "A". Variants "B"

⁹ HQI report, op. cit., p. 83.

to "G" were each carefully studied and assessed for feasibility, without any preconception as to the suitability of any particular variant. Czechoslovakia's aim was to find the variant that would be acceptable to both parties, that would fulfil the broad aims of the 1977 Treaty and that would resolve the problems outlined in Section 1(A) above, while taking into account specific anxieties about the environment.

Variant "A"

5.15 This variant envisaged the completion of the G/N Project according to the 1977 Treaty with the Nagymaros step. Variant "A" is shown in the Gabčíkovo section in Illus. No. 32 by the green line. Nevertheless, by 1989 two sub-variants had been developed. Sub-variant "A1" simply provided for the original Project to be completed allowing for a flow of 50-234 m³/s into the left bank side arms. Sub-variant "A2", the preferred variant, allowed for the same measures in the left bank side arms together with water regulation measures in the inundation area along the old channel. It envisaged the construction in the Danube channel of underwater weirs (with a bypass for small vessels and fish migration) to raise the water level and that water discharge into the old channel would be increased to 350 m³/s.

Variant "B"

5.16 This assumed the completion of the original Project without the Nagymaros step (Illus. No. 32 - green line). This would mean that the water flow variations created by peak power production at Gabčíkovo would no longer be counter-balanced by the Nagymaros step. Consequently, hydroelectric production at Gabčíkovo would be limited to constant flow operation. Protective measures on Czechoslovak territory, aimed at flood control upstream of Nagymaros, would however be realised¹⁰.

5.17 It must be stressed that Variant "B" would have constituted a major alteration of the original concept of the G/N Project. The Project's aims would have been modified as follows:

- (i) Energy

¹⁰ Variant "B2" incorporated the same modifications as Variant "A2".



Bypass canal
(Headwater section)

Dunakiliti weir
(operational for Variants "A", "B", "D" and "E"; hydroelectric production under Variants "D" and "E" only).

Čunovo weir
(Variant "C")

GABCÍKOVO SECTION
COMPARISON OF VARIANTS STUDIED

- Variants "A" & "B"
- Variant "C"
- Variant "D"

Scale 1:100,000

0 1 2 3 4 5
Kilometers

0 1 2 3 4 5
Miles

- there would be no power production at Nagymaros;
- instead of peak power production at Gabčíkovo, only constant flow operation would be possible;
- the excavation of the Danube channel downstream of Sap (Palkovičovo) would not occur and, as a result, the head at the Gabčíkovo power plant would be lowered by 1 m, leading to a consequent drop in energy production.

(ii) International navigation

due to the fact that the excavation of the Danube channel downstream of Sap (Palkovičovo) would not be realised, unsuitable navigation conditions would remain in the section Sap (Palkovičovo)-Nagymaros.

(iii) Flood protection

again, due to the omission of excavation works, the water level at Sap (Palkovičovo) would in the case of high water discharges reach 117,25 m above sea level, endangering the adjacent territory with severe flooding.

Variant "C"

5.18 This variant, discussed in greater detail in Section 2 below, envisaged the operation of a temporary solution by means of the construction of a new weir on Czechoslovak territory, near the village of Čunovo . This would involve the reduction of the planned reservoir dimensions (Illus. No. 32 - blue line). It assumed that neither the Nagymaros Project, nor the Danube channel excavation downstream of Sap (Palkovičovo) would be realised immediately¹¹.

Variant "D"

5.19 This variant constituted a radical alteration of the original G/N Project, providing for its completion without the creation of a reservoir at Dunakiliti (Illus.

¹¹ This variant had 3 sub-variants as briefly described in Annex 35.

No. 32 - orange line). Construction of flood control dykes in the section Bratislava-Dunakiliti would then be required. Power would be produced by means of turbine installation at the Dunakiliti weir. There would be no channel excavation downstream of Sap (Palkovičovo) and no step at Nagymaros. Variant "D" would nonetheless attempt to provide safe international navigation by means of dredging to the minimum navigation depth of 3.5 m in impounded sections. This variant had 6 sub-variants¹². Although these are very different in scope, providing in some cases for the construction of a new weir and a new canal, each shares the common disadvantage of substantial additional investment requirement coupled with reduced energy production.

Variant "E"

5.20 Variant "E" was technically identical to Variant "B" but assumed that the bypass canal would be used only for navigation and flood control, save for when flows in the Danube exceeded 1,500 m³/s, in which case power production at Gabčíkovo would take place. The damming of the channel by means of the Dunakiliti weir would be carried out in accordance with the original Project, though there would be no construction at Nagymaros¹³. Again this variant would have involved substantial extra cost in the form of the construction of a new power plant at Dunakiliti. The result would however have been a significantly reduced power production, due both to the loss of peak operation and to the lower head of the river step at Dunakiliti (one third of the head of the canal step at Gabčíkovo).

Variant "F"

5.21 This variant provided for the "mothballing" of the Project. It envisaged that all the construction works would be stopped and that existing structures would be maintained in their present state and simply protected from deterioration. It would then be necessary insofar as possible, to return land to its original purpose. Similarly, it

¹² The 6 sub-variants of Variant "D" are briefly described in Annex 35.

¹³ Inflow discharge into the Dunakiliti reservoir up to 1500 m³/s would be directed into the old Danube channel, except for such water flow necessary for the operation of the navigation locks at Gabčíkovo. New hydroelectric power plant would be constructed at the Dunakiliti weir for power production. Inflows into the reservoir exceeding 1500 m³/s and up to 4000 m³/s would be used for power production at Gabčíkovo.

would be necessary, to provide for the re-establishment of infrastructure affected by the construction (communications, irrigation and drainage systems, for example). In addition, flood control methods to protect the adjacent areas would have to be provided.

5.22 Variant "F" was thoroughly considered in spite of the near completion of construction works on Czechoslovak territory. It was rejected because such a solution would have resulted solely in detriment to the environment, in terms of the unfinished nature of the construction activity and the extensive and continuous maintenance required. Moreover, it would have constituted a continuing and substantial investment for no return. Protection of the construction site against floods, protection of tens of kilometres of dykes against destructive climatic effects and protection of the headwater canal from vegetation growth constituted a huge financial burden, which Czechoslovakia would have had to bear alone. In addition, the temporary occupation of large areas of farmland for construction purposes would become permanent. At the same time the riverbed erosion of the Danube would continue with the accompanying and accelerated ground water level decrease in the area, leading in turn to the deterioration of the forest ecosystems and gradual aridification.

Variant "G"

5.23 Variant "G" provided for the gradual demolition of the Project structures, recultivation of the construction sites and restoration of the landscape into its original state. The full technical realisation of this variant was not possible. This was confirmed by Professor Schwarz in the University of Massachusetts study of May 1989:

"It has been suggested that the completed construction could be removed and original conditions restored. Such an attempt would likely cost as much or more than building it, and there is a question if total restoration is even possible. Even with spending inordinate amounts of money, major scars on the landscape would likely remain¹⁴."

It would be impossible, for example, to remove subterranean structures, such as sealing screens. Filling material for the tailwater canal and topsoil for land recultivation would also not be available in sufficient quantities. The gravel-sand material excavated from the canal had already been used elsewhere for dykes construction and concreting, while topsoil had been used for recultivation of idle land in other areas. As Professor Schwarz pointed out,

¹⁴ Annex 26, p. 31.

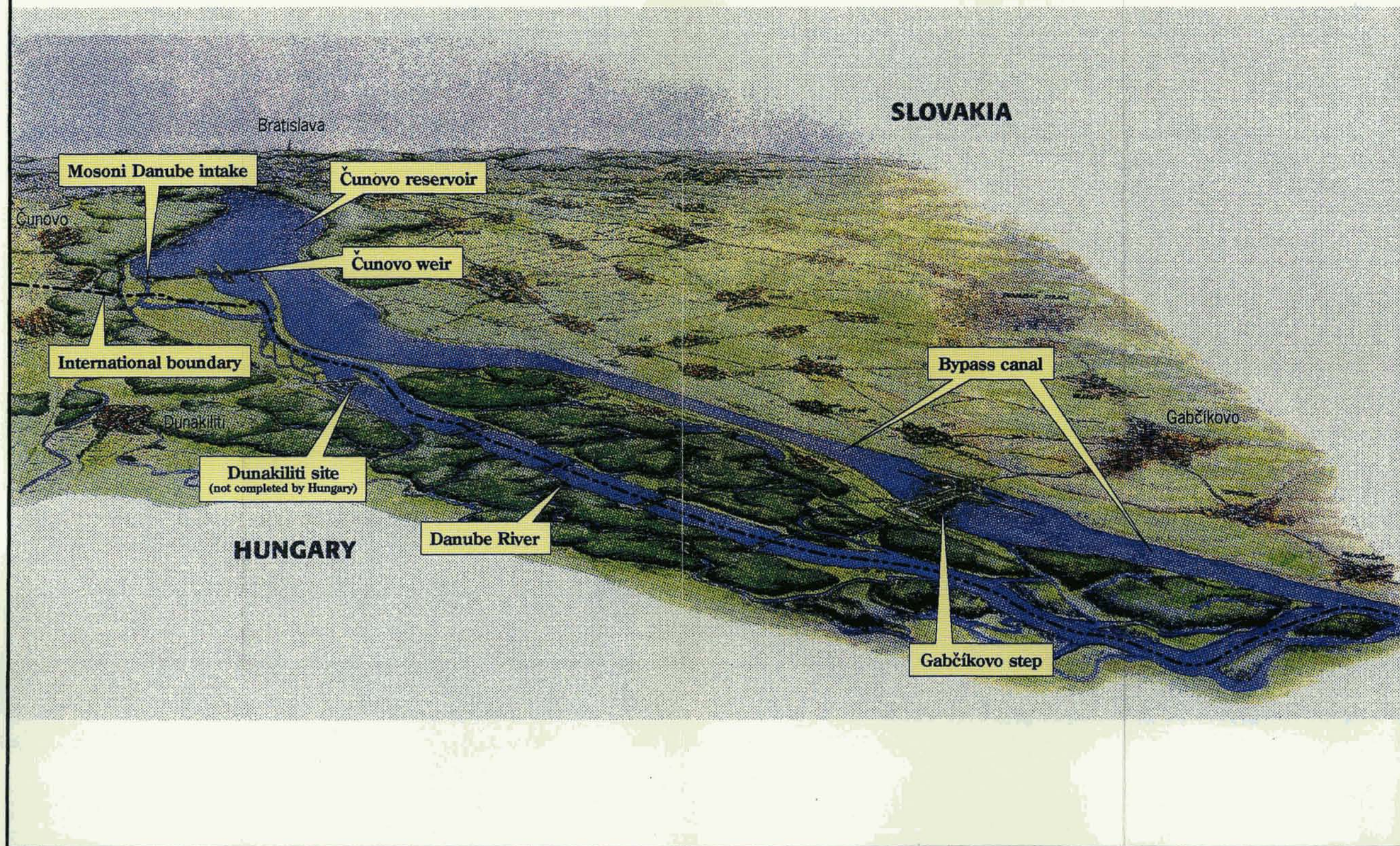
the process of removing the constructions would have been very long and inordinately costly. As with Variant "F", the parties would receive no benefit in terms of power production, improved navigation and flood control or in terms of the resolution of the riverbed erosion problem and the revitalisation of the side arm system. Variant "G" was therefore rejected as it countered the very purpose of the 1977 Treaty and failed to fulfil the development goals contained therein.

The Selection of Variant "C"

5.24 Each of the other variants was then carefully considered from four different points of view - economic, technical, ecological and social. As a result, the number of variants was reduced to three: variants "A2", "B2", "C2". In other words, in each case sub-variant 2 was favoured, which allowed, for environmental reasons, the higher flow of 350 m³/s into the old riverbed. Variants "D" and "E" were eliminated at this stage as they represented a radical move away from the original G/N Project, and could not be realised without Hungarian cooperation and consent. Cooperation in the form of Hungary meeting its 1977 Treaty commitments would, of course, have also been required for variants "A2", and "B2". Any variant providing for use of the Dunakiliti weir or for the construction of structures in the riverbed further downstream required Hungary's active involvement.

5.25 The consideration of variants was carried out openly; and at all stages, Hungary and Czechoslovakia were meeting at both the political and technical level, at some of which meetings the variants were naturally discussed. However, the decision of the Hungarian Parliament, taken on 23 April 1991, to instruct the Government to negotiate only the termination of the 1977 Treaty left the Czechoslovak Government with only two options: to await a change of mind on the part of Hungary to the end that it would meet its Treaty obligations or to fulfil to the largest possible extent the goals of the G/N Project by a modified implementation on Czechoslovak territory, that is by implementing Variant "C". But steps towards implementation of Variant "C" were not made without extensive and detailed research of its specific impacts on the Danube basin. From 1991 nearly ninety studies were carried out, a list of which, together with a brief summary of each study, appears as Annex 36. Such detailed research naturally continues today in the form of monitoring and the desire to take advantage of the latest techniques and methods of analysis.

VARIANT "C"





VARIANT "C"

Scale 1:100,000

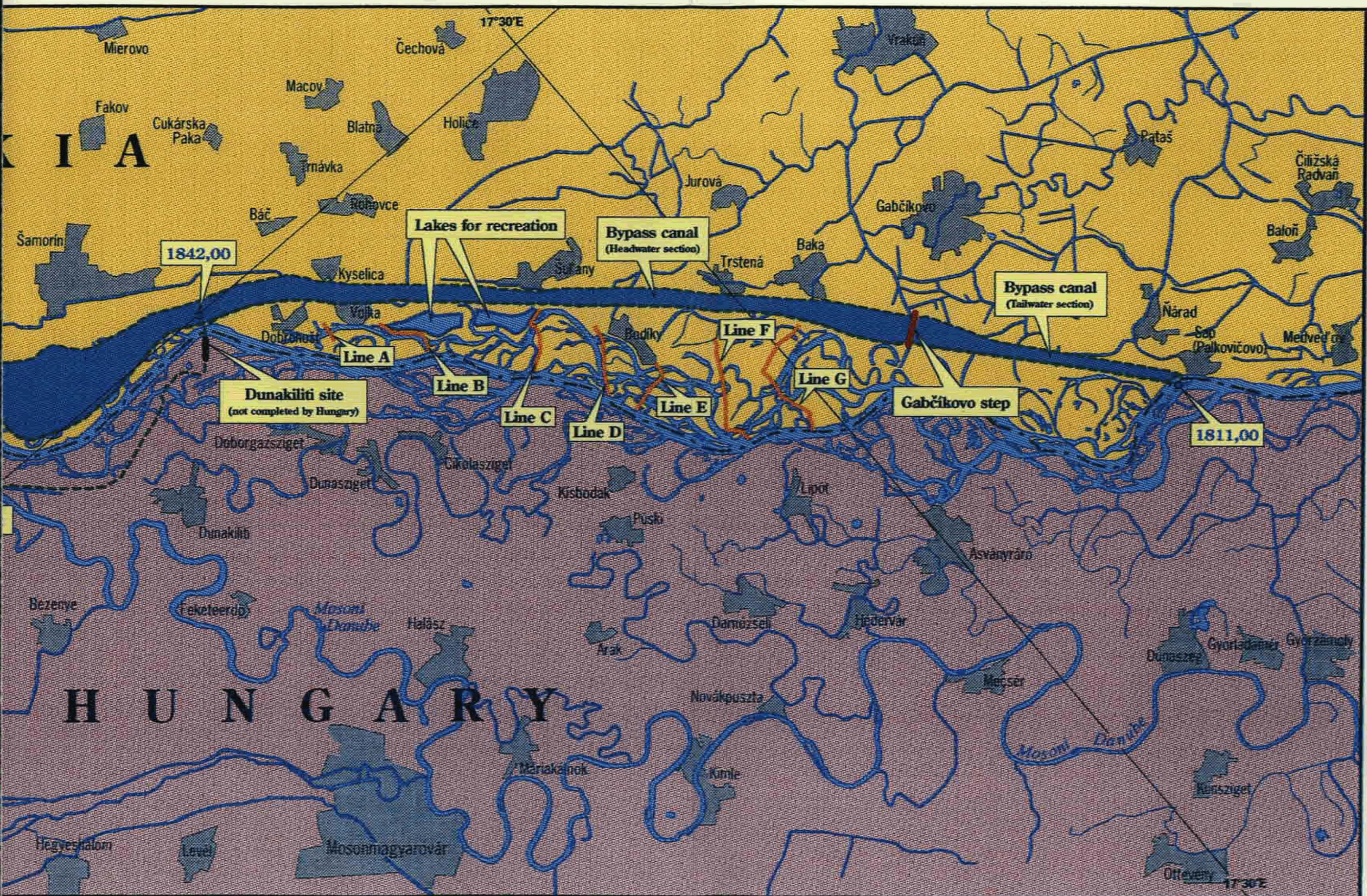


Kilometers



Miles

Specially prepared for presentation to the International Court of Justice.



SECTION 2. The Structures and the Implementation of Variant "C"

A. Variant "C": Structures and Functioning

5.26 Illustrations showing the location and the elements of the structures built to enable the implementation of Variant "C" - the Čunovo weir and the reduced reservoir - are provided as Illus. No. 33 and Illus. No. 34. It may be seen that all that Variant "C" alters in terms of the 1977 Treaty is the positioning of the weir originally planned for (and constructed at) Dunakiliti. A new weir complex is constructed 10 kilometres upstream of Dunakiliti, behind which a reservoir of reduced proportions is formed. Thus, the basic aims of the 1977 Treaty could still be achieved, at least insofar as the Bratislava-Sap (Palkovičovo) stretch was concerned:

- flood control by means of the dissipation of waters between the Danube, its side arms and the bypass canal was possible;
- navigation in accordance with the recommendations of the Danube Commission was possible;
- the production of hydroelectric power at Gabčíkovo was achievable, although only on a constant flow basis;
- the erosion of the riverbed could be halted;
- the restoration of a natural balance in the Danube side arms could be achieved, at least on Slovak territory;
- a sophisticated and extensive monitoring system could be put into place to ensure the safe functioning of the System and the good quality of surface and ground water.

5.27 The implementation of Variant "C" comprised four stages: first, the completion of unfinished works on Czechoslovak territory that should have been carried out by Hungary under its 1977 Treaty obligations; second, the creation of a reservoir upstream of Dunakiliti by the construction of a weir complex at Čunovo and a new section of dykes connecting the weir with the bypass canal and right side dyke on Slovak territory; third, the

damming of the Danube and the putting into operation of the Project; and, finally, the completion of ancillary structures at Čunovo such as navigation locks and a hydroelectric power plant.

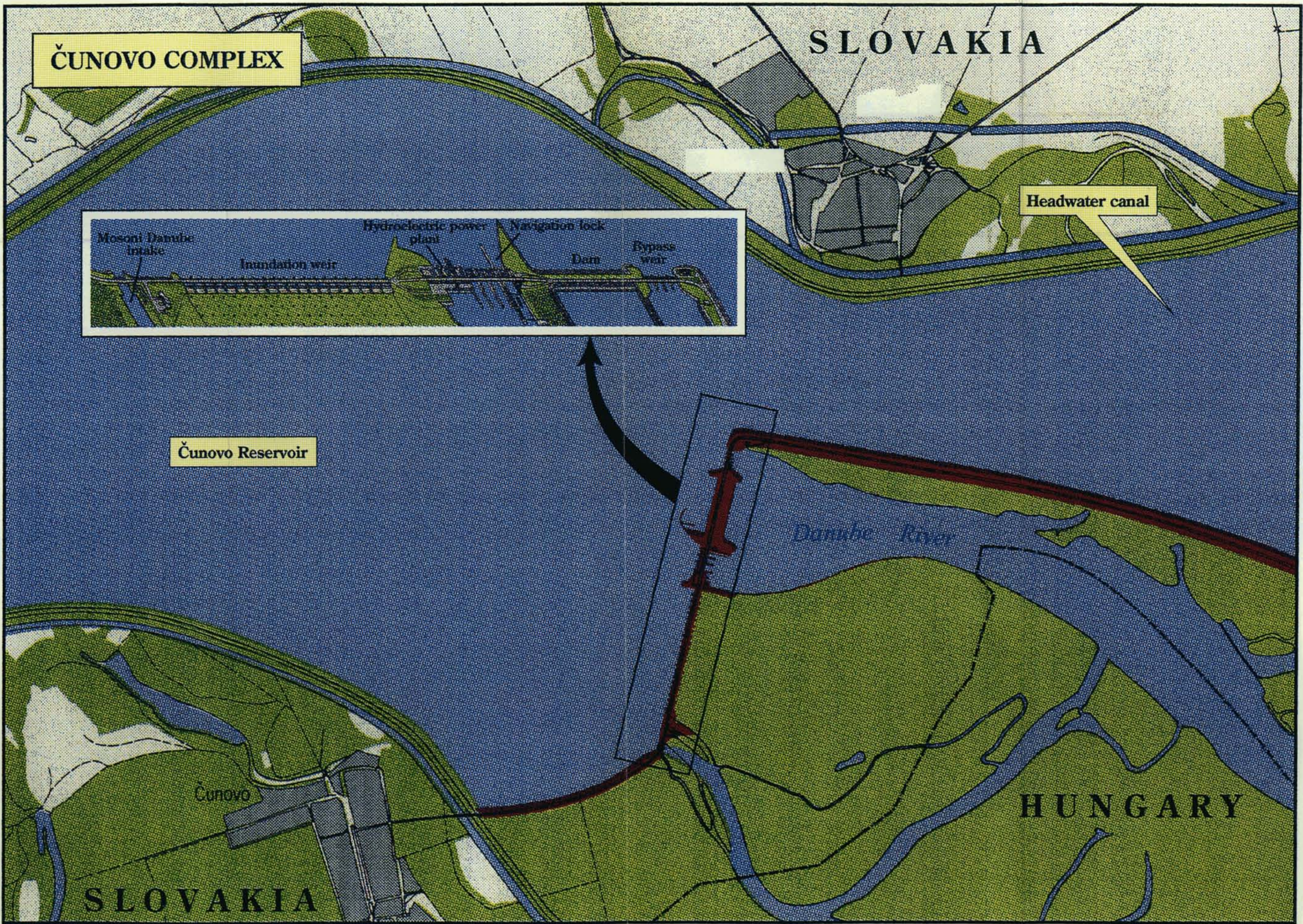
The Completion of Works Intended to be Carried Out by Hungary

5.28 According to Article 5 (5) of the 1977 Treaty, Hungary was responsible for the construction both of the tailwater section of the bypass canal and of a connecting dyke from this canal to the site of the Danube's damming close to the Dunakiliti weir. These works, to be carried out on Czechoslovak territory, had been commenced but not completed by Hungary¹⁵. The remaining works were therefore carried out by Czechoslovakia in 1991-1992, at a cost of US\$ 14.3 million (CSK 416 million) as follows¹⁶:

- (i) deepening of the tailwater canal to the designed profile;
- (ii) completion of excavation and fortification of the tailwater canal by quarry stone and riprap;
- (iii) protection and fortification of the slope at the right-hand wall of the lock approach in the tailwater canal;
- (iv) connection of the tailwater canal with the old channel and existing protection dykes upstream of the confluence with the Danube;
- (v) removal of the temporary left-side protection dyke along the Danube and the canal closing structure;
- (vi) connection of the tailwater canal to the left and right side of the Gabčíkovo step;
- (vii) sealing of part of the connecting dyke upstream of the bypass canal with a plastic foil lining on the inside slope, since a survey revealed

¹⁵ The position of these works is shown on Illus. No. 28 referred to at para. 2.73, above.

¹⁶ See, also, Chapter IX, below.



ČUNOVO COMPLEX

SLOVAKIA

Headwater canal



Čunovo Reservoir

Danube River

Čunovo

SLOVAKIA

HUNGARY

that the clay bottom sealing layer had not been realised by Hungary according to the Project specifications.

The Čunovo Weir Complex and Reservoir

5.29 It may be seen from Illus. No. 34 that Variant "C" comprises two major structures: first, the actual weir system at Čunovo; and second, a 10.5 km long reservoir dyke connecting the weir to the bypass canal¹⁷. The Čunovo complex is comprised of three main elements in its first stage i.e., current status¹⁸. These are depicted on Illus. No. 35. First, on the southern side of the complex is the intake into the Mosoni Danube, designed to provide a permanent water supply of 20 m³/s. Second, forming the main part of the structure, is an inundation weir with twenty gates, each 24 m wide. This may be used to direct part of flood waters into the Danube riverbed and inundation area. On the far northern side of the complex is the bypass weir, designed to channel a regular flow into the Danube and similarly to channel ice floes during winter conditions. In between are located the dam closing the riverbed, the facilities (yet to be completed) for a hydroelectric power plant and an auxiliary navigation lock for small ships, and a third weir for release of sediments (see paragraph 5.35 below).

5.30 These structures have been built to the same high standards as applied to the original Project constructions. Moreover, the Čunovo weir, the bypass canal and the Gabčíkovo plant have all been in operation now for more than 18 months, and subjected to the closest scrutiny. This period since implementation has been sufficient to verify the safety and correct construction of the Čunovo weir structures¹⁹.

¹⁷ The newly constructed dykes are, as with the original G/N System structures, elevated to a level of 133.6 m, that is 2.5 m above the operating water level. The crest width is 6 m and the outside slope is covered with soil to encourage re-vegetation.

¹⁸ These elements are described in greater technical detail in Annex 37.

¹⁹ The designed capacity and safe releasing of a 10,000 year flood will be achieved after the completion of the second phase. In the meantime it was accepted that at certain flow and operation conditions there was a certain risk of damage to the spillways downstream of the weir, which could occur without endangering the stability of the main structures or inhabited areas along the Danube. This was shown during the November 1992 flood.

The Implementation of Variant "C"

5.31 In order to bring the Čunovo weir system into operation along with the bypass canal and the hydroelectric power plant at Gabčíkovo, it was necessary to dam the Danube. First, it was essential to verify whether the chosen location for the damming operation at rkm 1851.14, near the village of Čunovo (just upstream of the point where the Danube becomes the border between Slovakia and Hungary) was suitable. This required a detailed analysis of the geology of the Čunovo region. Some 267 drill samples were taken in the summer of 1991. The ground was further mapped by the use of electrical sounding. In all, 446 probe tests were carried out. As a result, the chosen location was found to be safe in terms of geological formation.

5.32 A hydraulic model of the dam was then constructed on the scale of 1:50. On the basis of this model, some 22 damming operation variants were considered before selection of the eventual damming method. It was also essential to establish the right moment to divert the river's flow in terms of hydrological conditions. On the basis of the long term data available, the damming was planned for the second half of October 1992 when low flow usually occurs. As provided for in the Protocol of February 1989, the damming was planned for late 1989 and was therefore already three years behind schedule. Failure to meet this deadline would push back the implementation of Variant "C" by a further year and therefore substantially increase the damage already suffered by Czechoslovakia. Thus, the preparation of the damming was begun in July 1992.

5.33 The damming comprised three stages. The first, the preparation, consisted in the reinforcement of the riverbed and the narrowing of the main channel from 280 to 200 m. This was completed by mid-October 1992. The second stage - starting to dam the river - was scheduled to commence on 20 October 1992 but was suspended pending the negotiations between Czechoslovakia, Hungary and the EC for the establishment of a tripartite commission, as discussed in greater detail in Chapter IV above. This period was even more critical than originally envisaged due to an unusually early and unpredicted winter flood that saw the flowrate at Bratislava increase from 800 m³/s to 1,000 m³/s during the days preceding 20 October and from 1,100 to 1,400 m³/s by 24 October 1992. Thereafter it was not possible to delay the damming due to the rapidly increasing water level²⁰. The

²⁰ In fact, on 26 October 1992 the flow exceeded the limit of 1500 m³/s up to which the damming could be started. Thereafter it continued to increase, reaching over 6,000 m³/s one month later.

second stage damming operation therefore began in the morning of 24 October and continued until 27 October 1992. The third stage dam reinforcement works then commenced and continued up to 23 December 1992.

5.34 As a result of the damming, the central aims of the Gabčíkovo section of the G/N System could be achieved. The following structures, constructed under the 1977 Treaty, therefore came into operation for the first time:

- (i) The reservoir: the water level rose slowly in the reservoir, and the dykes began to fulfil their water impoundment function, while the seepage canals began to channel excess seepage water, in part to the left bank side arm system through a culvert underneath the bypass canal.
- (ii) The bypass canal: by 9 November 1992 this was ready to handle international navigation and the first ships passed through the Gabčíkovo navigation locks on that date.
- (iii) The Gabčíkovo step: hydroelectric testing began on 26 October 1992.

Further Works

5.35 Two important sets of further works are planned in order to optimise the use of the Danube at Čunovo. First, a hydroelectric power plant has been designed to produce an annual energy production of 4 GWh from the constant flow directed to the Mosoni Danube. Second, the middle section of the Čunovo complex has been reserved for the installation of an auxiliary navigation lock, a third weir to be used to direct flood waters in addition to guaranteeing water flow into the Danube riverbed and enabling the discharge of bed-load, and a further hydroelectric power plant. The navigation lock will make possible the continued use of the Danube channel as a waterway for small ships while the power plant, consisting of five turbine units, will enable a benefit to be gained from the flow into the Danube. This plant will produce up to 174 GWh on an annual basis.

B. Modifications of the G/N Project Made in Order to Permit the Operation of Gabčíkovo: Additional Measures Taken to Restore the Danube Side Arm System and to Ensure Good Ground Water Conditions

5.36 The Gabčíkovo section of the G/N Project was meant to operate together with the Nagymaros section, each representing one part of an integrated system. The putting into operation of Gabčíkovo by means of Variant "C" required the very substantial modification of the hydroelectric power production from a peak to a continuous basis. Without Nagymaros, peak production would have created extensive water level fluctuations in the Danube, adversely affecting navigation and leading to unacceptable erosion of the riverbed and banks. In terms of technical modifications, the work involved was substantial. The loss in terms of hydroelectric power production, however, was even greater, approaching one half of the predicted annual production²¹. In addition, peak produced electricity is more valuable and, as a result of the modification of production at Gabčíkovo, Slovakia is forced to produce peak power by more expensive means, that is by pumped-storage hydroelectric plants or thermal peak power plants that consume imported gas or liquid fuel.

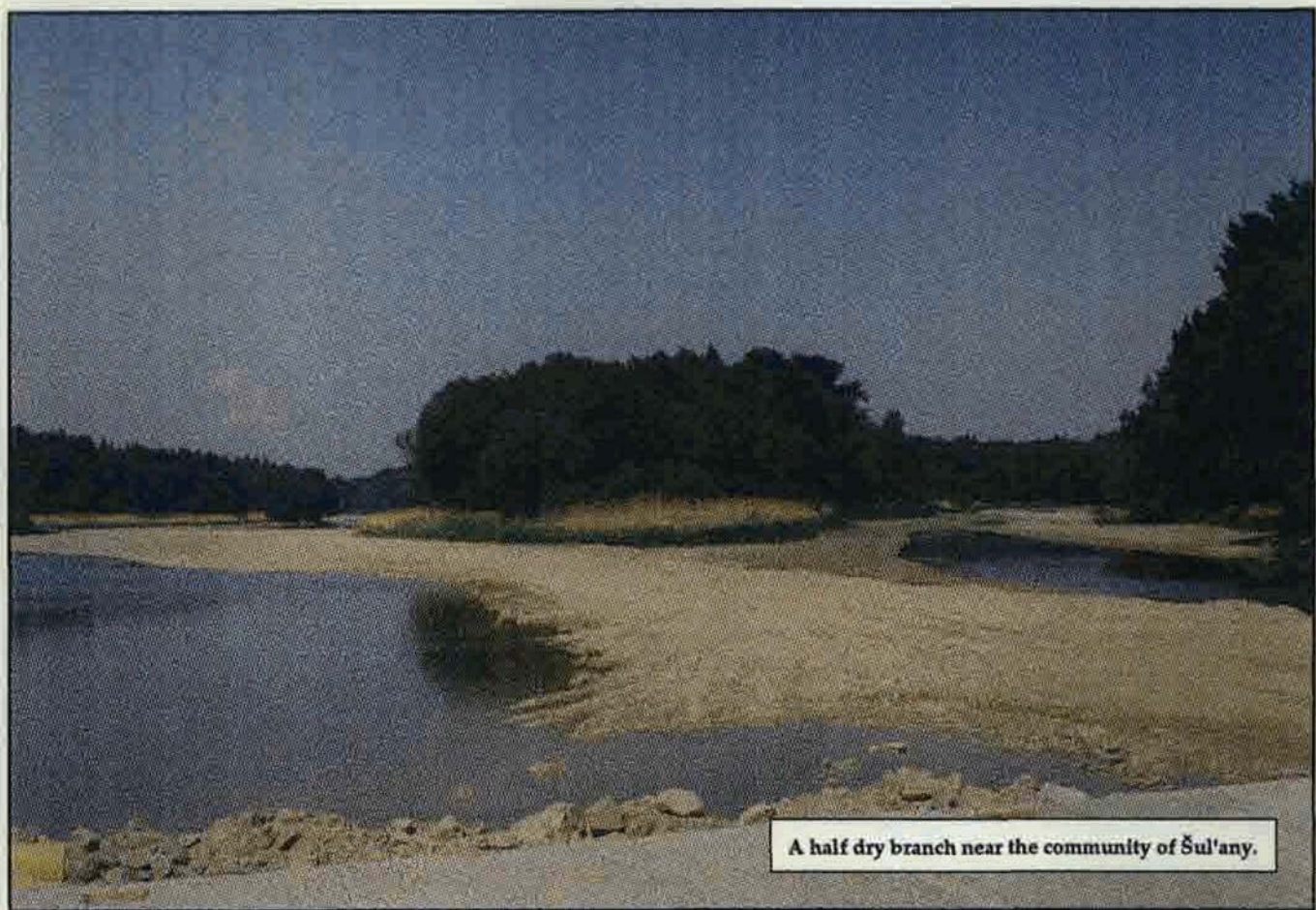
5.37 In addition, a potentially serious flooding problem was caused by the non-completion of the Nagymaros works. Hungary's failure to excavate the Danube channel in the Sap (Palkovičovo) section meant that the water level at the confluence point and therefore in the tailwater canal would be more than one metre higher than planned²². In order to channel away excess water and to prevent unplanned stresses on the canal's protection dykes it was necessary to construct a seepage drain and a large number of wells along the tailwater canal²³. Flood protection measures were also necessary on the right bank of the canal²⁴. The total cost of these measures was US\$ 7 million (CSK 203 million).

²¹ See, Chapter IX, below.

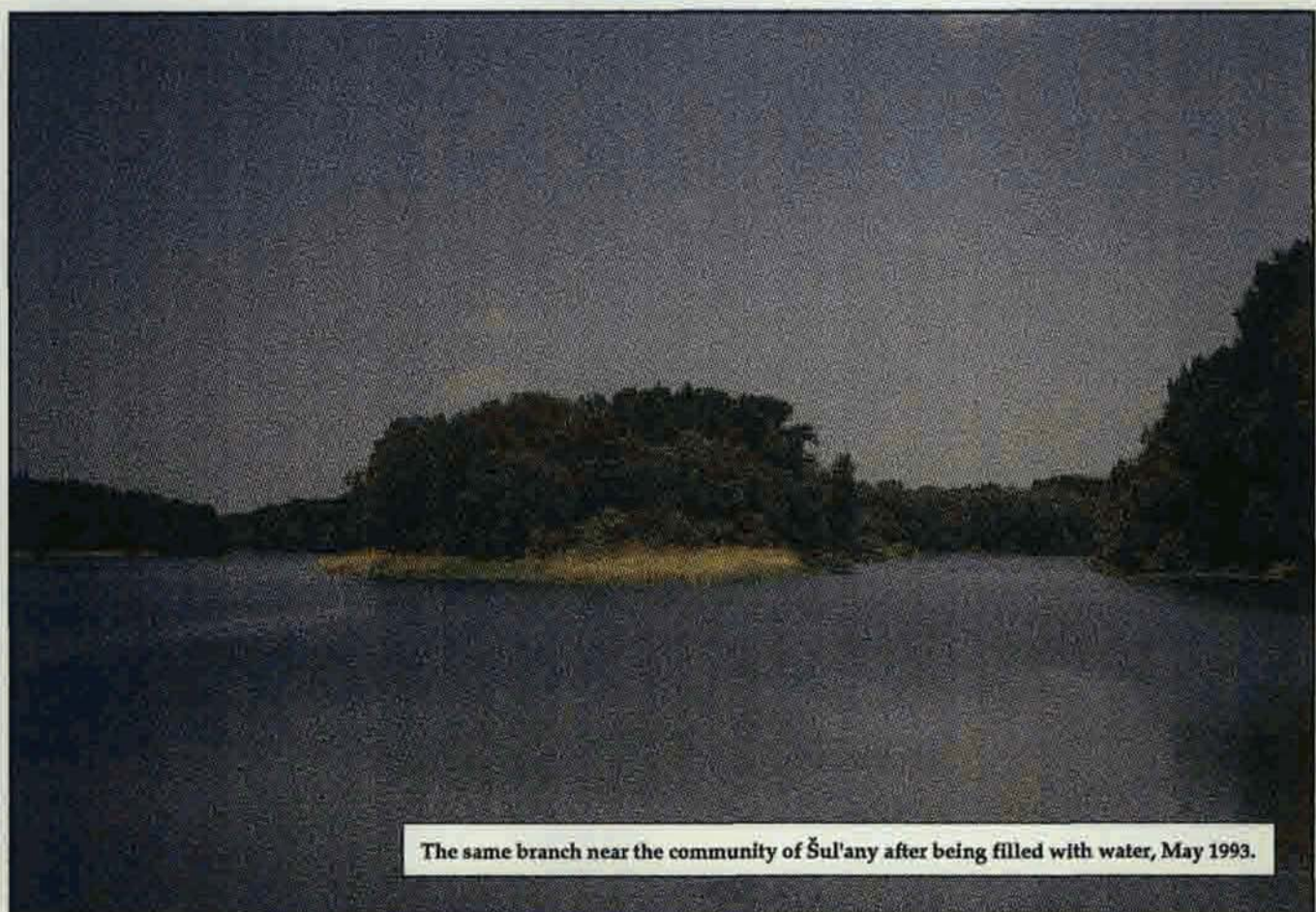
²² At a flood discharge of 10,600 m³/s i.e., the 100 year flood, the water level in the tailwater canal would be at 117.25 m instead of 116 m as provided in the G/N Project.

²³ See, also, Chapter IX.

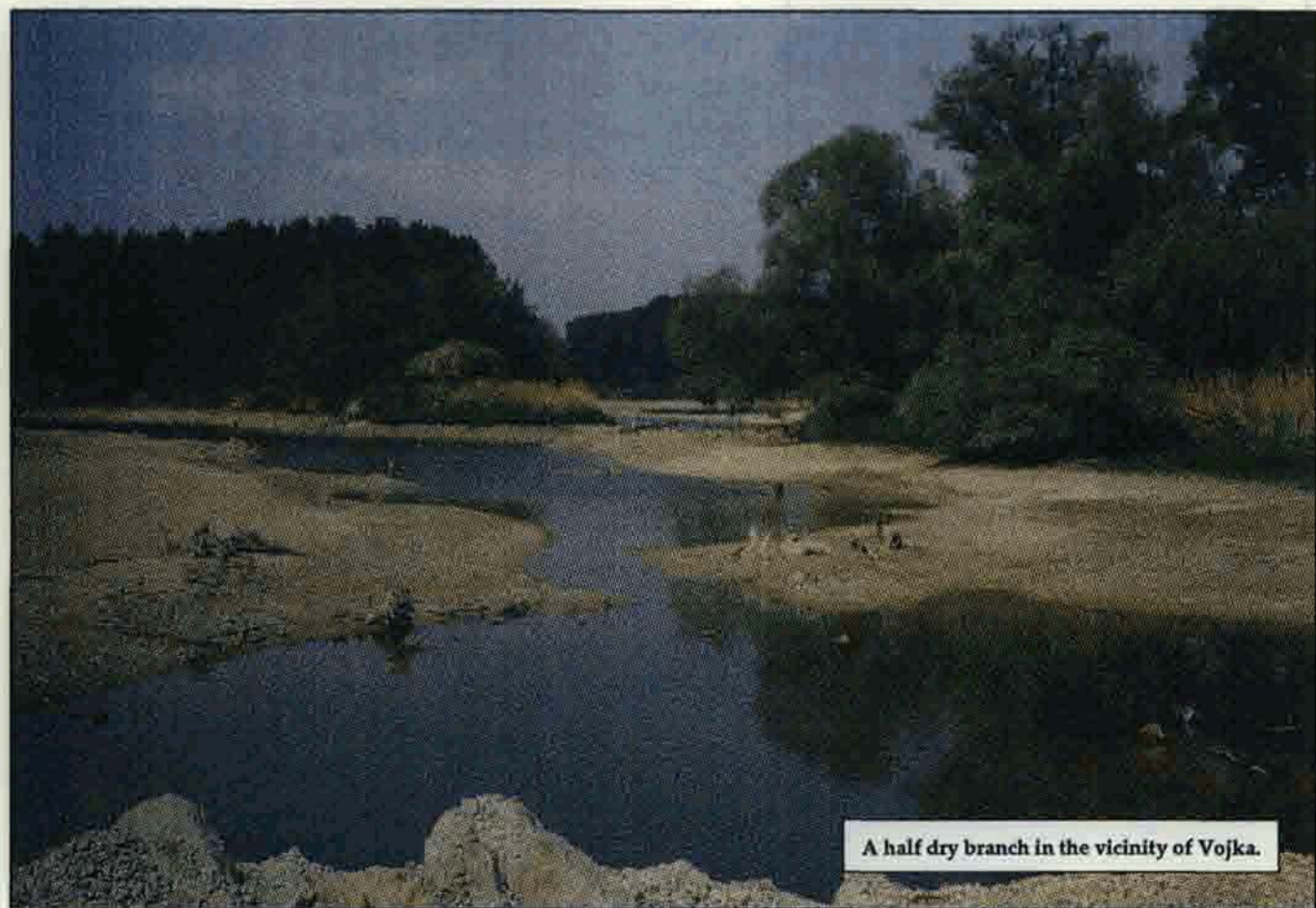
²⁴ Ibid.



A half dry branch near the community of Šul'any.



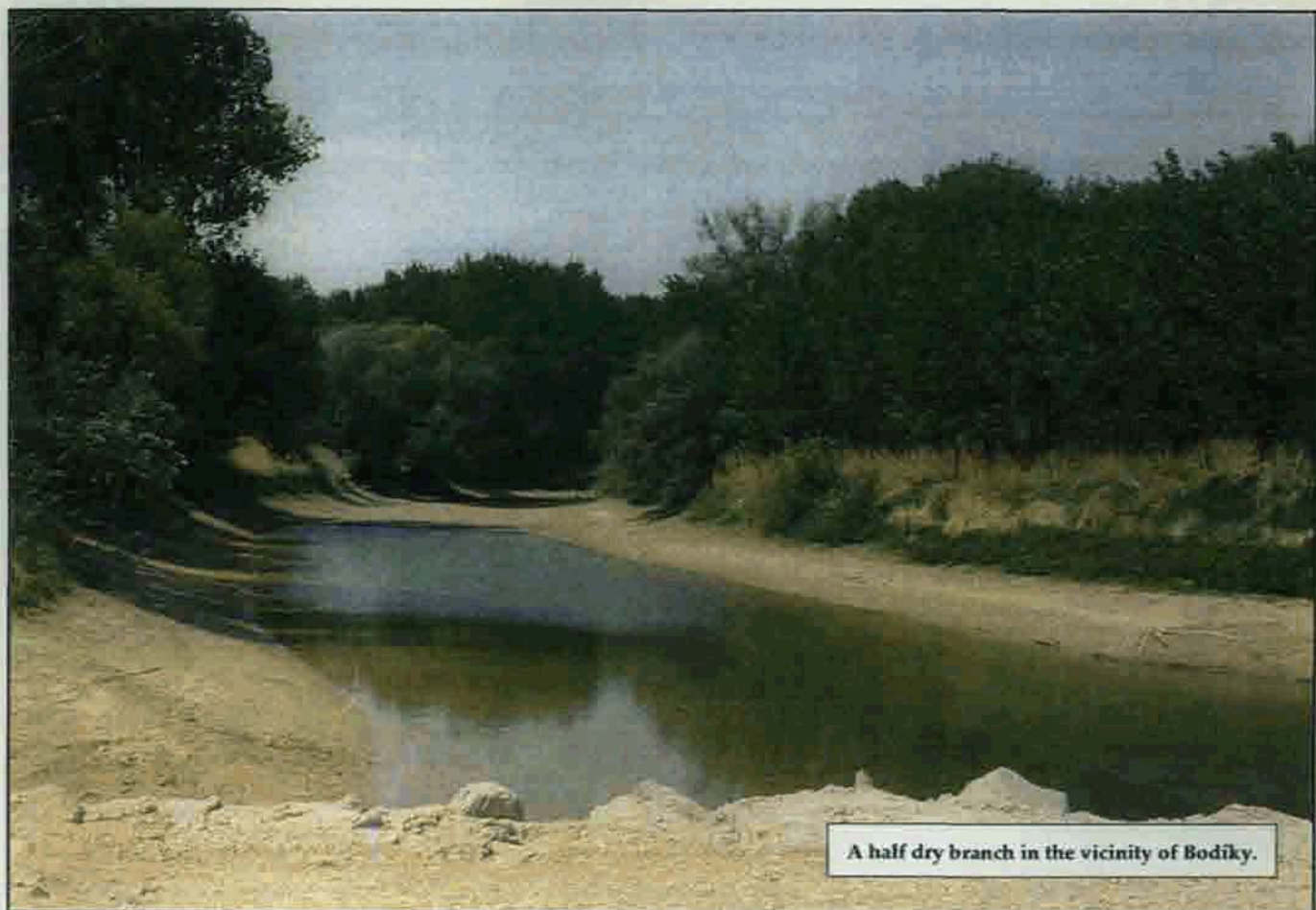
The same branch near the community of Šul'any after being filled with water, May 1993.



A half dry branch in the vicinity of Vojka.



The same branch after being filled with water, May 1993.



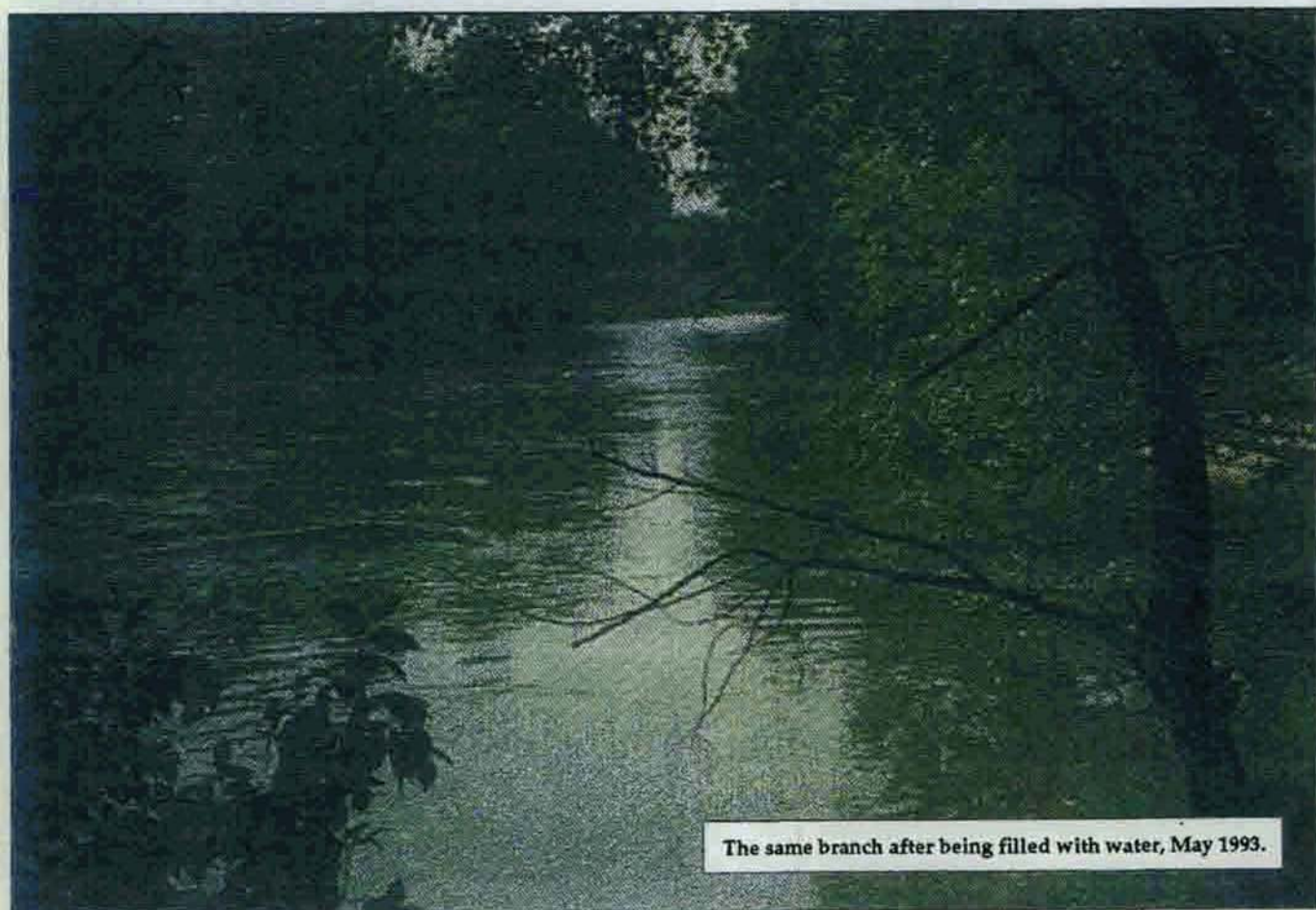
A half dry branch in the vicinity of Bodiky.



The same branch after being filled with water, May 1993.



A regularly dried up branch near the community of Vojka.



The same branch after being filled with water, May 1993.

The Danube Side Arms

5.38 The extent of the Danube side arms in the region from Dunakiliti to Sap (Palkovičovo) is depicted in Illus. No. 34. On the Hungarian side there are two separated systems of arms : the "inner" system, called the Szigeti Danube, is situated between the flood protection dyke and the Danube river channel. The "outer" system is situated between the Danube flood protection dyke and the Mosoni Danube. This system is called the Zátonyi Danube.

5.39 It is impossible for Slovakia to take the steps required to ensure a balanced water regime in the "inner system" of the right bank side arms without Hungary's consent and cooperation. Nonetheless, Slovakia now supplies about 25 m³/s to Hungary by means of the intake into the Mosoni Danube and water from the seepage canals of the Čunovo reservoir. Of this water, around 15 m³/s is being channelled by Hungary to the "outer" system of the right bank side arms (as from August 1993). It is clear from the EC Water Management report of 1 December 1993 that if flows of between 30 and 70 m³/s were supplied to the "inner" system, ground water levels on Hungarian territory would return to the levels prior to the implementation of Variant "C"²⁵. Slovakia is prepared to guarantee such a flow to Hungary in order to facilitate this and has offered several alternative technical means to achieve this²⁶.

5.40 The steps taken by Slovakia on the left bank, discussed below, indicate that through technical measures it would be possible to restore the whole side arm system, transforming the Hungarian side also into a healthy and more natural ecosystem. Slovakia's achievement has been to replicate natural water conditions in the left bank side arms so that an ecosystem far closer to the original conditions before man's interventions in this section of the Danube is being recreated. A series of photographs has been taken to enable the comparison of this area today with the area prior to the supply of new water flows i.e., how this area appeared during the ten months of the year when it did not receive discharge from the Danube (Illus. No. 36 (A-D)). This is clearly one of the substantial benefits of the G/N System as it has been implemented to date.

²⁵ See, the EC Water Management report of 1 December 1993, op. cit., p. 38.

²⁶ See, Proposal for Temporary Water Management Regime, 8 February 1994. Annex 38.

5.41 Sending water flow directly into the side arm system is essential because the Danube no longer supplies water to this system and, in fact, acts largely as a drain. According to the G/N Project, this problem should have been resolved to an extent by the construction of underwater weirs in the Danube riverbed, impounding the reduced flow and thus increasing the water level in the channel. These works were to be carried out by Hungary which had originally designed these weirs in 1978 and up-dated the design in 1987. Even with a reduced water flow of 50 m³/s, these weirs would have ensured a channel width of 100-150 m. With the increased flow of 350 m³/s envisaged in 1989, such weirs would have maintained the main channel at its pre-Project level corresponding to the natural flow of 1300 m³/s. Thus, the installation of such weirs was approved after a detailed analysis by the EC Working Group of Independent Experts in its report of 23 November 1992:

"The results show that the desired effect of increasing the water levels [by means of underwater weirs] without reducing the velocities too much and of preserving the dynamics with the characteristic fluctuations is possible²⁷."

5.42 Slovakia has repeatedly proposed the implementation of all measures necessary to ensure the recharge of the side arms system on both the Slovak and Hungarian banks. But structures such as underwater weirs cannot be constructed in the Danube main channel without Hungary's consent. Slovakia has however been able to carry out all the works necessary to the restoration of the left side branch system, a territory covering approximately 4000 hectares. This has been by means of water recharge from two intakes in the bypass canal: one at Dobrohošť, close to the canal entrance, and one at Gabčíkovo, just downstream of the step²⁸. The Dobrohošť intake supplies a regular flow of around 50 m³/s into the side arms, which it is planned to increase to 140 m³/s 1-3 times per year to achieve the inundation of the side arms as would occasionally occur under natural conditions. The maximum flow through this intake is 234 m³/s²⁹. Illus. No. 34 shows that the left side arm system has been divided into 8 distinct zones, each with its own water level. These zones

²⁷ The EC Working Group report of 23 November 1992, op. cit., p. 54.

²⁸ A series of spillways are also being constructed along the Danube left bank, allowing flow into the side arms during periods of increased flow or flood discharge into the main channel.

²⁹ A similar intake was designed near the right bank in the Dunakiliti weir to ensure the restoration of the Hungarian side arms.

are graded so as to form a cascade from Dobrohošť to Gabčíkovo, thus ensuring a high oxygen content in the moving water and preventing the deposition of fine sediments.

5.43 The success of the water recharge into the system is evident from the photographs appearing as Illus. No. 36 (A-D). The ground water levels in the side arm system are now significantly higher than the pre-Project levels and are even sufficient to enable the recharge of water levels in the adjacent regions. This is noted in the EC Working Group report of 2 November 1993:

"However, after discharging water into the side channels in the Slovakian flood plain from May 1993 onwards the ground water levels have increased above those corresponding to pre-dam conditions. This demonstrates that a considerable recharge now takes place from the side channels. This has become possible because the running water has removed the fine material, previously clogging the bed of these river arms³⁰."

The report goes on to say:

"By comparison of Fig. 6.5 and 6.6, which represent conditions before and after putting water to the side channels on the Slovakian flood plain, it is evident that a good hydraulic connection between the side channels and the ground water system has been established. Thus, a substantial ground water recharge takes place from the side channels resulting in up to 1.5 m increased ground water levels³¹."

Put simply, the side arms, which prior to the implementation of Variant "C" were dying areas, are now flourishing and even replacing the function of the Danube channel in terms of providing water to the region.

Measures Aimed at Ensuring Good Ground Water Quality

5.44 As already discussed in Chapter II above, an extensive body of research prior to the signature of the 1977 Treaty was devoted to predicting the impact of the Project on water quality, particularly in terms of possible sedimentation or de-oxygenation in the Dunakiliti reservoir. As the Bechtel and HQI reports note, these studies

³⁰ The EC Working Group report of 2 November 1993, op. cit., p. 31.

³¹ Ibid., p. 34.

showed that the net impact on ground water quality would be minimal, and might in fact result in some improvement³². Nonetheless, due to the different reservoir dimensions under Variant "C" it was considered necessary to carry out a new and extensive series of studies, in particular to calculate the impact on water quality at the waterworks of Šamorín, Kalinkovo and Rusovce³³. There is no mystique insofar as the water quality in these drinking water wells is concerned. The water is drawn from aquifers which are recharged by the Danube. The effect of the layers of gravel and sand in the aquifer is to filtrate and clean the water, which means that it is important that wells are located at a sufficient distance from the river to allow for the filtration process.

5.45 The effect of creating the reservoir was, of course, to increase surface water in the impounded zone and thus to bring the river water closer to the drinking water wells. Therefore there was a concern that pollutants from the river might reach certain wells before sufficient purification had taken place and that these would have to be re-sited. This does not imply the large scale contamination of the aquifer in any way, it simply means that the pollutants carried in the Danube are potentially reaching different areas including areas in which drinking water wells have been sunk. The studies carried out in 1991 simply recommended the drilling of four new wells at Šamorín and proposed further water treatment and monitoring at Kalinkovo and Rusovce. In addition, a series of measures was devised prior to the implementation Variant "C" aimed at optimising water quality at the well sites:

- increasing of flow velocity in the reservoir in places where infiltration occurs;
- prolongation of the flow route of infiltrated water by means of sealing aprons;
- measures to influence flow direction of ground waters into the territory;

³² See, paras. 2.99 to 2.107, above.

³³ Annex 36.

- elimination of stagnant water in the aquifer region by providing discharge into river branches;
- introducing monitoring systems for the well sites, thus ensuring optimum protection of water and a warning system against water deterioration in the future;
- removing to the greatest possible extent the organic matter from the area of the future reservoir;
- preventing sedimentation in reservoir localities where it could be undesired and directing it to areas where either it could not harm water supplies or where the bed is protected by a layer of plastic sheeting.

5.46 In order to regulate sedimentation and increase flow velocity in the reservoir close to the Šamorín waterworks, two guiding dykes were constructed. These ensure a constant movement in the water and reduce sedimentation to practically nil in the guiding dyke area. Further measures were implemented to increase the water infiltration route to the waterworks at Kalinkovo and Rusovce. The success of such measures may be judged from the fact that the implementation of Variant "C" has not led to a deterioration in ground water quality either in Slovakia or in Hungary. As the EC Working Group report of 2 November 1993 points out:

"In general no ground water quality changes can be identified after the damming of the Danube³⁴."

Due to the change of the direction of underground currents on the right side of the reservoir, the wells at Rusovce now receive water with a significantly higher content of oxygen. This makes the previously installed measures for water treatment unnecessary.

SECTION 3. The Benefits Provided By Variant "C"

5.47 It is obvious that the success of Variant "C" must be quantified in terms of the aims of the parties to the 1977 Treaty for the Gabčíkovo section of the G/N

³⁴ EC Working Group report of 2 November 1993, op. cit., p. 40.

System. Certain benefits - improved navigation, flood protection downstream of Sap (Palkovičovo), and hydroelectric power production at Nagymaros - are not realisable without Hungary's cooperation. Nonetheless, the success of Variant "C" remains readily quantifiable, both in terms of the parties' original aims and of the development of these aims, particularly in the field of environmental protection. In terms of the environment, Variant "C" offers essentially the same benefits as envisaged for the Gabčíkovo section of the G/N System, although in this area Slovakia is able to show that Variant "C" is if anything more successful than originally envisaged. However, it should be borne in mind that Variant "C" does still represent an under-utilisation of the potential for the production of hydroelectric power.

Flood Control

5.48 According to the G/N Project, the System had to be able to deal with flood waters amounting up to 10,600 m³/s at the Dunakiliti weir. The Variant "C" constructions, once fully completed, will be able to handle and even to surpass this figure. A flowrate of 12,715 m³/s will be successfully dissipated between the Danube, its tributaries and the bypass canal as follows:

-	the Čunovo bypass weir	1200 m ³ /s
-	the Čunovo floodplain weir	6000 m ³ /s
-	the bypass canal	5200 m ³ /s
-	intake to Malý Danube	50 m ³ /s
-	intake to Mosoni Danube	25 m ³ /s
-	intake to left side arms	<u>240 m³/s</u>
	Total	<u>12715 m³/s</u>

5.49 Thus, by means of the operation of Variant "C", flood protection has been achieved in the Bratislava-Sap (Palkovičovo) section on the Slovak side and on the Hungarian side in the section from Rajka to Dunaremete. The structures after completion of the second phase will safely channel the 10,000 year flood. In the section downstream of Sap (Palkovičovo) the flood risks continue to exist and, in fact, the risk of disastrous floods has considerably increased due to the large quantities of gravel deposited in recent years.

Improvement of Navigation Conditions

5.50 After putting Variant "C" into operation it was possible to move the shipping route from the old riverbed into the bypass canal. Thus, the navigation problems occurring in the section between Bratislava and Sap (Palkovičovo) have been overcome. The Danube waterway up to Bratislava is classified as a riverine-sea route. The navigation locks at Gabčíkovo have the requisite dimensions recommended by the Danube Commission as well as the necessary navigation depth. The navigation depth of at least 3.5 m is also provided in the reservoir section. Variant "C" has therefore contributed significantly to the establishment of favourable navigation conditions in this important section of the transeuropean waterway.

Energy Production

5.51 The value of energy production at Gabčíkovo is, unfortunately, substantially lower both in quantity and quality than originally planned. The principal reason for this is that peak power production is not possible so long as Nagymaros remains uncompleted. A secondary reason is that an increased flow has been dedicated to the Danube channel - a flow of around 400 m³/s was recorded as the 1993 average³⁵. There is an obvious correlation between increased flow into the Danube at Čunovo and decreased flow into the bypass canal and, in turn, through the power turbines at Gabčíkovo. Nonetheless, in 1993 Gabčíkovo contributed around 10% of Slovakia's total electricity needs³⁶. This is a most significant percentage, especially when the long life expectancy of the Gabčíkovo power plant is taken into account. In order to compensate the lost production due to the non-completion of Nagymaros and also in order to optimise use of the Danube flows, a series of small hydroelectric power plants are planned or already under construction. These are at the Mosoni Danube intake and the intakes into the side arm system at Dobrohošť and into the irrigation system near Gabčíkovo. In addition, as mentioned at paragraph 5.35 above, a power station is to form part of the second stage at Čunovo, which together with the three intake power plants would produce an annual total of 190 GWh.

³⁵ EC Working Group report of 2 November 1993, op. cit., p. i.

³⁶ Ibid., p.ii.

Surface Water: Levels and Quality

5.52 One of the prime aims of the G/N Project was to halt the riverbed erosion at Bratislava and to raise the water level there. As the EC Working Group report of 2 November 1993 notes, this has now been achieved:

"At Bratislava the water levels during low flow periods have increased by 1-2 m as compared to pre-dam conditions, i.e. to a level corresponding to the situation 40 years ago³⁷."

Downstream of Čunovo there has been a decrease in surface water levels but, as will be shown below, this has not necessarily had a significant impact on ground water levels. Moreover, the level of water in the Danube main channel could easily be increased by construction of the underwater weirs, originally designed by Hungary. Water flow rates into the Malý Danube and the Mosoni Danube have increased substantially as have those into the Slovak side arms, leading to a marked improvement in water conditions:

"From Fig 2.4 it appears that the discharge to Little Danube has been increased with about 10 m³/s...Similarly, the discharge to Mosoni Danube has been significantly increased. Finally it may be noted that with the water intake from the power canal at Dobrohošť to the Slovakian flood plains the water flow through the side arms has been very significantly increased as compared to the pre-dam conditions, which most often were characterized by stagnant water³⁸."

5.53 As to the quality of surface water, there is no question of any deterioration, again according to the EC Working Group report of 2 November 1993:

"Surface water quality

With exception of November - December 1992, when sudden changes of regime and a high flood event occurred, no significant changes in surface water quality parameters as compared to pre-dam conditions can be detected after damming the Danube³⁹."

³⁷ Ibid.

³⁸ Ibid, p. 10.

³⁹ Ibid, p. iii (emphasis added).

Ground Water: Levels and Quality

5.54 One of the principal aims of the parties was that the reduction in the water level of the Danube downstream of the entrance to the bypass canal should not lead to a corresponding reduction in the ground water levels in Žitný Ostov and Szigetköz. The possibility of such a reduction had of course been thoroughly researched and steps had been taken to ensure that this did not occur. These were largely successful:

"Ground water level

In June/July 1993 the situation in Slovakia shows that over the entire area the ground water levels have increased or have not been affected. The increases have mainly occurred in the upstream area close to the reservoir, i.e. in the area which has been most negatively affected by the long term trend of decreasing ground water levels. On the Hungarian side, where comprehensive assessments have not been made, it appears that ground water levels have increased close to the reservoir (Rajka - Dunakiliti region). Furthermore, it appears that in the middle part of Szigetköz between Dunakiliti and Asványraro ground water levels have decreased in areas close to the main Danube⁴⁰."

The decrease in levels close to the Danube on Hungarian territory are inevitable because a full recharge program in the right bank side arm system has not yet been implemented. As noted at paragraph 5.43 above, the recharge into the Slovak side arms has had a substantial impact on adjacent ground water levels, raising these by as much as 1.5 m in places. There is no reason why this impact could not be replicated in the Hungarian side arms.

5.55 Indeed, it must be noted that the ground water recharge from the left bank side arms is not limited to Slovak territory - it has an impact on ground water levels for as far as 4 km into Hungary:

"Selected hydrographs are shown in Figs. 6.3 and 6.4. Fig. 6.3 shows the ground water levels at three wells in Hungary. The three wells are located at 50 m, 400 m and 4000 m distance from the Danube, see map. At the two wells located closer to the Danube (Rajka and Lipot) the ground water levels were in the beginning of 1993 reduced by 1.5 - 2.0 m corresponding to the decrease in the Danube water level. After May 1993 the reduction at Lipot decreased to about 1.0 m. At Darnozelli the reduction is initially about 0.4 m

⁴⁰ Ibid, p. ii.

and after May gradually changes to about 0.2 m. The timing of this reduced impact coincides with inundation of the side channels in the Slovak flood plains⁴¹ . "

It is self-evident that if Hungary were to implement the full recharge system planned for its side arm region, the impact of the lower flow in the Danube would be dramatically, if not completely, reduced - especially if this were coupled with the construction of at least some of the Hungarian designed underwater weirs in the main channel. It may be noted that a budget of 2.4 billion Czechoslovak Crowns was set aside for the construction of such weirs by the Czechoslovak government in 1992⁴² .

5.56 In terms of ground water quality, Variant "C" has not led to any significant change, either in Slovakia or in Hungary. This has been confirmed by the EC Working Group report:

"In general no ground water quality changes can be identified after the damming of the Danube ... According to the Hungarian Data Report (ref/3/) no significant changes have been detected in the ground water quality⁴³ . "

The idea that a large scale contamination of underground water supplies would be caused by the implementation of the G/N Project may be laid to rest. Reports that the drinking water wells supplying Budapest, situated 150 km downstream of Čunovo, would be adversely affected have been shown, quite simply, to be absurd⁴⁴ . The concern that heavy metals might enter drinking water supplies has also been shown to be misplaced:

"No changes in concentrations of heavy metals nor organic micropollutants have been detected⁴⁵ . "

In fact the upper layer of the ground water down to a depth of 40 m has been polluted by industrial waste, nitrates, pesticides and other agrochemicals. Receiving now a

⁴¹ Ibid., p. 31.

⁴² This is confirmed in the EC Fact Finding Mission report of 31 October 1992, op. cit., p. 11.

⁴³ The EC Working Group report of 2 November 1993, op. cit., p. 40 (emphasis added).

⁴⁴ See, also, para. 2.105, et seq., above.

⁴⁵ The EC Working Group report of 2 November 1993, op. cit., p. 58.

significantly increased amount of water infiltrated from the reservoir, the pollution is gradually being diluted.

Flora and Fauna

5.57 It is not yet possible to quantify the impact of the implementation of Variant "C" on the region's flora and fauna, due to the long response time of natural ecosystems. Certain preliminary conclusions can however be made. First, the diversity and abundance of flora and fauna in the side arm system should increase due to the water recharge of these areas. Second, given that ground water levels increased on Slovak territory as a result of Variant "C", any impact on flora and fauna should be beneficial. If Hungary were to agree on the implementation of technical measures to ensure a sufficient recharge into its own side arm region, there is every reason to believe that the impact on ground water levels and subsequently on flora and fauna should also be beneficial.

Agriculture

5.58 One of the objectives of the 1977 Treaty was to create more favourable conditions for agricultural production by measuring the deterioration in ground water levels and the resultant dependency in irrigation. As explained in the EC Working Group report, prior to the implementation of Variant "C" the capillary flow to crop root systems was gradually declining:

"Due to the general decline of the ground water table in large parts of the area during the past 40 years the conditions for capillary water supply to the root zone have decreased and the irrigation water requirements have increased correspondingly⁴⁶."

This tendency has been reversed due to the increased or stabilised ground water levels. It is now possible to make use of the draining and impounding function of the Project's canal network in order to regulate ground water levels and to ensure the levels necessary to

⁴⁶ Ibid., at p.47.

achieve capillary flow into the soil root systems. This capillary flow has been evaluated and preliminary results show that the need for artificial irrigation in Žitný Ostrov is dropping⁴⁷:

"Analyses of 1991-93 Data

Due to the increase of ground water tables in large parts of the Slovakian area the conditions have improved. According to an estimate given in ref /2/ the requirements for irrigation from external sources is expected to decrease by about 25% as compared to the pre-dam conditions⁴⁸."

Thus, in 1993, during a relatively dry summer, a saving in irrigation costs of around US\$ 5.2 million was made.

5.59 Moreover, it has now been possible to return land temporarily occupied for construction purposes to agricultural usage. During the construction phase around 1400 hectares of arable land were occupied, which have now been returned to their original purpose. In addition 2000 hectares of idle land have been recultivated with the topsoil taken during the construction of the bypass canal.

5.60 The impact of Variant "C" on Hungarian agricultural production has not yet been assessed but, providing Hungary makes the most of the water flows available to it via the Danube channel, the Mosoni Danube and the intake for its side arm system, there is no reason why this should not also be beneficial. Certainly the EC Working Group report of 23 November 1992 predicted no significant change⁴⁹.

Forestry

5.61 Again the impact of Variant "C" on forestry depends on the level of ground water. At the moment therefore, the impact on Slovakia has been to create more

⁴⁷ Although extensive research into the impact of the Project on soil water regimes was carried out prior to 1977 and during consideration of Variant "C", Slovakia is continuing to study this area to achieve optimal production in agricultural areas. The Dutch computer model SWACROP has been applied in this research. In addition, the impact on agriculture in terms of the ground water regime is being analysed within the scope of the PHARE Project. Of particular interest is the use of the Danish computer model DAISY which simulates the transportation of nitrates into ground waters.

⁴⁸ The EC Working Group report of 2 November 1993, op. cit., p. 47.

⁴⁹ The EC Working Group report of 23 November 1992, op. cit., pp. 56-57.

favourable conditions while less favourable conditions have been created in Hungary, especially close to the Danube channel:

"As a result of the changes in ground water levels the forestry has been positively influenced in Slovakia and negatively in Hungary⁵⁰."

The continuation of unfavourable conditions or their reversal will depend on whether underwater weirs are constructed in the Danube main channel and whether full advantage is taken of the artificial recharge system on the right bank.

Monitoring

5.62 It is essential that the impact of Variant "C" in all the above areas is constantly monitored so that any negative impacts can be identified and remedied immediately. As noted in the Bechtel report, a highly sophisticated monitoring system has been developed⁵¹. This system has also been evaluated favourably in the EC Working Group report of 2 November 1993⁵². In addition, this report notes the huge amount of data collected during the Project, particularly in the areas of surface and ground water and flora and fauna⁵³.

SECTION 4. The Provisional or Temporary Character of Variant "C" and the Possibility of Returning to the Treaty Regime

5.63 The Czechoslovak Government, in its considerations of the different variants for putting the Gabčíkovo section of the G/N Project into operation, naturally took full account of the continuing validity of the 1977 Treaty. The Czechoslovak Government has always been and the Slovak Government remains prepared to fulfil all its obligations arising from the 1977 Treaty. This fact has been underlined during negotiations with Hungary both before and after the decision to implement "Variant C". The provisional or

⁵⁰ The EC Working Group report of 2 November 1993, op. cit., p. iii.

⁵¹ See, para. 2.98, above.

⁵² The EC Working Group report of 2 November 1993, op. cit. See, e.g., with regard to surface water levels and quality, pp. 20 and 23; with regard to ground water levels and quality, pp. 34 and 40.

⁵³ Ibid., pp. 14, 21, 28, 38 and 46.

temporary character of the solution known as Variant "C" was therefore given both legal and a technical significance.

5.64 From the legal point of view, the choice of a temporary solution indicates that in realising Variant "C" there was no intention to abandon the construction and implementation of the G/N System according to the fully valid 1977 Treaty, but to achieve at least partial fulfillment of the 1977 Treaty's goals. Guidelines formulated by the Czechoslovak Government for the implementation of Variant "C" contained the requirements that the temporary solution should:

- not hamper in any way the possibility of realising the object and purpose of the 1977 Treaty and must preserve the possibility of returning to the Project according to the Treaty provisions;
- make possible, during the period up until Hungary resumes its obligations according to the 1977 Treaty, the implementation of the aims of the Treaty to the greatest extent possible without the cooperation of Hungary;
- not endanger the rights and legal interests of third States, particularly with regard to international navigation.

5.65 From the technical point of view, Variant "C" is temporary in that it is possible to return to full conformity with the 1977 Treaty. This has been confirmed by the EC Working Group report of 23 November 1992⁵⁴. Once the Nagymaros section is completed and the agreed damming of the Danube at the common Slovak-Hungarian section in rkm 1842 is affected and the weir at Dunakiliti put into operation, all weirs at the Čunovo complex may be opened. The reservoir in accordance with the 1977 Treaty would therefore be created. The new reservoir dyke, constructed for Variant "C", would be surrounded by water but could fulfil the function of directing the water flow inside the reservoir.

5.66 The functions of the structures of the temporary solution situated at Čunovo would be carried out by the Dunakiliti weir. The agreed discharge into the Danube

⁵⁴ The EC Working Group report of 23 November 1992, op. cit., p. 14.

riverbed and water supply of the Mosoni Danube would be assured from Dunakiliti. Floods exceeding the capacity of the bypass canal as well as ice floes would be directed through the open gates of Čunovo and across the Dunakiliti weir. Finally, auxiliary navigation locks at the Dunakiliti weir would make possible the navigation between the reservoir and the old Danube riverbed.

5.67 The changeover in terms of the utilisation of the Dunakiliti weir instead of Čunovo would take time. But the adjustments at Čunovo would demand far less time than Hungary would need to complete works at Dunakiliti, without taking into account the amount of time needed for the completion of the Nagymaros step. Therefore, neither in terms of timescale nor in terms of actual construction work has the implementation of Variant "C" in any way impeded the putting into operation of the G/N System as envisaged by the 1977 Treaty and Slovakia remains committed to the joint development goals on the basis of that Treaty.

PART II

THE LAW

CHAPTER VI. BREACHES BY HUNGARY OF ITS INTERNATIONAL OBLIGATIONS

6.01 The terms of Article 2(1) of the Special Agreement provide that:

"The Court is requested to decide on the basis of the Treaty and rules and principles of general international law, as well as such other treaties as the Court may find applicable:

- (a) whether the Republic of Hungary was entitled to suspend and subsequently abandon in 1989, the works on the Nagymaros Project and on the part of the Gabčíkovo Project for which the Treaty attributed responsibility to the Republic of Hungary¹."

6.02 There is no better established norm of international law than that embodied in the principle pacta sunt servanda. In Article 26 of the 1969 Vienna Convention of the Law of Treaties the same norm is stated in these terms:

"Every treaty in force is binding upon the Parties to it and must be performed by them in good faith."

6.03 It is only too apparent that in unilaterally suspending, in several stages starting on 13 May 1989, and later entirely abandoning the works under the 1977 Treaty, and then announcing its termination - again unilaterally - on 19 May 1992, Hungary contravened this fundamental principle.

6.04 These circumstances in and of themselves suffice to define the present dispute; in unilaterally choosing not to carry out its treaty obligations, Hungary committed an internationally wrongful act which entails its responsibility under international law. In so doing, Hungary has in fact violated an ensemble or complex of obligations that flow from a network of interrelated agreements.

6.05 To establish this, it will be shown in this Chapter, first, that the 1977 Treaty cannot be considered in isolation from this network of agreements of which it is the pivotal element (Section 1 below). Second, it will be shown that the unilateral suspension, subsequent abandonment of works and purported termination of the 1977 Treaty constituted

¹ Annex 1.

wrongful acts under international law (Section 2) that, in turn, resulted in the breach of a large number of obligations to which Hungary is subject (Section 3).

SECTION 1. A Closely Interrelated Complex of Agreements

6.06 The 1977 Treaty is but one of a group of inseparably interrelated agreements, as the Hungarian Parliament itself recognised in its Resolution of 23 April 1991². The 1977 Treaty and the agreements tied to it constitute what the Court in its Advisory Opinion of 20 December 1980, described in this way:

"... whether they are regarded as distinct agreements or as separate parts of one transaction, [they constitute] a contractual legal regime [between Slovakia and Hungary] which remains the basis for their legal relations today³."

Hence, the initiatives taken by Hungary violate not only the 1977 Treaty itself but also the other agreements that extend its provisions or that form part of it.

A. The 1977 Treaty: The "Basic Treaty"

6.07 As has been shown above in Chapter II, the negotiations that led up to the conclusion of the 1977 Treaty began in the early 1950s⁴. After some 12 years of rather inconclusive discussion, the general principle on which the G/N Project rests was arrived at: a waterworks system consisting principally of an upstream step built on a bypass canal on Slovak territory and designed to produce peak flow electricity; and a downstream step on Hungarian territory designed to produce constant flow electricity.

6.08 It is not without interest that it was the Czechoslovak Government that exhibited the most caution before approving the Project, requiring convincing evidence to show the Project's positive effects on the economic, the scientific and the human levels. The first important contacts between Czechoslovakia and Hungary on the subject of the

² Annex 88.

³ Interpretation of the Agreement of 25 March 1951 between the WHO and Egypt, Advisory Opinion, I.C.J. Reports 1980, p. 73, at pp. 92-93.

⁴ See, para. 2.03, above.

utilisation of water energy on the common section of the Danube took place in 1952⁵. Little progress was made in the discussion until 1957, when the Hungarian Prime Minister, Mr. Kádár, pressed the Czechoslovak Government to take up once more the negotiations⁶. In 1958, the two States declared together that "the common utilization of water energy of the Danube in the section Bratislava-Nagymaros [was] desirable for both states"⁷. However, although the general project design was approved by 1963, the Joint Investment Task was not definitively accepted until 1974 - the Czechoslovak authorities having wished to take all the necessary precautions and to await the outcome of the multiple impact and other studies commissioned before giving their final acceptance.

6.09 On 6 May 1976, Czechoslovakia and Hungary entered into the Joint Contractual Plan Agreement⁸. As its name suggests, it was an agreement, in the light of studies and preparatory work, to prepare a Joint Contractual Plan, the details of developing which, including the sharing of costs, were set out therein. Article 1 of that Agreement provided that the Joint Contractual Plan was to be "the basis for the realisation of the construction".

6.10 Article 4(1) of the 1977 Treaty referred to this Plan, providing that:

"The joint investment shall be carried out in conformity with the joint contractual plan"

That the Plan is a document of prime importance is also brought out by Article 4(2) of the 1977 Treaty:

"The joint contractual plan shall:

- (a) Determine the main dimensions of the works of the System of Locks, the technical specifications of technical equipment, the final project work schedule and responsibility for the costs referred to in article 12, paragraph 2;
- (b) Serve as a basis for:

⁵ Annex 3

⁶ Annex 132.

⁷ Annex 133.

⁸ Annex 3.

- (1) Ordering the technical equipment, construction, materials, machinery and steelwork for the System of Locks;
- (2) Drawing up the construction plans and specifications⁹."

And in the next paragraph, Article 4(3), it is provided that:

"Approval of the joint contractual plan shall be effected in conformity with the national laws and regulations of the Contracting Parties, and the government delegates [plenipotentiaries] shall inform each other of its approval."

6.11 Hence, there is no doubt that the Joint Contractual Plan was an agreement at the same level as the other interrelated treaties and inter-State agreements: established pursuant to the 1976 Joint Contractual Agreement as well as the 1977 Treaty, it required approval by the parties, in conformity with their national laws and regulations with notification of approval given to the other party. In addition, Article 25 of the 1977 Treaty specifies that:

"The Contracting Parties shall be jointly liable in respect of:
(a) the content of the approved joint contractual plan."

6.12 The Plan may thus be regarded as an element of the 1977 Treaty itself - and a violation of the Plan as a violation of the 1977 Treaty. The same applies to the "jointly-adopted measures and decisions of the plenipotentiaries, and the joint measures and decisions of the joint agencies" referred to in Article 25 (1)(b) of the Treaty.

6.13 In Chapter II above the construction obligations of the parties under the 1977 Treaty have already been referred to. These and the remaining obligations of the 1977 Treaty are briefly discussed below:

- The purpose of the Treaty was the construction of the G/N Project as a joint investment consisting of the Gabčíkovo system of locks and the Nagymaros system of locks, which were to "constitute a single and indivisible operational system of works".

⁹ Article 12(11) concerns the costs of "the operating, maintenance (repair) and reconstruction of jointly-owned works ... borne jointly by the Contracting Parties in equal measure".

- The main structures that resulted from carrying out the Treaty (the Dunakiliti weir, the bypass canal, the Gabčíkovo and Nagymaros steps) were the common property of the parties (Article 8), who would operate them jointly (Articles 10 and 11) and would share equally in the resulting electricity (Article 9) and costs (Article 12(1)).

- Article 5 of the Treaty contained detailed provisions covering the respective responsibilities of the parties in carrying out the work in accordance with the principles under Article 5(1) that:

"The costs of carrying out the joint investment shall be borne by the Contracting Parties in equal measure."

- Article 25 (1) establishes the principle of the joint liability of the Contracting Parties:

"... in respect of:

(a) the content of the approved joint contractual plan.

(b) The execution of the Treaty during the construction and operation of the System of Locks, the jointly-adopted measures and decisions of the Government delegates, and the joint measures and decisions of the joint agencies."

- As a result, the Contracting Parties agreed to share liability on an agreed basis if their liability should be incurred (Article 25(2)), whilst under Article 26, each party remained exclusively responsible and bound to pay damages resulting from its own negligence and omissions.

- The 1977 Treaty also contained provisions concerning water resource management functions (Chapter V), including the protection of water quality (Article 15), navigation (Chapter VI), and the protection of the natural environment (Chapter VII).

- The 1977 Treaty established detailed procedures for management and control in carrying out the Treaty (Articles 6, 10 and 11) and for settling disputes (Article 27).

6.14 In conformity with its final article (Article 28), the 1977 Treaty was ratified by Hungary on 21 February 1978 and by Czechoslovakia on 28 June 1978, and it entered into force on 30 June 1978, the date of exchange of instruments of ratification. Hungary has never raised a question as to the Treaty's validity.

6.15 In fact, as recently as early June 1989, following Hungary's temporary suspension of work at Nagymaros decided on 13 May 1989, the Hungarian Government reaffirmed during a meeting of Plenipotentiaries, its intention to carry out the 1977 Treaty in other respects:

"The Hungarian Government Commissioner and the Hungarian Plenipotentiary stated that the Hungarian party will complete construction of the Gabčíkovo project in the agreed time and in accordance with the project plans. Directives have already been given to continue works suspended in the area due to misunderstanding¹⁰."

6.16 Then, in spite of these assurances given by representatives of the Hungarian Government, the decision to suspend performance was made permanent as to Nagymaros and the suspension was extended to include the Gabčíkovo section of the Project. Yet, in the same breath, Hungary did not hesitate to blame Czechoslovakia for having violated the 1977 Treaty by its supposed refusal to be willing to engage in negotiations. And, several times subsequently, Hungary attempted to justify its unilateral suspension, abandonment of works and purported termination of the 1977 Treaty on the basis that it was Czechoslovakia who had violated its obligations thereunder. To cite but a few examples:

- In various Notes Verbales and letters, Hungary characterised Variant "C" as a violation of the 1977 Treaty¹¹;
- Similarly, in a letter of 26 February 1992 to Czechoslovakia's Prime Minister, the Prime Minister of Hungary stated that "the unilateral

¹⁰ See, para. 4.11, above.

¹¹ See, e.g., para. 4.39, above, concerning Hungary's Note Verbale of 1 September 1989; and para. 4.74, above, concerning Hungary's Note Verbale of 30 July 1991.

deflection of the Danube ... questions the validity of the interstate Treaty of 1977"¹²;

- In its 1992 Declaration, Hungary sought to justify its decision to terminate the 1977 Treaty on the grounds that:

"The Czech and Slovak Party did not fulfil its duties prescribed in the 1977 Treaty for the protection of nature and water quality. Therefore Czech and Slovak Republic can be condemned for material breach of the Treaty. According to general rules of international law, a treaty can be terminated unilaterally against a violating state.

As it is clear from Chapter II of the present Declaration, the Czech and Slovak Party, continuing the constructions, did not fulfil the obligations included in Articles 15 and 19 of the Treaty according to which "The Contracting Parties ensure that the quality of the water in the Danube is not impaired as a result of the construction and operation of the barrage system" and "ensure compliance with the obligations for the protection of nature arising in connection with the construction and operation of the barrage system"...

The so-called "provisional solution" can be regarded as an even more severe breach of the Treaty. The Contracting Parties determined very precisely the work to be carried out in the original Treaty in 1977 and in the subsequent related agreements. The diversion of the Danube near Bratislava was not part of them in any form¹³."

6.17 Slovakia will show in Chapters VII and VIII below that this argument is entirely without merit. But it also reveals Hungary's firm belief in the validity of the 1977 Treaty, at least up to the time of the announcement of its purported unilateral termination of the Treaty.

6.18 Generally speaking, Hungary's conviction that the 1977 Treaty remained in force is evidenced by the successive amendments to the Treaty itself and to the 1977 Mutual Assistance Agreement. For, in amending a treaty, a State is by that very act certifying that it considers the treaty as valid. Such proof of Hungary's belief in the 1977 Treaty's validity is particularly striking since the last such amendment occurred on 6

¹² See, para. 4.77, above.

¹³ Annex 17, pp. 25-26. Emphasis added.

February 1989, that is only slightly more than three months before Hungary decided unilaterally to suspend performance.

6.19 In this regard, it is important to note that Part V of the 1969 Vienna Convention on the Law of Treaties devotes separate sections, first, to the question of the invalidity of treaties (Articles 46 to 53) and, next, to the termination and suspension of the operation of treaties. Here, in purporting to put an end to the 1977 Treaty, Hungary necessarily recognised, even if implicitly, that at least up to the effective date that it claimed to have terminated the Treaty unilaterally - that is as from 25 May 1992 - the Treaty was valid i.e., in full force and effect and imposed obligations on the parties.

6.20 Furthermore, from the very beginning, Hungary acted as if this were so. Fully aware that it could not lawfully proceed unilaterally to terminate the 1977 Treaty, Hungary sought to convince Czechoslovakia to modify and then to terminate it by mutual agreement.

6.21 In fact, although it presented Czechoslovakia with a fait accompli on 13 May 1989 when it abruptly announced its decision to suspend work at Nagymaros, the Hungarian Government made every effort to obtain Czechoslovakia's concurrence in this action. For example, in his letter to the Czechoslovak Prime Minister of 4 October 1989, Hungarian Prime Minister Németh stated that his Government:

"... proposes common negotiation on technical - economic modifications concerning the suspension of the construction of the Nagymaros part of the project and respective modification of the Hungarian-Czechoslovak Treaty signed on September 16, 1977¹⁴."

And the Resolution adopted on 23 April 1991 by Hungary's Parliament called on the Government to:

"[T]o conduct negotiations with the Government of the Czech and Slovak Federal Republic regarding the [termination] by joint agreement of the Treaty concluded on 16 September, 1977 regarding the Completion and Operation of the Gabčíkovo - Nagymaros Barrage System and any and all such agreements which the State Parties to the treaty and/or their authorized

¹⁴ Annex 74.

bodies have concluded for the purpose of the execution of the aforementioned Treaty¹⁵."

In other words, the Treaty and related agreements should be terminated by common accord.

6.22 After May 1989, Hungary repeatedly sought to obtain Czechoslovakia's agreement to changes in the 1977 Treaty, albeit changes that were not acceptable to Czechoslovakia. This, too, shows beyond any doubt that Hungary regarded the Treaty as the law between the parties so long as they did not modify it by mutual agreement. For example, in the Note Verbale of 30 October 1989, the Hungarian Government indicated that the Council of Ministers:

"... stresses the proposal on modification of the Treaty on the Gabčíkovo-Nagymaros waterwork system expressed in Prague, October 11, 1989, and in Bratislava, October 26, 1989 at the Czechoslovak-Hungarian meeting. The original Treaty was signed on September 9, 1977 by [Hungary and Czechoslovakia]¹⁶."

Modification of the Treaty by mutual agreement was the explicit purpose of the draft treaty communicated by Hungary on 30 November 1989 according to which:

"The contracting parties have decided to modify the Treaty between [Czechoslovakia and Hungary] on the construction and operation of the Gabčíkovo-Nagymaros waterwork system, signed in Budapest, on September 16, 1977" (Article 1, emphasis added).

"The signing day. The contracting parties [from the day of signature shall] suspend the realization of the provisions of the treaty, signed on September 16, 1977, as well as the amended protocols, signed on October 15, 1983 and February 6, 1989, that are not in harmony [with] this treaty.¹⁷" (Article 4, paragraph 1).

6.23 It could not be indicated more clearly, a contrario, that in the event of failure to conclude such a mutual agreement to modify the Treaty (and the other agreements

¹⁵ Annex 88. Emphasis added.

¹⁶ See, para. 4.46, above, and Annex 75.

¹⁷ See, para. 4.50, above, and Annex 78.

related to the Treaty which would also have to have been modified), the 1977 Treaty remained in force according to Hungary's own admissions.

B. Other Agreements Linked to the 1977 Treaty

Agreements that Stemmed from the Treaty

6.24 The 1977 Treaty, the "basic treaty", refers to several other agreements that supplement and are an inseparable part of the Treaty, in particular the following instruments to which reference is made in the Treaty, as indicated below:

- The Joint Contractual Plan (referred to in Article 1 (4) of the 1977 Treaty);
- A separate treaty to be negotiated subsequently in order to revise the State frontier and to exchange territories (Article 22(2))¹⁸;
- Other separate agreements for the transfer to the territory of the other party of documents, machinery and materials required in connection with the Project (Article 24(1)).

6.25 In addition, although not referred to in the 1977 Treaty itself, two agreements were entered into in order to carry out the purposes of the Treaty: the 1977 Mutual Assistance Agreement and the 1979 Joint Statute Agreement, both of which will now be examined.

The 1977 Mutual Assistance Agreement

6.26 This Agreement was entered into on the same day as the 1977 Treaty (16 September 1977) and, similarly, entered into force on the same day (30 June 1978) by virtue of Article 5 of the Agreement. The preamble to the Agreement contains a reference to the 1977 Treaty.

¹⁸ Such a treaty was never drawn up or entered into.

6.27 The 1977 Mutual Assistance Agreement had a dual purpose: (i) to establish the precise work schedule and (ii) to modify the division of work responsibility as set out in the 1977 Treaty, and to provide for the resulting compensation.

6.28 As to the work schedule, Article 4(4) of the 1977 Treaty provided that:

"Operation relating to the joint investment shall be organised by the Contracting Parties in such a way that the power generation plants will be put into service during the period 1986-1990."

Pursuant to this general principle, Article 1 of the Mutual Assistance Agreement provided that the Gabčíkovo hydroelectric plant would be placed in service in two stages, in 1986 and 1989, and the Nagymaros plant in 1989 and 1990, according to an annexed schedule breakdown.

6.29 As to the division of work responsibility, at Hungary's request (in the light of the economic problems that are discussed above in Chapter III), Czechoslovakia accepted, under Article 2 of the Mutual Assistance Agreement, to undertake initially, in order to assist Hungary, an additional portion of work the extra value of which was set in Article 3 as the equivalent of 1022.5 GWh of electricity to be recuperated from electrical production at Gabčíkovo between 1986 and 1988. This decision, which modified temporarily the principle of the equal division of hydroelectric power generated under the Project (Article 9 of the Treaty) was the consequence of carrying out (and illustrates) the principle of equal sharing of costs (Article 5(1) of the Treaty).

6.30 In conformity with the principle set out in Article 27 of the Treaty, Article 4 of the Agreement provided that:

"All differences which shall emerge in the framework of mutual assistance shall be settled by the government plenipotentiaries in accordance with the respective articles of the Treaty."

The 1979 Joint Statute Agreement

6.31 In accordance with Article 3(1) of the 1977 Treaty, Czechoslovakia and Hungary entered into the Joint Statute Agreement on 11 October 1979 dealing with the

status, responsibilities and activities of the Plenipotentiaries appointed to the Project by each side. It went into force upon signature.

6.32 The terms of the first three paragraphs of Article 3 of the Joint Statute Agreement provided as follows:

"The government plenipotentiaries shall act and take decisions jointly when exercising rights and duties emanating from the Treaty and at solving problems which occur at the realization and operation of the System of Locks.

The government plenipotentiaries shall ensure implementing of the jointly taken decisions on the territory of the Contracting Party according to the international regulations and principles of the management.

The government plenipotentiaries shall settle disputes according to the Article 27 of the Treaty."

6.33 Article 4 of the Agreement listed in detail the functions of the Plenipotentiaries both before the completion of the Project and after it had been placed in operation.

6.34 As a result of these provisions, the Plenipotentiaries took joint decisions which in effect became veritable international agreements themselves, binding on the parties. The same was true of recommendations of the joint agencies created under Article 3(2) of the 1977 Treaty and Article 6(1-5) of the 1979 Joint Statute Agreement, since these recommendations had been approved by the Plenipotentiaries (Article 6(6) of the 1979 Agreement).

The Protocols to the 1977 Treaty and the Mutual Assistance Agreement

6.35 On two separate occasions, in 1983 and in 1989, the parties modified the 1977 Treaty and the Mutual Assistance Agreement entered into on the same day in order to adjust the Project schedule and to deal with the consequences flowing therefrom in respect to the obligations of the parties thereunder. It must be stressed that in each case these changes occurred at the strong urging of Hungary, even though the requests went in opposite directions: in 1983 to slow down the Project; in 1989 to speed it up. Nevertheless, in each case, Czechoslovakia responded positively to Hungary's requests.

6.36 Following the 17th session of the ESTC Committee held in February 1981, Hungary started to fall behind in carrying out the work it had to perform and asked that a new Project schedule be worked out in order to slow down the pace of planned work, for financial reasons¹⁹. Shortly thereafter, Hungary requested a moratorium until 1990.

6.37 Although an agreement in principle was reached over a new schedule during the 18th session of the ESTC Committee in mid-June 1982, the necessary amendments to the 1977 Treaty and Mutual Assistance Agreement were not finally agreed until October 1983 in view of the lack of agreement as to how to compensate Czechoslovakia for undertaking work that it was Hungary's responsibility to carry out²⁰.

6.38 In the event, no agreement on compensation was reached, with the result that the two Protocols²¹ dealt only with the delays in proceeding with the Project:

- The first of these Protocols, which amended Article 4(4) of the 1977 Treaty provided that:

"Operations relating to the joint investment shall be organized by the Contracting Parties in such a way that the power generation plants will be put into operation during the period 1990-1994."

- Under the terms of the second Protocol the dates for completing work - and consequently the dates on which compensation was payable to Czechoslovakia - were prolonged by four years, the end of construction being fixed at 1995. Both instruments entered into force on 7 February 1984.

6.39 Then, starting in 1985, Hungary sought to accelerate the schedule, citing the protection of the environment as a reason²². Thus, at this stage, Hungary saw the

¹⁹ See, para. 3.04, above.

²⁰ See, para. 3.05, *et seq.*, above.

²¹ Annexes 7 and 8.

²² See, para. 3.10, *et seq.*, above.

Project as beneficial to the environment. The Czechoslovak Government hesitated in accepting this new proposal because it imposed a difficult economic and financial burden.

6.40 Nevertheless, Czechoslovakia gave in to Hungary's strong pressures even though the changes involved rearranging the ensemble of economic measures for the public financing of the Project in Czechoslovakia. Thus, the way lay open to speed up the Project as Hungary desired.

6.41 The new Protocol accomplishing this was signed on 6 February 1989²³. It accomplished the following changes:

- It annulled the second 1983 Protocol that had amended the Mutual Assistance Agreement and modified Article 1(1) of that Agreement with the following timetable:

"Beginning of the preparatory works	1978
Gabčíkovo hydroelectric power plant:	
- putting into operation the first [turbine/generator unit]	1990
- putting into operation the eighth [turbine/generator unit]	1992
Nagymaros hydroelectric power plant	
- putting into operation the first [turbine/generator unit]	1992
- putting into operation the sixth [turbine/generator unit]	1993
Finishing of the construction works	1994."

An overall construction schedule was annexed to the Protocol and the substitution of a detailed program to replace that appearing in the Joint Contractual Plan was provided for in Article 2.

²³ Annex 9. In order to achieve the new time schedule, it was not necessary to amend the 1977 Treaty once more, as the parties intended to remain within the time limits laid down by Article 4 (4) as modified by the 1983 Protocol. Thus, in order to satisfy Hungary's demands, it was necessary simply to reduce the time limits for the putting into operation of Gabčíkovo and Nagymaros by amending once again Article 1 (1) of the 1977 Mutual Assistance Agreement.

Other Relevant Agreements

6.42 Besides the foregoing agreements linked to the 1977 Treaty, and inseparable from it, several other agreements are specifically referred to in the Treaty. The Treaty was not the basis of these Agreements but rather the Treaty carried out certain of their provisions and put them into operation. These agreements, which will be briefly looked at next, were the following:

- The 1976 Boundary Waters Management Agreement²⁴;
- The 1948 Danube Convention²⁵; and
- The 1958 Danube Fisheries Agreement²⁶.

The 1976 Boundary Waters Management Agreement

6.43 As already discussed above, the 1977 Treaty dealt specifically with water quality and referred in this respect to the provisions of the 1976 Agreement dealing with monitoring water quality. Thus, the Boundary Waters Management Agreement remained the essential instrument between the parties governing the matter of water management and, in particular, the monitoring and protection of water quality.

6.44 The point to be made is that Article 3 of this Agreement, which deals with the general obligations of the parties, refers three times to mutually agreed conditions. Thus, the 1976 Agreement presumed there would be implementing agreements between the parties, and it was precisely this function that the 1977 Treaty and related agreements performed in respect to the part of the Danube related to the Project.

6.45 Similarly, the 1976 Agreement created a Joint Commission whose duties are described generally in Article 5²⁷, and more exactly in Article 10(1) of the 1979

²⁴ Annex 4.

²⁵ Annex 10.

²⁶ Annex 11.

²⁷ See, para. 3.15, et seq., above.

Joint Statute Agreement. This last provision is of particular interest in view of the importance of the question of water quality and the great emphasis placed on it by Hungary in the course of this dispute; it empowered the commission to:

" ... supervise water resource management functions, water ameliorations, measures to utilize water resources, protection of surface and underground waters against pollution, maintenance of fairway, maintenance of the bed of the Danube river, protection against the flood and ice movement."

And Article 10(2) foresaw:

" ... an agreement to supervise the solving of all relevant water resource management questions in time of operation of the System of Locks."

As noted in Chapter III above, in the course of discussing water quality it was Hungary who, in May 1989, refused to proceed further with steps to protect water quality in the regions affected by the G/N Project²⁸.

6.46 It is evident, as well, that the 1976 Boundary Waters Management Agreement remains in force and continues to place on the parties obligations to the extent not otherwise modified by subsequent treaty or agreement, and these obligations were in fact made concrete in the 1977 Treaty and related agreements that constituted the mutually agreed conditions mentioned in Article 3 of the 1976 Agreement.

The 1948 Danube Convention

6.47 Article 18(1) of the 1977 Treaty makes specific reference to the 1948 Danube Convention:

"The Contracting Parties, in conformity with the obligations previously assumed by them, and in particular with Article 3 of the [1948 Danube Convention] shall ensure uninterrupted and safe navigation on the international fairway both during the construction and during the operation of the System of Locks."

²⁸

See, para. 3.24, above.

6.48 The main purpose of this Convention was to assure freedom of navigation on the Danube and to regulate it. Of special relevance is Article 3 of the Convention, which provided that:

"The Danubian States undertake to maintain their sections of the Danube in a navigable condition for river-going ... vessels, to carry out the works necessary for the maintenance and improvement of navigation conditions and not to obstruct or hinder navigation on the navigable channels of the Danube. The Danubian States shall consult the Danube Commission (Article 5) on matters referred to in this Article."

6.49 The 1977 Treaty and related agreements were the means by which Czechoslovakia and Hungary carried out their obligations under the Treaty in respect to the portion of the Danube affected by the G/N Project.

The Danube Fisheries Agreement

6.50 Article 20 of the 1977 Treaty provided that:

"The Contracting Parties, within the framework of national investment shall take appropriate measures for the protection of fishing interests in conformity with the Danube Fisheries Agreement, concluded at Bucharest on 29 January 1958."

6.51 This Agreement and the regulations for Fisheries in the River Danube attached to it (Article 3) controlled fishing in the waters of the Danube:

"... including its mouth, to tributaries of the Danube up to the maximum extent of its flood waters, and to lakes, estuaries and pools permanently or temporarily connected with the Danube, in the Danube flood-basin in the territory of the Contracting Parties, including the area adjoining the mouth."

The mixed commission created by Article 12 coordinated the activities of the parties to the Agreement.

6.52 According to Article 5 of the Agreement:

"The Contracting Parties agree to carry out in the river Danube and in the waters referred to in article 3 improvement works and piscicultural operations to ameliorate the natural conditions for the breeding, growth and normal increase in stocks of fish of economic importance."

They also undertook to so operate the water engineering works as to safeguard "the normal migratory movements of fish" and "the normal breeding and development of economical, valuable species of fish, in the sections of the river situated under and below the said works, under the new environmental conditions created by the erection of those works".

6.53 Although neither Czechoslovakia nor Hungary was a signatory to the original Agreement, in accordance with Article 14 they adhered to it on 29 June 1972 and 18 December 1961, respectively. In addition, the obligations flowing from this Fisheries Agreement were integrated into the bilateral arrangements arising from the 1977 Treaty by virtue of the provisions of Article 20 thereof.

6.54 This is another illustration of how the 1977 Treaty lies at the centre of an interrelated, inseparable complex of agreements. Although the questions posed to the Court under Article 2 of the Special Agreement formally refer to the 1977 Treaty, they can only be understood and responded to in the context of this system of agreements²⁹. Article 2 of the Special Agreement expressly recognises this for it requests the Court "to decide on the basis of the Treaty", defining "Treaty" to include its "related instruments" and it adds: "as well as such other treaties as the Court may find applicable³⁰".

SECTION 2. Hungary's Suspension, Subsequent Abandonment of its Performance and Purported Termination of the 1977 Treaty Violate this Interrelated Complex of Treaties and Agreements

6.55 The response to the questions posed under Article 2 of the Special Agreement brings into play the law of treaties.

6.56 Moreover, Czechoslovakia and Hungary several times in the course of the dispute made specific reference to the 1969 Vienna Convention on the Law of Treaties. Hungary, for its part, tried to justify termination of the 1977 Treaty by relying in its 1992 Declaration on several provisions of the Vienna Convention:

²⁹ See, para. 6.06, above.

³⁰ See, Introduction, para. 4, above.

"Although the Vienna Convention cannot directly be applied in the legal dispute of the 1977 Treaty (it entered into force for both countries after 1977), its provisions are guiding in many respects, concerning the content of generally accepted international legal norms at the time of the Treaty's conclusion. This does not mean that the Parties may not invoke other rules of general international law not mentioned in the Vienna Convention, neither does it mean that norms of the Vienna Convention, even if indirectly applicable, literally apply in the present case. One of the reasons is that the Convention, at the time of its formulation partially conformed with customary law; in some respects it developed and tightened these rules.³¹"

6.57 There is, of course, a technical point to deal with arising under Article 4 of the Vienna Convention by virtue of the fact that neither Czechoslovakia nor Hungary had adhered to the Convention before 19 June and 29 July 1987, respectively³². However, as the Court has held, the Convention codified in large part pre-existing customary law on the subject, as the following citation of the Court bears out:

"The rules laid down by the Vienna Convention on the Law of Treaties concerning termination of a treaty relationship on account of breach (adopted without a dissenting vote) may in many respects be considered as a codification of existing customary law on the subject³³."

6.58 As Sir Ian Sinclair has noted, the 1969 Convention:

"... incorporates grounds of termination or suspension which are exclusive to the treaty and do not depend on a subsequent treaty, but rather derives from rules of general international law.³⁴"

³¹ Annex 17, p. 23.

³² Slovakia succeeded to Czechoslovakia as a party to the Vienna Convention by its notification of succession, dated 28 May 1993.

³³ Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971, p. 16, at p. 71. See, also, Appeal Relating to the Jurisdiction of the ICAO Council, Judgment, I.C.J. Reports 1972, p. 46, at p. 67; and Fisheries Jurisdiction (United Kingdom v. Iceland), Jurisdiction of the Court, Judgment, I.C.J. Reports 1973, p. 3, at p. 18; and Interpretation of the Advisory Opinion Agreement of 25 March 1951 between the WHO and Egypt, I.C.J. Reports, 1980, p. 73 at pp. 95-96.

³⁴ The Vienna Convention on the Law of Treaties, 2nd ed., Manchester University Press, Manchester, 1984, p. 185. Thus, insofar as Hungary is entitled to invoke the general rules of international law to support its actions, they are already to be found, incorporated with care, in the Vienna Convention.

6.59 Further, in February 1989, after the Vienna Convention had entered into effect for both parties, Hungary affirmed the substantive obligations of the 1977 Treaty by entering into a Protocol that advanced the timetable. As a result, the provisions of the Vienna Convention certainly governed the supposed unilateral termination of the Treaty. Moreover, as has been pointed out in Section 1 above, the Protocol was an integral part of the interrelated system of agreements constituting the "contractual legal regime" binding on the parties. It is to this "contractual legal regime" that the Vienna Convention applies.

6.60 Section 3 of this Chapter will set out in detail the treaty obligations violated by Hungary; but it is appropriate here to note that the unilateral suspension, abandonment of works, then purported termination of the 1977 Treaty alone constituted violations by Hungary of obligations in respect to rights that, as recognised in the preamble of the Special Agreement, became vested in Slovakia as successor State to rights and obligations relating to the G/N Project³⁵.

6.61 It would not be correct to conclude that the unilateral acts of Hungary to suspend, abandon its performance and then purport to terminate the 1977 Treaty constituted the only failures of Hungary to live up to its treaty obligations. From the very start, giving economic difficulties as an excuse, Hungary fell short of meeting its obligations. As has been discussed above in Chapter III, this failure on Hungary's part caused delay and led to an amendment of the 1977 Treaty and Mutual Assistance Agreement to extend the agreed work schedule of the Project. For, at the time, Czechoslovakia was more anxious to reach a compromise in the light of Hungary's economic difficulties in order to safeguard the Project under the Treaty than to insist on its legal rights and demand compensation for the damages incurred. This, of course, did not mean that Czechoslovakia had at any time renounced rights to claim damages caused by Hungary's failures to carry out its obligations under the Treaty before the amendments of 1983 and 1989³⁶.

³⁵ See, Introduction, para. 5.

³⁶ See, e.g., Annex 44, a letter from Czechoslovakia's Prime Minister of 3 May 1983 to the Prime Minister of Hungary.

A. Hungary's Unilateral Suspension and Subsequent Abandonment of its Performance under the 1977 Treaty

6.62 Hungary's decision to suspend unilaterally and subsequently to abandon its performance may be seen as occurring in four stages, each of which will now be examined.

6.63 The first stage took place on 13 May 1989 only 96 days after the taking effect of the 1989 Protocol shortening the Project's work schedule by 15 months. For, on that day, the Hungarian Government - without advance warning or consultation - announced the immediate suspension for two months' duration of work at the Nagymaros site³⁷. This notification received by Czechoslovakia was not of Hungary's suspension of the 1977 Treaty as a whole, only the suspension of its own obligations in respect of a part of the Treaty. Since, however, the works at the Nagymaros section of the G/N Project were the sole responsibility of Hungary, this amounted to an illegal suspension of the 1977 Treaty in part. Czechoslovakia's protest of this action followed at once and was expressed in vigorous terms³⁸.

6.64 The second stage of Hungary's suspension and subsequent abandonment of performance took place on 20 July 1989³⁹. After reassurances given to Czechoslovakia that Hungary's decision was limited to Nagymaros⁴⁰, on 20 July the Hungarian Government announced that its extension included the Gabčíkovo section of the Project as well, notably the damming of the Danube near Dunakiliti weir, which was Hungary's responsibility and essential to the operation of the Gabčíkovo section of the Project. This suspension of work at both sites was until 31 October 1989, extending the earlier two-month suspension at Nagymaros. As in the case of the first stage decision, it was transmitted orally. It provoked an immediate Czechoslovak protest⁴¹ and a series of subsequent official rejections of Hungary's decision as unilateral, in violation of the 1977

³⁷ See, para. 4.07, above.

³⁸ See, para. 4.09, above.

³⁹ See, para. 4.36, above.

⁴⁰ See, para. 4.11, et seq., and para. 4.35, above.

⁴¹ See, para. 4.36, above.

Treaty, and certain to cause serious damage to Czechoslovakia for which it would claim compensation.

6.65 From a legal standpoint, the 20 July decision was a reaffirmation of non-performance by Hungary under the Treaty, extended to Gabčíkovo and with the date of suspension also extended. It was coupled with a demand that Czechoslovakia, likewise, suspend performance of its obligations. Unlike the first phase of suspension, the 20 July decision concerned works in the section of the Project that were shared between the parties. Hence, it did not suspend that part of the Treaty; Hungary simply refused to perform its portion of the works there, for an unspecified period.

6.66 This brings the discussion to the third phase of Hungary's violations, which concerned further extensions of the initial decisions:

- Renunciation of the Nagymaros section of the Project resulting in the elimination of peak hour operation at Gabčíkovo; and
- Suspension of work on all parts of the Project on the pretext of the need to reach an agreement on environmental protection and guarantees.

6.67 As is brought out in Chapter IV, by the end of 1989, Hungary had made up its mind about Nagymaros and peak operations at Gabčíkovo: these simply had to be eliminated. There was nothing to negotiate about. As to the rest of the G/N Project, Hungary's position in the autumn of 1989 was that work should stop - but for only a short time - pending agreement on measures and guarantees protecting water quality and the environment. Czechoslovakia rejected the cancellation of Nagymaros and peak operation but it was willing to accept a moratorium as to Nagymaros - during which the issues could be studied and resolved by agreement.

6.68 As to the Gabčíkovo section of the works - and notably Dunakiliti and the damming of the Danube - Czechoslovakia fully accepted the proposal to start at once to prepare agreements on the protection of water quality and the environment. Before the end of 1989, the assumption of both sides was that any environmental and water quality issues presented by completing and putting into operation the Gabčíkovo section were matters that

could be resolved by mutual agreement. But Nagymaros and peak operation at Gabčíkovo were simply not issues that Hungary was prepared to negotiate over.

6.69 Any possibility of compromise, of which some promise seemed to exist in the final months of 1989, were dashed by Hungarian Prime Minister Németh's letter of 10 January 1990⁴². This development was all the more surprising since Mr. Németh had been Prime Minister of Hungary during the promising period of negotiations in the previous year. This ushered in phase four of Hungary's suspension and abandonment of performance of its obligations under the 1977 Treaty.

6.70 From that point on, Hungary's position continued to harden. On 6 March 1990, as expressed in its Prime Minister's letter of that date⁴³, Hungary's position was simply that all work on the G/N Project would be suspended pending discussion of modifying the 1977 Treaty and further research.

6.71 Thus, by the spring of 1990, Hungary's decision to suspend was therefore: (i) general in character, (ii) for an unspecified time and (iii) presented as calling the Project "mistaken" and calling for the negotiation of its abandonment with Czechoslovakia. This constituted in effect an ultimatum - for resumption of work had been made dependent on acceptance by Czechoslovakia of the amendments to the 1977 Treaty, which as a minimum meant the elimination of Nagymaros and peak operation at Gabčíkovo. Hungary was to maintain and, indeed further harden this rigid, inflexible position until its purported termination of the 1977 Treaty in May 1992.

6.72 The details of the arguments advanced by Hungary to attempt to justify its decisions discussed above in their four successive stages will be examined in Chapter VIII, where it is shown that these arguments carry no weight. For present purposes it suffices to mention, as the Czechoslovak legal experts did in the course of a meeting during 18-20 September 1989 convened to discuss the legal issues, that Hungary's decisions of 13 May and 20 July - and a fortiori its subsequent decisions during the third and fourth stages of Hungary's suspension of performance - must be characterised, as stated by Czechoslovakia at the time as:

⁴² See, para. 4.55, et seq., above.

⁴³ See, para. 4.61, et seq., above.

"... unilateral acts not respecting the way of settling points at issue specified by the 1977 Treaty. At the same time, this act [of suspension] is at variance with common international ... law codified in Article 57 of the 1969 Vienna Convention ... ⁴⁴."

And it is useful to quote here the terms of Article 57 of the 1969 Vienna Convention:

"The operation of a treaty in regard to all the parties or to a particular party may be suspended:

- (a) in conformity with the provisions of the treaty; or
- (b) at any time by consent of all parties after consultation with the other contracting States."

This Article was adopted unanimously (101 votes in favour) by the Vienna Conference charged with drawing up the 1969 Convention.

6.73 In the present case, the 1977 Treaty contains no provision of any kind having to do with suspension. It is unnecessary to add, therefore, that neither Czechoslovakia nor Hungary had agreed on any such provision. It is also rather an interesting coincidence that the particular phrase "after consultation with the other Contracting States" was added to paragraph (6) of the above-cited provision of Article 57 of the 1969 Vienna Convention at the request of Hungary⁴⁵.

6.74 With regard to the facts in this case, Hungary not only refrained from obtaining the consent of Czechoslovakia but it avoided any consultation. Hungary's decisions of 13 May and 20 July 1989, as well as those taken later, placed Czechoslovakia face-to-face with a fait accompli, not the least surprising elements of which were, first, that only three months earlier a Protocol had been agreed to speed up the Project by 15 months and, second, that Czechoslovakia had been assured by Hungary's Plenipotentiary, only a month before the 20 July decision, that the decision of his Government was strictly limited to Nagymaros. It can be seen from a review of the history of exchanges during 1989 and 1990 that Hungary served Czechoslovakia with what were ultimatums: initially as to Nagymaros

⁴⁴ Annex 134.

⁴⁵ United Nations Conference on the Law of Treaties, first and second sessions, Official Records, Documents of the Conference, A/CONF. 39/L. 30, p. 269 and second session, Official Records, Summary Records, 21st Plenary Meeting, p. 110, paras. 10 and 11.

and peak hour operation; then, concerning the entire operation of the Project. Hungary's positions were non-negotiable, but this never prevented Czechoslovakia from attempting to reach some sort of solution through discussions with Hungary as is established in Chapter IV.

6.75 The unacceptable nature of Hungary's conduct is heightened by the fact that, as the evidence shows, the Hungarian Government demonstrated its awareness that an agreement with Czechoslovakia as to suspension of the 1977 Treaty was required. Such was all the more required in the light of Article 27 of the 1977 Treaty, which deals with disputes settlement. This provided that disputes should be resolved through bilateral negotiations.

6.76 The illegality of Hungary's conduct was further aggravated by the fact that its decision to suspend the 1977 Treaty occurred only 96 days after the 1989 Protocol was entered into and had taken effect - at the express and insistent request of Hungary - shortening the time for completing the Project by 15 months. Such a complete reversal of position by Hungary is incompatible with the principle of good faith which, in all circumstances, must govern the conduct of States in international relations and in particular in the carrying out of treaties⁴⁶.

6.77 Moreover, it is the very essence of the notion of "suspension" of a treaty that its completion not be compromised⁴⁷. Although this principle is dictated by common sense, it also finds expression in Article 72(2) of the 1969 Vienna Convention in these terms:

"During the period of the suspension, the parties shall refrain from acts tending to obstruct the resumption of the operation of the treaty."

6.78 In the first place, it is evident that Hungary's actions to suspend performance - first for two months, then for five months and then for an indeterminate period (which in fact lasted three years) - rendered impossible the performance of the Treaty within the period shortened by the 1989 Protocol. That the Hungarian Government was

⁴⁶ See, Article 26 of the 1969 Vienna Convention on the Law of Treaties.

⁴⁷ See, Paul Reuter, *Introduction au Droit des Traités*, P.U.F., Paris, 1985, p. 137 and Nguyen Quoc Dinh, Patrick Daillier and Alain Pellet, *Droit International Public*, L.G.D.J., Paris, 1992, p. 292.

well aware of this is borne out by its Note Verbale of 3 November 1989 in which it expressly indicated that it had "cancelled that part of the Protocol signed in February 1989 on the acceleration of the construction at the waterwork system concerning the Nagymaros part"⁴⁸.

6.79 Secondly, in making the end of the "suspension" of the carrying out of the 1977 Treaty subordinate to an acceptance by Czechoslovakia of the amendments proposed by Hungary in its Note Verbale of 30 November 1989⁴⁹, Hungary altered the meaning of "suspension". This did not involve "suspension", but rather the outright imposition of an amendment on Czechoslovakia, leaving the latter no choice.

6.80 Such practices are unquestionably not compatible with the elementary rules concerning the respect owing to treaties.

B. The Purported Termination of the 1977 Treaty

6.81 There exists a wide difference between the notions of suspension and termination of a treaty. With suspension, the treaty is allowed to continue, only its operation is suspended⁵⁰. Termination, however, constitutes an irremedial step; and its validity is made subject to certain rigorously applied conditions, which are not present in this case, as will be shown below. In Chapter VIII it will be established that the particular circumstances invoked by Hungary do not constitute valid grounds for termination so as to exclude the illegality of Hungary's actions.

6.82 As was explained above in Chapter IV, and mentioned again in this Chapter, Hungary's position varied considerably between the time when the Government decided to suspend the application of the 1977 Treaty (13 May 1989) and when it purported to put an end to it (19 May 1992).

6.83 Given these frequent changes of position on the part of Hungary, it is difficult to present in a succinct way the successive positions adopted. The following

⁴⁸ See, para. 4.47, above.

⁴⁹ See, para. 4.50, above.

⁵⁰ See, in this regard, the carefully drafted provisions of Articles 57 and 72 of the 1969 Vienna Convention.

presentation (in five stages) may be helpful, even though it may give more coherence to Hungary's moves than they merit:

- At first the Hungarian Government limited itself to requiring that new studies be carried out as to the ecological impact of the G/N Project; Czechoslovakia acceded to this request but opposed suspending work because of the ecological and economic damage this would entail;
- Then, at a second stage, Hungary insisted on the postponing of the performance of the Treaty pending examination of whether and how it should be modified;
- The third stage followed almost at once, even before the studies had been commissioned, when the Hungarian Government appeared to subordinate the resumption of work to the conclusion of agreements on protection of the environment, elimination of peak power operations and cancellation of work at Nagymaros; Czechoslovakia declared itself prepared to begin negotiations on all points except cancellation of Nagymaros, although agreeing to separate the fate of Nagymaros from that of Gabčskovo;
- Then, in March 1990, occurred the fourth shift in position: Hungary again posed the problem in scientific and technical terms and demanded that new studies be undertaken - which Czechoslovakia agreed to;
- While this process was getting underway, Hungary once again tightened its requirements and tried to dictate the acceptance of "the conclusion of a new interstate treaty" as the consequence of termination of the 1977 Treaty, while at the same time acknowledging (in the Resolution of the Hungarian Parliament of 23 April 1991) that it was to be accomplished by common accord.

6.84 As already mentioned earlier, the Resolution of Hungary's Parliament was certainly one of the decisive elements in the hardening of Hungary's position for it

limited the mandate of its representatives in subsequent negotiations. As a result, Hungary in practice showed not the slightest wish thereafter to negotiate over whether or how to modify the 1977 Treaty and related agreements - which Czechoslovakia continually expressed its willingness to do - but purely and simply envisaged only the Treaty's total abrogation.

6.85 The Hungarian Prime Minister officially made his intention very clear to his counterpart on 26 February 1992⁵¹. He invoked the protection of "environmental values", a goal which, in fact, was provided for in the 1977 Treaty and which Czechoslovakia shared completely with Hungary and had always accepted to discuss.

6.86 Then, on 7 May 1992, the Hungarian Government adopted a Resolution providing, in part, as follows:

"The Government of Hungary is given a power, on the basis of the article 3 of the Resolution of the Hungarian Parliament N° 12/1992 (of April 4), to terminate unilaterally, beginning May 25, 1992, the interstate Treaty of 1977 and all related Agreements which were concluded by treaty parties, respectively their authorities for realization of this interstate Treaty⁵²."

6.87 Despite the protests of the Slovak Government on 11 May that Hungary's declared intention to terminate the 1977 Treaty was "legally null and void", pointing out that the Treaty, which contained no provision for termination, could be cancelled or changed "only by agreement of both Parties to the Treaty", and despite Czechoslovakia's declared willingness to negotiate, the Hungarian Government decided on 19 May 1992 to carry out this intention.

6.88 On 19 May 1992, the Hungarian Government informed the Hungarian Parliament - and at the same time advised Czechoslovakia by Note Verbale and letter - of the following⁵³:

"The Government of the Republic of Hungary invested with power by the Parliament of the Republic of Hungary, hereby terminates the 16 September

⁵¹ See, para. 4.77, et seq.

⁵² Annex 110.

⁵³ See, para. 4.81, above.

"The Government of the Republic of Hungary invested with power by the Parliament of the Republic of Hungary, hereby terminates the 16 September 1977 Treaty signed in Budapest between the People's Republic of Hungary and the Czechoslovakian Socialist Republic concerning the construction and commencement of operation of the Bős-Nagymaros Barrage System, and furthermore terminates all agreements concluded by the Parties or their authorities for the implementation of the above mentioned Treaty effective 25 May 1992."

6.89 The so-called "justifications for this step" were set out in a Declaration of 16 May 1992 enclosed with the 19 May letter (the 1992 Declaration).

6.90 It is not the purpose of this Chapter to deal with these so-called "justifications". It suffices to show that such a unilateral termination that relates to the 1977 Treaty, as well as to all agreements concluded in application of it, is *per se* an extremely serious breach of well-established and fundamental principles of general international law.

6.91 Neither the 1977 Treaty, the basic treaty, nor the subsequent agreements linked to it or modifying it contain provisions concerning termination.

6.92 In such a situation, the relevant provision to examine is Article 56 of the 1969 Vienna Convention:

"Denunciation or withdrawal from a treaty containing no provision regarding termination, denunciation or withdrawal.

1. A treaty which contains no provision regarding its termination and which does not provide for denunciation or withdrawal is not subject to denunciation or withdrawal unless:
 - (a) it is established that the parties intended to admit the possibility of denunciation or withdrawal; or
 - (b) a right of denunciation or withdrawal may be implied by the nature of the treaty.
2. A party shall give not less than twelve months' notice of its intention to denounce or withdraw from a treaty under paragraph 1."

Several remarks concerning Article 56 are called for in the context of the present case. In the first place, it must be noted that "termination" and "denunciation or withdrawal" are put

on the same footing. Therefore it does not matter whether the decision made by Hungary may be qualified as a "denunciation" or not. Whether a denunciation stricto sensu or another kind of termination, it is clearly illegal since none of the conditions required in article 56 are fulfilled.

6.93 Moreover, without any doubt the Vienna Convention introduced a considerable softening of the customary rules prevailing theretofor, and in this sense constituted more a "progressive development" rather than a codification stricto sensu.

6.94 Traditional practice had favoured the principle of the absolute stability of treaties concluded without time limits, as had been firmly expressed by the Powers in the London Protocol of 17 January 1871 in these terms:

"[C]'est un principe essentiel du droit des gens qu'aucune Puissance ne peut se délier des engagements d'un Traité, ni en modifier les stipulations, qu'à la suite de l'assentiment des Parties Contractantes au moyen d'une entente amicale.⁵⁴"

Translation:

"It is a basic principle of law that no State can disavow its treaty obligations, nor modify a treaty's provisions, save for with the consent of the Contracting Parties in the form of an amicable agreement."

There is abundant and highly consistent State practice in support⁵⁵.

6.95 Relying on "a long series of intergovernmental discussions", Lord McNair considered that "there is a general presumption against the existence of any right of unilateral termination of a Treaty"⁵⁶. Brierly considered that there was "certainly no general

⁵⁴ De Martens, Nouveau Recueil Générale des Traités, Vol. 18, p. 278. See, also, the Despatch from Earl Granville, British Secretary for Foreign Affairs, to the British Ambassador at St. Petersburg, dated 10 November 1870 and quoted with approval by Lord McNair, The Law of Treaties, Clarendon Press, Oxford, 1961, pp. 495-497.

⁵⁵ See, in particular, (i) the incidents concerning the Clayton-Bulwer Treaty of 1850 (cited by McNair, ibid., pp. 497-498); (ii) Affaire de Batoum (ibid., pp. 498-499), and (iii) Germany's renunciation of certain parts of the Treaty of Versailles condemned by the Council of the League of Nations in terms very close to those used in the London Protocol (Off. J., 1935, No. 5, pp. 551-552) and in the Statute of Berlin (cited by Nguyen Quoc Dinh et al., op. cit., p. 295, etc.).

⁵⁶ McNair, op. cit., p. 493.

right of denunciation of a treaty of indefinite duration"⁵⁷. And Article 34 of the Harvard Research Draft concluded a long examination of the practice as follows:

"A Treaty may be denounced by a party only when such a denunciation is provided for in the treaty or consented to by all other parties. A denunciation must be in accordance with any conditions laid down in the treaty or agreed upon by the parties"⁵⁸.

6.96 Such unanimity of view is easily explained: the validity of a unilateral decision to put an end to a treaty may be accepted in only very exceptional circumstances, for otherwise the stability of the legal regime of treaties could not be assured and the significance and application of the principle pacta sunt servanda, so essential to the whole structure of the law of treaties, would be called into question⁵⁹.

6.97 The debates in the International Law Commission leading to the present text of Article 56 of the 1969 Vienna Convention reveal that this provision goes as far as one can go in the sense of relaxing traditional doctrine. In his second report, Sir Gerald Fitzmaurice postulated a presumption in favour of the absence of any right at all of unilateral termination⁶⁰. Although he sided with a relatively supple formula, his successor, Sir Humphrey Waldock, recognised that "he might have gone rather far in admitting an implied right of denunciation"⁶¹. In the event, these initial propositions were the object of active (and unanimous) criticism in the proceedings of the Commission⁶². As for the Commission's President Mr. Jimenez de Aréchega, his views were he said, "very close to" the opinion expressed by Mr. Ago⁶³, and he considered that the general rule was that:

"... where a treaty contained no provision on denunciation or termination, the right of denunciation would exist only where it could be inferred from the

⁵⁷ The Law of Nations, Clarendon Press, Oxford, 1955, p. 256.

⁵⁸ American Journal of International Law, 1935, supplement, pp. 1173-1183.

⁵⁹ See, Pierre-Marie Dupuy, Droit International Public, Dalloz, Paris, 1993, pp. 209 et 244; Oppenheim, 9th, ed., op. cit., p. 1206.

⁶⁰ A/CN.4/107, Art. 4.

⁶¹ Yearbook of the International Law Commission, 1963, Vol. I, p. 99, para. 85.

⁶² Ibid., pp. 99-107.

⁶³ Ibid., p. 104., paras. 48-52.

travaux préparatoires or from the circumstances attending the conclusion of the treaty. In all other cases, the consent of the parties would be necessary⁶⁴ . "

6.98 When the question was raised again by the International Law Commission in 1966, Mr. Herbert Briggs noted that:

"It was a fallacy to approach the subject as though there existed a choice between two presumptions of equal merit - first, that where a treaty was silent on the subject of termination or denunciation, no unilateral right of denunciation existed and, secondly, the contrary presumption, that where a treaty was silent on the point the right of denunciation existed. In fact, there was no such choice: the rule that a treaty was binding was not a presumption; it was an objective rule of law and it excluded the possibility of unilateral denunciations⁶⁵ . "

Mr. Ago, without differing, nevertheless introduced into the principle the following nuance:

"... it was the Commission's duty to say specifically that a treaty not containing such provisions could not be denounced, save in exceptional cases, in other words that it could be denounced only if either the nature and character of the treaty were such that it was necessarily open to denunciation, or it was evident from the circumstances of the conclusion of the treaty that the parties had intended a denunciation to be possible, even if they did not explicitly say so in the treaty⁶⁶ . "

And this became, with very slight changes in the drafting of the final text, the general rule set out in Article 56.

6.99 Thus, the principle is not subject to any doubt: there exists a very well-established presumption denying the right of unilateral termination of treaties not providing for such a right. And if paragraphs (a) and (b) of Article 56(1) of the Vienna Convention are considered to reflect current customary international law (which in fact the Article probably weakened), it is clear that in the present case the required conditions set out are in no sense met.

⁶⁴ Ibid., p. 106, para. 80. Emphasis added.

⁶⁵ Yearbook of the International Law Commission, 1966, Vol. I, Part 1, p. 45, para. 24.

⁶⁶ Ibid., p. 46, para. 35.

6.100 In the first place, there is nothing in either the travaux préparatoires or the text of the 1977 Treaty or in the subsequent agreements to suggest "that the parties intended to admit the possibility of denunciation or withdrawal". In fact the indications run in the opposite direction. Article 3(2) of the 1977 Treaty and Article 6 of the 1979 Joint Statute Agreement provided for the establishment by the Plenipotentiaries of each Government of "appropriate permanent and temporary joint agencies for the performance of their functions"⁶⁷. In addition the very idea of a joint "investment" in the G/N Project, necessarily supposing a permanency, is hardly compatible with the possibility of unilateral termination of the Treaty - and the concept of "joint-ownership" (Articles 8 and 10 of the Treaty) excludes it entirely. And the object of the Treaty itself, the construction of permanent structures, admits of no possibility that a Party may have contemplated termination or denunciation. Unilateral termination of obligations is a dubious claim; unilateral termination of another's ownership rights is an impossible claim.

6.101 There is a second point to be made. These same arguments not only support the conclusion that no "right of denunciation ... [is] implied by the nature of the treaty" but they go much further and exclude it absolutely. In the present case the words of Sir Humphrey Waldo are particularly apt, for this case concerns a Treaty that has:

"... a definite object and the parties to which must be assumed to have intended the treaty to continue in force until that object was achieved. In the case of those treaties there could be no implied right of denunciation"⁶⁸."

6.102 And there is a third element that supports such a conclusion. As Lord McNair stated:

"One factor which would generally indicate that a treaty containing no express provision for termination can only be terminated by mutual agreement is the fact that the treaty is in part executed and in part executory"⁶⁹."

To this he added the following:

⁶⁷ Emphasis added.

⁶⁸ Yearbook of the International Law Commission, 1963, Vol. I, p. 100, para. 5.

⁶⁹ McNair, op. cit., p. 494.

"Executed clauses are obviously incapable of termination, and it follows that the executory clauses also should normally be terminable only by mutual agreement⁷⁰."

And this is precisely the situation here: when Hungary made the decision to put an end to the Treaty - and even before that, when it decided to suspend performance under it - the Treaty had in large part been carried out. By May 1992, 90% of the work to be performed on Slovak territory had been completed.

6.103 The ecological absurdity of Hungary's supposed termination surpasses even its economic absurdity: when Hungary purported to put an end to the 1977 Treaty, the bypass canal had been almost completely finished, representing a huge excavated and reinforced area of over 4,000 hectares. The ecological catastrophe of this immense area gouged out of the land, intended to be filled with 196 million cubic metres of water, but left unfilled, staggers the imagination.

6.104 Incompatible with the nature of the Treaty - and totally excluded by the state of advancement of the work and the dangers present were it to be abandoned - the purported termination of the 1977 Treaty and its related agreements constituted a violation of the obligations by which Hungary was bound. Under present doctrine:

"The party alleging that the nature of the treaty is such as to imply a right of denunciation or withdrawal will have the burden of establishing that it is so. It would seem that the implication can arise even if the parties did not so intend⁷¹."

The 1977 Treaty is an international agreement by virtue of which both parties were over many years required to expend substantial sums on large scale constructions and installations. A termination of the Treaty prior to the conclusion of the Project, necessarily nullified this immense effort, and the parties would have been left with constructions of great cost, but deprived of any value. In these circumstances, it cannot be said that a right of termination can be implied.

⁷⁰ Ibid., p. 512.

⁷¹ Oppenheim's 9th ed., op. cit., p. 1299, fn. 2.

6.105 Hungary gave every indication over the years of its recognition of the 1977 Treaty's validity and also assured its Czechoslovak partner that it intended to carry out the Treaty. The following are but a few of the examples of this:

- Over a period of 12 years Hungary repeatedly affirmed the validity of the Treaty and its firm intention to carry it out;
- From 1985, Hungary exerted heavy pressures on Czechoslovakia to accelerate the Project's schedule; and in the Protocol entered into and taking effect on 6 February 1989 Czechoslovakia agreed with Hungary to a 15-month shortening of the work schedule;
- In June 1989, having unilaterally suspended its works on the Nagymaros section of the Project, Hungary formally committed itself to continue the work on the Gabčíkovo section; and
- Until April 1991, Hungary repeatedly affirmed that its suspension of work at Gabčíkovo was temporary and that resumption was subject only (i) to the outcome of scientific and technical studies to be undertaken jointly with Czechoslovakia and (ii) to the future conclusion of a supplementary agreement on environmental protection, an agreement that Czechoslovakia never refused to consider.

6.106 Relying on its partner's good faith, Czechoslovakia assumed part of the work that Hungary was responsible for and even, on several occasions, undertook additional work of this nature. Czechoslovakia even went so far as to agree the 1989 Protocol shortening the schedule by 15 months, although not without some hesitation in the light of the extensive and basic economic adjustments that this required. In any event, Hungary is precluded from a unilateral termination of the 1977 Treaty under existing doctrine⁷²:

⁷² See, Humphrey Waldo, 2nd Report on the Law of Treaties, Yearbook of the International Law Commission, 1963, Vol. II, p. 40, para. 1.

"The principle of preclusion (estoppel) is a general principle of law whose relevance in international law is generally admitted and has been expressly recognized by the International Court of Justice itself in two recent cases⁷³. Under this principle a party is not permitted to take up a legal position that is in contradiction with its own previous representations or conduct, when another party has been led to assume obligations towards, or attribute rights to, the former party in reliance upon such representations or conduct⁷⁴. If in some legal systems, such as the common law systems, the application of the principle may to some extent be dependent upon technical rules⁷⁵, the foundation of the principle is essentially good faith and fair dealing, which demand that a party shall not be able to gain advantage from its own inconsistencies (*allegans contraria non audiendus est*)."

6.107 Hungary was bound to act in good faith in conformity with the obligations to which it was subject from the very outset. It remains bound by them. Hungary has violated these obligations by suspending them and by purporting to terminate unilaterally the Treaty and related agreements. Hence, Hungary has violated a large number of assorted rights belonging to Slovakia by virtue of these treaty instruments.

SECTION 3. Hungary's Suspension, Abandonment of Performance and Subsequent Purported Termination of the 1977 Treaty Violates the Numerous Rights of Slovakia

6.108 The G/N Project constitutes a joint investment having broad impacts and aims:

- It is a long-term Project designed to have a prolonged impact once the works provided for in the 1977 Treaty are completed; the execution of such works is therefore only one aspect of this Treaty;
- There are economic, ecological, political and social facets to the Project, the impact of each of which is long term;

⁷³ Arbitral Award made by the King of Spain on 23 December 1906, Judgment, I.C.J. Reports, 1960, p. 192 at pp. 213-214; The Temple of Preah Vihear, Preliminary Objections, Judgment, I.C.J. Reports, 1961, p. 17 at pp. 23-32.

⁷⁴ In Spanish systems of law the doctrine is known as "la doctrina de los actos propios".

⁷⁵ See, generally, Canadian and Dominion Sugar Co. v. Canadian National (West Indies) Steamships Ltd. (1947) Law Reports Appeal Cases, at p. 55.

- The Project is governed by a complex of agreements (as to which, see, Section I above);
- The cooperation of the parties is provided for both in the construction of the G/N System and its subsequent operation;
- The Project lays down for the parties a very complete and diversified range of rights and obligations.

6.109 For the purposes of the ensuing analysis and with the aim of assisting the Court in determining the multiple violations by Hungary of the legal obligations arising from the 1977 Treaty and its related agreements, the various obligations are broken down below into separate categories. Thus, the distinction is made between "primary" and "secondary" breaches. Hungary's primary breaches comprise its failure to respect its obligations to construct, to operate and to maintain the System, to protect the environment and to facilitate navigation. On the other hand, Hungary's secondary breaches are breaches in relation to its duties to consult and to enter into dialogue with Slovakia and to follow the established procedures with respect to the settlement of disputes and the establishment of compensation.

A. Hungary's Violation of Its Primary Obligations

Hungary's Construction Obligations

6.110 In accordance with Article 5(5)(b) of the 1977 Treaty:

"The Hungarian Party shall be responsible for:

- (1) The Dunakiliti-Hrušov head-water installations on the right bank, in Czechoslovak territory, including the connecting weir and the diversionary weir;
- (2) The Dunakiliti-Hrušov head-water installations on the right bank, in Hungarian territory;
- (3) The Dunakiliti dam, in Hungarian territory;
- (4) The tail-water canal of the by-pass canal, in Czechoslovak territory;

- (5) Deepening of the bed of the Danube below Palkovičovo, in Hungarian and Czechoslovak territory;
- (6) Improvement of the old bed of the Danube, in Hungarian and Czechoslovak territory;
- (7) Operational equipment of the Gabčíkovo system of locks (transport equipment, maintenance machinery) in Czechoslovak territory;
- (8) The flood-control works of the Nagymaros head-water installations in the lower Ipeľ district, in Czechoslovak territory;
- (9) The flood-control works of the Nagymaros head-water installations in the lower Ipeľ district, in Hungarian territory;
- (10) The Nagymaros series of locks, in Hungarian territory;
- (11) Deepening of the tail-water bed below the Nagymaros system of locks, in Hungarian territory;
- (12) Operational equipment of the Nagymaros system of locks (transport equipment, maintenance machinery), in Hungarian territory;
- (13) Restoration of vegetation in Hungarian⁷⁶ territory."

6.111 Further, Article 2(2) of the 1977 Mutual Assistance Agreement provided that Hungary should carry out various works:

"... on the Czechoslovak side in the area of the low Hron river and at the Gabčíkovo step at the transition section adjacent to the tail water canal."

6.112 These provisions were not modified by the Protocols of October 1983 and February 1989 that changed the Project's timetable⁷⁷.

6.113 In Chapter III above⁷⁸, the degree of completion (or otherwise) of the works to be carried out by Hungary is shown at the moment these were interrupted in May 1989. This reveals that some of the works were to a large extent complete (Dunakiliti-weir on the Hungarian territory - 90%; Dunakiliti-Hrušov reservoir on the right bank - 85%,

⁷⁶ In the United Nations Treaty Series translation, the word Hungarian in sub-article (13) erroneously appears as "Czechoslovak".

⁷⁷ The definitive timetable, as was agreed to in this last instrument, appears as the last page of the Protocol (Annex 9).

⁷⁸ See, para. 3.25, *et seq.*

flood control works in the Nagymaros headwater installations in Hungarian territory - 60%) whereas others were not yet very far advanced (Nagymaros step - 20%). Further, some works had not even been commenced, i.e., the works relating to paragraphs 5, 6, 7, 11, 12 and 13 of Article 5(5)(b) of the 1977 Treaty.

6.114 These percentages were established as follows: each year, the Plenipotentiaries effected a review of the works carried out by each party in the preceding year, the volume of such works being then the subject of a common agreement; such an evaluation was carried out for each year except 1982.

6.115 Slovakia does not, however, wish to limit itself to this assessment: Hungary's breaches of its 1977 Treaty obligations extend well beyond its failure to complete the works provided for. Three other factors, at least, must be taken into consideration.

6.116 First, Hungary did not respect the time limits for the execution of its construction works as set out in the 1977 Treaty, as modified by the 1983 Protocol. This precise obligation de résultat, has already been rendered impossible: even though the Gabčíkovo section has been put into operation, at least partially, due to the implementation of Variant "C", the works on the Nagymaros step (which were not carried out to more than 20%) are now subject to a delay that cannot be made up, and such works as have been realised are threatened by the decisions recently taken by Hungary, as discussed in greater detail at paragraph 6.131 below.

6.117 The general objective provided for in Article 4 of the 1977 Treaty is addressed in greater detail in the 1977 Mutual Assistance Agreement, itself modified by the 1983 and 1989 Protocols. Article 1(1) of this Agreement, as amended by the 1989 Protocol, provides for the putting into operation of the first turbine/generator unit of the Nagymaros hydroelectric power plant in 1992 and of the sixth turbine/generator unit in 1993⁷⁹. This time limit, which constituted a positive obligation on the parties arising from a formal agreement concluded at the express request of Hungary, could not be respected due solely to the fault of Hungary.

⁷⁹

Annex 9.

6.118 Breaches of its obligations by Hungary, deriving from non-respect of the overall construction schedule annexed to the 1989 Protocol and from the detailed working schedule included in the Joint Contractual Plan are detailed in the table reproduced in Annex 135.

6.119 Second, an appreciation of Hungary's failures to meet its obligations cannot be carried out from the perspective of a single moment in time. As noted above, Hungary's performance since the beginning of the works has been a history of delays causing serious damage to Czechoslovakia.

6.120 Third, a simple record of Hungary's failure to respect its obligations arising from Article 5(5) of the 1977 Treaty and the time limits laid down for their completion does not take full account of the importance of the non-performance of such obligations. These "quantitative" breaches have had extremely severe "qualitative" repercussions in terms of the performance of the 1977 Treaty. The Joint Contractual Plan provides for the "time schedule of the construction"⁸⁰. It has not been possible to respect the time limits laid down due to Hungary's deficient performance. This document enumerates (at 10.2) the "conditions of keeping terms and [the] decisive time schedule" and in particular, the duty of:

"... c) Providing continuous construction works on outlet and approach canal, and permanent abundant supply of gravel-sand on the dumping ground"⁸¹.

Hungary's delays in the performance of its construction obligations followed by the complete halt of all its works deprived Czechoslovakia of indispensable building materials and forced it to find costly replacement materials elsewhere.

6.121 The mutual objectives laid down by the parties in the Treaty documents constitute legal obligations as discussed in Section 1 above. Such objectives have not been realised due to the default of Hungary. Moreover, as is explained in greater detail in Chapter IX below, the expected benefits of the Project in terms of the production of peak electricity and improved navigation have not been realised or only to a limited degree.

⁸⁰ Annex 3

⁸¹ Ibid., at p. 10.

6.122 The G/N System is a project the separate elements of which form an integral system: the failure to realise one element inevitably has negative repercussions on all the rest. In particular, as the Czechoslovak Prime Minister reminded the Hungarian Prime Minister on 23 April 1992:

"... the Nagymaros dam forms an inseparable part of the whole system of locks ...⁸²."

6.123 Hungary's refusal to construct the Nagymaros step - just as its refusal to put the nearly completed Dunakiliti weir into operation and its refusal to carry out the necessary channel excavation works in the Danube riverbed at the Sap (Palkovičovo) confluence - has prevented the Project from conforming to the agreed specifications and caused considerable damage first to the Czechoslovak and then to the Slovak party⁸³.

6.124 From a more general point of view, the fact that Hungary has not carried out the works that it was obliged to has also led to serious repercussions in terms of its other obligations - in terms of maintenance, operation, the protection of the environment and improvement of navigation. This is discussed by Slovakia in greater detail below.

The Obligations of Maintenance and Operation

6.125 In its purported unilateral termination of the 1977 Treaty, Hungary has only partially deprived itself of the use and benefits of the System, the equal sharing of which was foreseen by Article 9. Hungary may share in the benefits to the environment brought about as a result of Variant "C" and similarly from the considerably improved navigation conditions in the Bratislava-Sap (Palkovičovo) section of the Danube. On the other hand, the unilateral decisions taken by Hungary have imposed considerable additional charges on Slovakia.

6.126 Article 10(1) of the 1977 Treaty foresees the mutual management of the G/N System - by means of the Plenipotentiaries as provided for in Article 3(3)(b) of the 1977 Treaty and Articles 4(2) and 4(6) of the 1979 Joint Statute Agreement. This principle

⁸² See, para. 4.79, above, and Annex 108.

⁸³ See, para. 5.08, et seq., above.

has important financial consequences, as carefully regulated by Article 12(1) of the 1977 Treaty:

"Operating, maintenance (repair) and reconstruction costs of jointly-owned works of the System of Locks shall be borne jointly by the Contracting Parties in equal measure."

6.127 Since 13 May 1989, Hungary has not contributed to management and operating costs, which have thus been borne solely by Czechoslovakia. From this has resulted a severe prejudice to Slovakia, which cannot but grow in the future:

- The costs of operation and maintenance stricto sensu will evidently accumulate;
- The inevitable repairs necessary for the upkeep and safety of the constructions should be equally shared between the parties whereas these costs will fall solely to Slovakia unless Hungary accepts its share;
- The costs of the maintenance of the Danube riverbed, in relation to which Article 16 of the 1977 Treaty foresees the joint responsibility of the parties will increase and accordingly the share of Slovakia will increase also.

6.128 Hungary's failure to fulfill its operation and maintenance obligations has a further aspect.

6.129 Although not expressly provided for in the 1977 Treaty, it is clear that the parties had obligations relating to the maintenance and conservation of the works during the construction phase also. It would be against the parties' duty to act in good faith if one or both parties allowed the completed works or those still in the course of construction to deteriorate - whether wittingly or through negligence. On several occasions, Hungary has shown itself to be aware of this obligation. Thus:

- After the first unilateral suspension of works announced in 1981 by Hungary, Hungary declared that within this period, conservation

works on the objects under construction, the riverbed and dams on the Danube would be performed only⁸⁴.

- Similarly in January and March 1990, the Hungarian Prime Minister informed the Czechoslovak Prime Minister that his country would stop all works except for the conservation and maintenance works⁸⁵.

6.130 This is not what happened. To the contrary, Hungary limited itself to stopping all work in progress without concerning itself with the conservation of the works already carried out, the upkeep of which has fallen solely on Czechoslovakia and then Slovakia. As Slovakia has indicated, this has been a particularly heavy charge in relation to the maintenance and conservation of the headwater canal, already largely complete when Hungary abruptly brought all cooperation to an end.

6.131 Furthermore, on 7 July 1993, the Hungarian Parliament allocated in the 1993 budget the sum of 800 million forints, that is more than US\$ 7.8 million, for the dismantling of the coffer dam at Nagymaros (i.e., the dam structure essential for the construction of the step) and for the restoration of the surrounding area. This decision does not appear to have been implemented at the moment of the submission of this Memorial. Nonetheless, as pointed out in the Slovak Foreign Ministry Note of Protest of 13 July 1993, the implementation of this decision would constitute a new and grave breach of the 1977 Treaty and, in particular, of Article 8(1)(d) which provides that the Nagymaros step shall be the joint property of the parties. Insofar as Hungary argues that joint property does not extend to temporary structures, this is clearly not acceptable since the coffer dam is aimed at protecting a permanent structure. Moreover, this joint ownership extends to the works already completed and thus to the coffer dam: Hungary cannot jeopardise such works nor destroy the coffer dam without the agreement of the co-owner, Slovakia, which categorically rejects the suggestion that the coffer dam is not joint property because of its temporary nature.

⁸⁴ Annex 40.

⁸⁵ Annexes 79 and 81.

Obligations Relating to Fisheries and the Environment

6.132 Although in fact no more than a pretext, Hungary has with insistence invoked environmental considerations in an attempt to justify its purported termination of the 1977 Treaty. In this, there is a curious distortion of reality - one of the principal objectives of the G/N Project as it developed was precisely the protection and improvement of the environment, notably through flood control, the revitalisation of the dried up side arm system and the improvement of surface and ground water. It is thus the abandonment of the Project which deals a severe blow to environmental protection and which would have been almost fatal but for the implementation of Variant "C".

6.133 In the expansion and completion of the provisions of the 1976 Boundary Waters Management Agreement, Chapter V of the 1977 Treaty is devoted to "Water Reserve Management Functions". In particular, Article 13 relates to "Flood Control and Ice Discharge" and provides in paragraph 1 that:

"Flood-control operations shall be carried out by the water-resource management authorities of the Contracting Parties".

Article 15, relating to "Protection of Water Quality", provides:

- "1. The Contracting Parties shall ensure, by the means specified in the joint contractual plan, that the quality of water in the Danube is not impaired as a result of the construction and operation of the System of Locks.
2. The monitoring of water quality in connection with the construction and operation of the System of Locks shall be carried out on the basis of the agreements on frontier waters in force between the Governments of the Contracting Parties."

6.134 It is quite clear from these provisions that the parties intended a continuous cooperation with the view to protecting the environment within the framework of the existing Project. It is not disputed that, as Hungary has been happy to repeat, the protection of the environment is the joint responsibility of the parties; but this cannot constitute a pretext for the termination of the 1977 Treaty. To the contrary, the 1977 Treaty creates the institutional framework within which the consultations of the parties must take place and within which their decisions must be taken.

6.135 By the time of the signature of the 1977 Treaty, an impressive number of environment related studies had already been carried out⁸⁶. After its signature, other studies were undertaken and one important part of the parties' discussions was devoted to the protection and improvement of the environment - notably through the ESTC Committees, meetings between Plenipotentiaries and numerous expert commissions; moreover, new agreements were foreseen. In particular, discussions between the parties relating to environmental protection and water quality continued right up to one month before Hungary's unilateral suspension of works on 13 May 1989⁸⁷. However, Hungary prevented such discussions from coming to fruition by refusing on 3 May 1989 to sign a protocol recording a proposal to prepare a special agreement on water quality⁸⁸, although some time later it was once more Hungary which did not hesitate to make the continuation of works subject to similar negotiations.

6.136 Unlike Hungary, neither Czechoslovakia nor Slovakia has ever refused negotiations on this issue. In particular, after Hungary had placed Czechoslovakia before the faits accomplis of the suspension, abandonment of works and purported termination of the 1977 Treaty, the Czechoslovak authorities continuously indicated their readiness to discuss the potential dangers to the environment alleged by Hungary and to implement together the means to remedy such dangers as might be disclosed. On this point, it is of interest also to note that, in spite of the difficult economic and financial position that this caused, Czechoslovakia showed itself to be ready to study the environmental considerations invoked by Hungary in its desire to accelerate the Project time schedule from 1985⁸⁹.

6.137 By its purported termination of the 1977 Treaty, Hungary brought to an abrupt end the cooperation instituted by this Treaty with a view to the protection of the environment - cooperation which Czechoslovakia for its part was always more than willing to give.

⁸⁶ See, para. 2.10 et seq., above.

⁸⁷ See, para. 3.14, et seq., above.

⁸⁸ See, para. 3.24, et seq., above.

⁸⁹ See, para. 3.10, et seq., above.

6.138 Furthermore, in not completing its construction works, Hungary introduced a serious threat to the environment, the consequences of which could not be dealt with save by the implementation of Variant "C".

6.139 In the event, Hungary stopped all works on 20 July 1989. At this date, the situation was as follows:

- The Gabčíkovo step was practically complete, although the turbines were not yet in place;
- The Dunakiliti weir was at a similar state of completion;
- The headwater canal was complete;
- The Nagymaros step, on the other hand, was only 20% finished;
- Hungary had not completed the excavation of the tailwater canal on Czechoslovak territory nor commenced the excavation works in its sector of the Danube, nor the regulation of the riverbed, as it was required to do under Article 5(5)(b) of the 1977 Treaty.

6.140 It is important to dwell on the consequences of this situation to understand the real ecological catastrophe that would have resulted if the works had been left in this state:

- Works on a vast construction site would have been brought to a halt, leaving thousands of hectares of agricultural land unuseable and a massive scar on the landscape in terms of the huge but useless asphalt and concrete structures;
- The flood protection, which was one of the principal aims of the Project, would not have been realised;

- The water level of the Danube would have continued to drop as a result of the sinking riverbed due, in turn, to the bedload gravel being trapped in various Austrian dam projects upstream;
- And, as a consequence, the Danube side arms would have received less and less water flow, depriving the floodplain woodlands of water and condemning these to a gradual disappearance.
- The irrigation of the region, whether on Slovak or Hungarian territory, would have become even more difficult;

6.141 There is no doubt that to a large degree these dramatic consequences have been avoided or, at least, limited by the implementation of Variant "C". However, such implementation has been at the sole expense of Slovakia. What is more, this consideration becomes relevant when it is a question of assessing Hungary's breaches of its treaty obligations, and in this respect there is no doubt that, in unilaterally suspending, abandoning its performance and then purporting to terminate the 1977 Treaty, Hungary has seriously breached its obligations in terms of the protection and improvement of the environment and its duties relating to the corresponding rights to Slovakia.

6.142 Hungary's deficient performance also constitutes a breach of its obligations in relation to the Danube Fisheries and, in particular, Articles 3 and 5 therefore⁹⁰. Hungary's refusal to take part in the improvements envisaged by the 1977 Treaty and, in particular those concerning the revitalisation of the side arm systems, is a breach of this obligation which is referred to by Article 20 of the 1977 Treaty.

Obligations Relating to Navigation

6.143 Article 18 of the 1977 Treaty, which forms Chapter VI thereof, deals with "navigation" and refers back to "obligations previously assumed by the Contracting Parties" and in particular to Article 3 of the 1948 Danube Convention. Under this article, the parties committed themselves not only "to maintain their sections of the Danube in a navigable condition for river-going vessels" but also "to carry out the works necessary for

⁹⁰ Relevant passages from Articles 3 and 5 may be found quoted above at paras. 6.51 and 6.52, above.

the maintenance and improvement of navigation conditions"⁹¹. In purporting to terminate the 1977 Treaty, Hungary has failed to meet these obligations which arise from the 1948 Danube Convention, the 1977 Treaty and also the 1976 Boundary Waters Management Agreement.

6.144 Article 13(1) of this last Agreement provides:

"The competent authorities of the Contracting Parties shall maintain and mark the waterway and mark the navigation route on the Danube in accordance with recommendations of the Danube Commission."

6.145 The Danube Commission has adopted numerous such recommendations. In the first place, it is important to note that in annex II to the 1948 Danube Convention itself (which forms an integral part of the Convention):

"... the Contracting Parties agree that it is the general interest to maintain this sector in good navigable condition."

Second, it must be remembered that the Commission has "recommended" that the minimum navigable depth of the Danube in the Czechoslovak-Hungarian sector be 2.5 m in natural sections and 3.5 m in artificial sections⁹².

6.146 As the Hungarian and Czechoslovak representatives wrote to the Danube Commission, the G/N System:

"... is situated in the section of the Danube at rkm 1860-1657 and represents a technical and economic inseparable unit. The construction of the whole System will remove the present unfavourable conditions for navigation in this section (where the average depth is only 18 dm and during low discharges only 14 dm) and where the formation of shallow water hinders the navigation of hundreds of ships from all Danubian countries"⁹³.

⁹¹ See, para. 6.47, et seq., above.

⁹² Annex 14.

⁹³ Annex 136.

6.147 As of 1977, the Danube Commission considered that:

"Sur le secteur tchécoslovaque-hongrois, le secteur entre Rajka et Gönyü y compris, l'unique et rationnel moyen d'obtenir les gabarits de chenal recommandés pour ce secteur est la construction de centrales hydrauliques⁹⁴."

Translation:

"In the Czechoslovak-Hungarian sector, including the sector between Rajka and Gönyü, the sole and logical means of obtaining the recommended channel dimensions for this sector is through the construction of the hydraulic works."

The plan for major works, adopted in application of Article 8 of the 1948 Danube Convention during the XXXV session of the Commission, specifically approved the G/N System which:

"... améliorera les conditions de la navigation sur un secteur de 200 km. de long, de Bratislava à Budapest⁹⁵."

Translation:

"...will improve the navigation conditions on a 200 km section, from Bratislava to Budapest."

The Commission reviewed these observations in 1984⁹⁶.

6.148 The Danube Commission has implicitly condemned Hungary's interruption of the works. In the information release relating to the termination of construction works at Nagymaros and the delay in the completion of the Gabčíkovo section, it is stated that:

"The construction was unanimously included by Danubian states in the Plan of basic works geared to achievement recommended profiles of the navigation route, hydrotechnical and other constructions on the Danube in the period 1981 - 1990 (DK/SES 42/13).

⁹⁴ Annex 137.

⁹⁵ Ibid., at p. 35.

⁹⁶ Annex 138.

The Plan of basic works was set up in accordance with Article 8/b of the Convention on the Navigation Regime on the Danube and approved by the decision of the second session of the Danube Commission (DK/SES 42/42). This plan assumes the execution of hydrotechnical works by all Danubian states in order to achieve the depths and widths of the navigation route along the whole navigation route in accordance with Recommendations concerning profiles of the navigation route, hydrotechnical and other constructions on the Danube, approved by the Danube Commission in 1979⁹⁷."

6.149 In the same way, the meeting of technical experts of the Commission on 7-15 December 1992 rejected Hungary's assertions and:

"... a relevé que la satisfaction des exigences des Recommandations en vigueur à l'établissement des gabarits du chenal, des ouvrages hydrotechniques et autres sur le Danube, constitue la garantie pour que les conditions nécessaires à la navigation soient assurées⁹⁸."

Translation:

"...has found that the satisfaction of the requirements in the recommendations in force for the establishment of navigation channel dimensions, hydrotechnical and other works on the Danube constitutes the guarantee that the necessary navigation conditions may be assured."

6.150 Hungary's interruption of the works has given rise to numerous other protests. Thus, as noted at paragraph 2.83 above, the Union Ouest-Européenne des Chambres de Commerce et d'Industrie des régions rhénane, rhodanienne et danubienne, by its resolution of 16 February 1990, has demanded "... la reprise des travaux de construction du projet commun tchécoslovaquo-hongrois Gabčíkovo-Nagymaros⁹⁹". It underlined the indispensable nature of the works so as to enable navigation to benefit from the Rhine-Main-Danube link as made possible by the opening of the Main-Danube canal. In the same vein, in an article published as an official document of the Danube Commission, the Austrian Society of River and Maritime Navigation wrote in December 1990:

⁹⁷ Annex 136.

⁹⁸ Annex 15.

⁹⁹ Annex 31.

"La situation est encore pire sur le secteur tchéco-slovaque-hongroise du Danube où durant la dernière décennie le niveau d'eau dans le chenal n'a pas atteint 2,5 m au cours d'un tiers de l'année. Tandis que la partie tchécoslovaque a modifié ses décisions, reprenant les travaux interrompus à la centrale hydraulique de Gabčíkovo, qui était à peu près terminée, du côté hongrois les travaux sont restés interrompus jusqu'à présent et, suite à la dérivation du lit du fleuve, à l'existence du canal de construction, des barrages etc., les profondeurs navigables, qui n'étaient déjà pas satisfaisantes, ont encore baissé de 50 cm. C'est notamment Budapest, où siège la Commission du Danube, qui n'est pas à même de trouver une solution satisfaisante pour le secteur de Nagymaros¹⁰⁰."

Translation:

"The situation is even worse in the Czechoslovak-Hungarian sector of the Danube where during the last decade the level of water in the navigation channel has not reached 2.5m during one third of the year. While Czechoslovakia has altered its decisions and is continuing the nearly completed works interrupted on Gabčíkovo, on the Hungarian side the works have remained interrupted to date and, due to the works on the riverbed, to the construction of the canal, the dams etc., the navigable depths, already unsatisfactory, have dropped a further 50cm. It is notably Budapest, the seat of the Danube Commission, which has not found a satisfactory solution for the Nagymaros section."

For its part the Danube Commission, at its 49th session, adopted in April 1991 Regulation DK/SES49/24 which stresses the necessity of strict compliance with recommendations concerning profiles of the navigation route.

6.151 The opening of the bypass canal has enabled this situation to be remedied in part - in as much as the Gabčíkovo step and the canal itself do respond in all points to the requirements arising from the recommendations of the Danube Commission, recommendations which Hungary and Czechoslovakia were bound to comply with in accordance with Article 13 of the 1976 Boundary Waters Management Agreement and Article 18 of the 1977 Treaty. For all that, such improvement is due solely to the efforts of Czechoslovakia and Slovakia, and in no way exonerates Hungary from its responsibilities: Hungary did not complete its part of the works that engendered this improvement and has not fulfilled its obligations, notably in the Nagymaros section which now constitutes the last serious impediment to navigation on the Danube.

¹⁰⁰

Annex 139.

B. The Breach of Secondary Obligations

6.152 The 1977 Treaty and its related instruments did not just impose "primary" obligations on the parties, under which they were bound to achieve certain results within specified time limits. It also contained numerous "secondary" obligations which regulated the parties' cooperation. By its purported termination of the 1977 Treaty, Hungary has also breached its subsidiary obligations, whether in terms of its duty to consult or to submit to a specified regime for the settlement of disputes or in terms of compensation for the damages which it has caused to Slovakia.

The Duty to Consult; and the Settlement of Disputes

6.153 The 1977 Treaty regulates the cooperation of the parties with a view to the realisation of the joint investment:

- Article 3, as completed by the 1979 Joint Statute Agreement, invests the Plenipotentiaries with a general responsibility for the execution of the 1977 Treaty through the intermediary of the joint agencies;
- Article 6(2) gives them the power to supervise and coordinate "the activities of the investment agencies of the Contracting Parties"; and
- Article 27 provides:
 - "1. The settlement of disputes in matters relating to the realization and operation of the System of Locks shall be a function of the government delegates [Plenipotentiaries].
 2. If the government delegates are unable to reach agreement on the matters in dispute, they shall refer them to the Governments of the Contracting Parties for decision."

6.154 This last provision has a particular importance in the context of the current dispute. As the Court explained in the Case concerning United States Diplomatic and Consular Staff in Tehran, it is precisely when difficulties arise that provisions of this type have their greatest importance¹⁰¹. Whatever the motives now advanced by Hungary in an

¹⁰¹ United States Diplomatic and Consular Staff in Tehran, Judgment, I.C.J. Reports, 1980, p. 3, at p. 28.

attempt to justify its purported termination of the 1977 Treaty, these could in no manner justify the neglect of the procedure for the settlement of differences also provided therein.

6.155 Hungary has consistently refused to conform to this procedure in spite of the insistent demands of Czechoslovakia.

6.156 More generally, Hungary has in all cases acted unilaterally and has continually shied away from all proposals for discussion made by Czechoslovakia, even though, as recorded in the Joint Contractual Plan: "It is to be noticed that the whole realization of [the G/N Project] would require a close interstate cooperation, precise specification of the works and duties of respective parties, especially in [the] case of works which will be carried out by the Hungarian party on the territory of [Czechoslovakia]¹⁰²."

6.157 In this way - and these are no more than examples:

- As from 19 May 1992, the Hungarian Government abolished the post of Plenipotentiary;
- The successive decisions for the suspension of works were taken without any warning and without the slightest consultation with Czechoslovakia in spite of its subsequent vigorous protests;
- Hungary limited the power of its delegates, leaving these with the power solely to negotiate the termination of the 1977 Treaty;
- The same year, Hungary opposed the creation of a joint commission proposed by Czechoslovakia;
- On 17 May 1992 Hungary notified Czechoslovakia and the EC Commission of its refusal to take part in a tripartite meeting on the environment, scheduled for the following day at Vienna¹⁰³;

¹⁰² Annex 3, para. 10: "Realization".

¹⁰³ See, para. 4.93, above.

- Hungary imposed pre-conditions to the creation of an EC tripartite commission, proposed on an unconditional basis by Czechoslovakia and then by Slovakia.

6.158 The recourse to the Court will now no doubt enable the settlement of this dispute in the appropriate manner. This is warmly welcomed by Slovakia. This however does not change the fact that Hungary, by its refusal of all dialogue and by its rejections of the procedures for consultation and settlement of disputes enshrined in the 1977 Treaty, has breached both its treaty obligations and the general duty of good faith imposed on any State in the performance of its international obligations¹⁰⁴.

The Obligation of Compensation

6.159 Slovakia will indicate in Chapter IX below the consequences which result from Hungary's responsibility according to the general principles applicable to State responsibility in international law.

6.160 It is sufficient at this stage to underline that the duty to make reparation is the object of an express provision in the form of Article 26 of the 1977 Treaty, relating to the "exclusive liability of the Contracting Parties and payment of damages"; In accordance with this provision, each of the parties is exclusively responsible for the execution (or non-execution) of the works incumbent on it and for the functioning and good maintenance of the works situated on its territory and each must, separately and exclusively, "make compensation for damage which results from acts giving rise to their exclusive responsibility". This obligation is further expounded in Article 12(7) which provides:

"The Contracting Parties shall endeavour to ensure that any differences arising from operating costs are, so far as possible, settled by work performed within the framework of the annual operating, maintenance and reconstruction plan of the System of Locks. The procedure for the settlement of differences still outstanding shall be determined by agreement between the competent authorities of the Contracting Parties".

¹⁰⁴

See, Nuclear Tests (Australia v. France), Judgment, I.C.J. Reports, 1974, p. 253 at p. 268: "one of the basic principles governing the creation and performance of legal obligations, whatever their source, is the principle of good faith"; see, also, Border and Transborder Armed Actions (Nicaragua v. Honduras), Jurisdiction and Admissibility, Judgment, I.C.J. Reports, 1988, p. 69 at p. 105.

6.161 In spite of the repeated demands of Czechoslovakia and then Slovakia, Hungary has consistently refused - except in the 1977 Mutual Assistance Agreement and the Protocols of 1983 and 1989 - to satisfy these provisions.

6.162 At the time of the bilateral negotiations which took place in Budapest on 22 April 1991, the Hungarian side did declare that it was "conscious about the fact that the Czechoslovak side had performed more work and, by final accounting, the Hungarian side will have to pay the difference in costs"¹⁰⁵. But to this day, it has taken no steps in furthering this acknowledgment, in spite of the continual reminders of Czechoslovakia.

6.163 Similarly, in 1981 and 1983, after Hungary's various delays in and interruptions of the works, Czechoslovakia had demanded compensation for its resulting damages¹⁰⁶. In the same vein, immediately after the unilateral interruption of the 1977 Treaty by Hungary in 1989, the Czechoslovak Government reacted by reserving the right to claim damages¹⁰⁷. This position was maintained after Hungary had - first in July, then in October 1989 - hardened its position and extended its unilateral suspension of the 1977 Treaty. Thus on 18 August 1989, in a Note Verbale, the Czechoslovak Minister for Foreign Affairs indicated that Czechoslovakia:

"... will calculate the extent of damage so far caused to the Czechoslovak Socialist Republic by the steps of the Hungarian side and claim their compensation.

The Government of the Czechoslovak Socialist Republic at the same time reserves itself the right to claim compensation for the damage which will be caused in the future as a result of unilateral decisions of the Hungarian People's Republic¹⁰⁸."

6.164 Although in 1991 Hungary appeared to show some hesitation and to envisage the discussion of the question of compensation, it later offered no response to the pressing demands from the Czechoslovak and Slovak authorities. As Slovakia has explained above, such a refusal constitutes not only the breach of the obligation on any State in virtue

¹⁰⁵ See, para. 4.68, above, and Annex 87.

¹⁰⁶ Annexes 136 and 44.

¹⁰⁷ See, para. 4.09, above.

¹⁰⁸ See, para. 4.37, above, and Annex 69.

of the fundamental principle of general international law but, in the present case, is also the breach of a treaty obligation accepted by Hungary in the form of Article 26 of the 1977 Treaty.

6.165 By virtue of Article 2(2) of the Special Agreement, the Court is "requested to determine the legal consequences, including the rights and obligations for the Parties arising from its Judgment" on the legality of the behaviour of the Parties with respect to the 1977 Treaty, the rules and principles of general international law, as well as other treaties which the Court may find applicable. In Slovakia's opinion, in order to fulfill its mission, the Court must on the one hand declare that the 1977 Treaty and its related instruments remain fully applicable and in force between the Parties and, on the other hand, accord to Slovakia full and complete reparation for the damages which it has suffered as a result of Hungary's multiple and grave breaches of its treaty obligations. These requests will be the object of Chapter IX. But first, it is essential to address the question as to whether certain actions of Czechoslovakia, including the implementation of Variant "C", or certain facts arising from situations exterior to the Parties, amounted to circumstances absolving Hungary of any liability under international law for the conduct it adopted.

CHAPTER VII. THE LAWFULNESS OF VARIANT "C"

7.01 Hungary contends that Variant "C" was the reason it moved from suspension and abandonment of its performance under the 1977 Treaty to its purported termination. But its claims as to the unlawfulness of Variant "C" are advanced as if the 1977 Treaty does not exist. From Hungary's perspective, it is apparently enough to assert the undesirability of the 1977 Treaty. This allows, in Hungary's eyes, Variant "C" to be analysed as if the Treaty had never existed.

7.02 Variant "C" was in fact a reluctant response by Slovakia to a persistent pattern of treaty violation by Hungary, coupled with a resolute failure by Hungary to substantiate at the scientific level - whether by publishing its own studies, commissioning studies, or by agreeing with Czechoslovakia jointly to refer the matter to international experts - its invocation of imminent ecological disaster. The legality of Variant "C" falls to be tested against that background and by reference to the obligations mutually undertaken in the 1977 Treaty and the related subsequent agreements. Slovakia will demonstrate the lawfulness of Variant "C" in relation to these, the relevant legal yardsticks.

7.03 At the same time, Slovakia will also show that no peremptory rule of law rendered the Treaty invalid, and thus irrelevant as a framework for the consideration of Variant "C". Slovakia will further show that, even were the Treaty obligations not at the heart of the issue, Variant "C" is still lawful by reference to other principles of international law

SECTION 1. The Background to Variant "C" Recalled

7.04 The factual background to the introduction of Variant "C" has been explained in Chapters IV and V above. Hungary's repeated and continuing breaches of its obligations under the 1977 Treaty and related instruments have been demonstrated in Chapter VI above.

7.05 Slovakia here recalls that by means of the 1977 Treaty it was agreed to address a variety of problems relating to the Danube - the inability to provide

the navigation depth required by the Danube Commission; the need to provide flood protection, all other previous measures having proved insufficient; and the reality that, neither Czechoslovakia nor Hungary being rich countries, these objectives could only financially be realised if the power potential of the Danube was efficiently utilised and the management of water supplies improved.

7.06 As has been elaborated above in Chapter III, Czechoslovakia accomplished around 90% of its works under the 1977 Treaty in the period from 1978 to 1989. By contrast, Hungary made little progress until 1981, asked for and secured a delay in the timetable for construction in 1983, then asked for and, on 6 February 1989, secured an acceleration in the revised timetable for construction. Hungary then reversed its position once more and refused to proceed with its obligations under the 1977 Treaty as agreed within the revised timetable. This caused unfavourable conditions on the Danube and loss and damage to Czechoslovakia. Equally Hungary's demand in early 1989 for an acceleration also presented problems for Czechoslovakia.

7.07 A mere 96 days after the agreement to speed up the construction, the Hungarian Government unilaterally, and without consultation, suspended the construction of the Nagymaros step for two months. On 20 July 1989, Hungary announced that it was stopping preparations to dam up the Danube at Dunakiliti. This rendered without purpose the work in progress throughout the G/N System. Hungary was clearly informed that it was in violation of its obligations and that any action by Hungary causing further damage would necessitate the putting into operation of temporary measures on Czechoslovak territory to realise the quantities of waters Gabčíkovo provided for in the Joint Contractual Plan relating to the Treaty¹. On 31 October 1989, the Hungarian Parliament ordered the stopping of the Nagymaros river step construction and authorised the preparation of a proposal to alter the 1977 Treaty. It suggested in a Note Verbale of 30 November 1989 that the Gabčíkovo site might be brought to conclusion, but the Nagymaros site abandoned by mutual agreement². Hungary thus was still prepared to accept the bypass canal and other associated works, as envisaged in the 1977 Treaty, provided always that its concerns about peak production could be met. Czechoslovakia, far from happy, indicated a readiness to talk

¹ See, e.g., para. 4.38, above.

² See, para. 4.50, above.

and as a proof of its seriousness stopped design work on the provisional solution on Slovak territory. As soon as it was apparent that Czechoslovakia was prepared, albeit reluctantly, to discuss this further request for an alteration to the 1977 Treaty, Hungary then lost interest in its own proposal, and withdrew it in January 1990³. The instructions of the Hungarian Parliament since April 1991 have been very clear: Hungary was to negotiate nothing save the cancellation of the 1977 Treaty and the drawing up of a new treaty to restore the terrain to its original state.

7.08 From the time of Hungary's unilateral stoppage in May 1989, Czechoslovakia had sought to have the alleged environmental problems objectively specified and procedures set in motion - including by reference to expert third parties - to resolve them. Throughout the meetings of governmental delegations of 1991 Hungary insisted only upon a right of people to their "original environment" and hence the cancellation of the 1977 Treaty. In April 1991 the Hungarian delegation had refused bilateral discussions at the expert level. In July 1991 the Hungarian delegation refused the formation of a tripartite commission, including EC experts, to report on the environmental impact of completing the G/N Project. Indeed, the Hungarian delegation made clear that its only mandate was to terminate the 1977 Treaty, and that it would enter bilateral talks with Czechoslovakia (presumably as a first step to this end) only if Czechoslovakia also stopped all its own works under the 1977 Treaty. These matters are recounted in detail at paragraph 4.72, et seq., above.

7.09 Czechoslovakia was naturally not willing to join Hungary in rejecting the legal obligations mutually undertaken. It was apparent, given the clear refusal of Hungary to produce evidence of an imminent catastrophe or to seek solutions to any identifiable problems and indeed to do anything but secure the termination of the Treaty, that it was necessary for Czechoslovakia to reconsider its position. At the end of July 1991 it decided that the appropriate response was to bring into operation as much of the 1977 Treaty as could be effected in the absence of cooperation by Hungary.

7.10 This prolonged history of prevarication and violation by Hungary, as well as its utterly inflexible and unscientific position throughout 1991, allows Variant "C" to be perceived for what it is - an attempt by the injured party to secure the

³ See, para. 4.55, et seq., above.

achievement of the mutually agreed objectives of the 1977 Treaty, in ways consistent with the 1977 Treaty and with international law generally. Hungary's attempts to address Variant "C", as if it has nothing whatever to do with a treaty mutually entered upon, cannot be countenanced.

SECTION 2. Variant "C" and the 1977 Treaty Arrangements

A. Variant "C" as an Attempt to Secure the Objects of the 1977 Treaty

7.11 The problems addressed by the 1977 Treaty have been elaborated above in Chapter II. The solution selected, after many years of careful consideration and scientific study, was the construction of two water schemes, at Gabčíkovo and Nagymaros, creating a single unified system bound hydraulically together by the interconnected water levels and by the method of power production⁴. The Project provided for sufficient water for navigation and all other uses, methods for water management and reliable energy production, including peak operation.

7.12 It was agreed that there should be a bypass canal, upon which the Gabčíkovo canal step would be constructed. This would allow the exploitation of the difference of the water level in the Danube between Bratislava and Kližská Nemá, thus meeting energy production demands. This part of the Project required, *inter alia*, a reservoir at Hrušov-Dunakiliti, to be formed between dykes built mainly in Czechoslovakia, but partially also in Hungary. As for the bypass canal, it would receive about 3500-4500 m³/s of water from the reservoir, the required volumes for the Malý Danube, Mosoni Danube and the old Danube riverbed being secured from the water level impounded by the Dunakiliti weir, located on Hungarian territory at rkm 1842.

7.13 One of the functions of the Nagymaros section was to utilise the Danube waters so as to permit peak power production at Gabčíkovo. Water released at Gabčíkovo during peak operations would form a new headwater section and would be channelled on a constant flow basis through the Project's second hydroelectric power plant, into the Danube downstream of Nagymaros. This part of the Project consisted of a weir, power stations and navigation locks. The operation of these locks, as at

⁴ See, e.g., Lokvenc and Szanto, "The Binational Gabčíkovo-Nagymaros project" Water Power and Dam Construction, November 1986, op. cit.

Gabčíkovo, provided for a much needed deeper draught (above 3.5m) for navigation. This would allow for full compliance with the recommendations of the Danube Commission relating to the safety of navigation⁵.

7.14 It is immediately apparent that cessation of work on the Nagymaros section by Hungary on 13 May 1989 not only made impossible the fulfilment of that part of the Project, but presented immediate problems for navigation and environmental conditions. There was nothing that Czechoslovakia itself was in a position to do about this, save protest.

7.15 When on 20 July 1989 Hungary announced cessation of its preparations to dam the Danube riverbed near Dunakiliti, it rendered devoid of purpose all the work that the Czechoslovakia had done on the Gabčíkovo section, and made impossible the achievement of the bypass canal, improved navigation and safe, clean energy production. Nor was flood control provided for and this remained a particular problem for villages located between the bypass canal and the old riverbed, until water could be directed into the canal. The interruption of work on the Gabčíkovo section, shortly before completion, caused ecological damage, largely on Czechoslovak territory.

7.16 Czechoslovakia was in a position however to achieve some, at least, of the objectives of the 1977 Treaty. It could ensure: that the Gabčíkovo waterworks be brought into operation, thereby minimising the negative effects of prior construction on the environment; that a suitably deep navigation channel be provided; and that power be generated (even in the absence of peak production which is impossible without Nagymaros). These Treaty objectives could be achieved through bringing the Gabčíkovo waterworks into operation - but that could be achieved only on Czechoslovak territory. This temporary solution, in favour of the best possible application of the 1977 Treaty, and always reversible if Hungary should resume its own role in achieving the 1977 Treaty commitments, was the basis of Variant "C".

⁵ See, paras 1.35 to 1.38, above.

7.17 The entitlement of a State to put, as best it can, a treaty into effect in the face of unlawful refusal by the other party to fulfil its own obligations, is entirely consistent with established principle.

7.18 No State may violate its treaty obligations - which violations not only jeopardise the attainment of the treaty objectives, but also cause injury to the environment and massive financial harm to the other party - and then complain when the other party does what it can to bring the agreed treaty terms into operation. Hungary's violations caused degradation by leaving constructions in an unfinished state; it left villages exposed to severe flood risk; it blocked energy production as well as navigation improvement. There has been inflicted on Slovakia both losses of anticipated revenue, and the additional costs of dealing with environmental degradation and associated problems⁶.

7.19 The principle of pacta sunt servanda remains at the heart of the international law of treaties, as it has been at the heart of all systems of contract⁷. The obligation that ensues is the obligation to perform. Thus it is that an aggrieved party, faced with a fundamental or material breach, has an election - to declare the agreement terminated, or to insist upon performance.

"The reason for the principle is obvious: the contract may contain provisions highly favourable to the aggrieved party, and it would be unjust to allow the other party by breaking the contract to bring about an automatic termination and so to deprive the aggrieved party of the benefits of those provisions⁸."

7.20 It was never realistic for Slovakia to elect termination. Termination would entail the total loss of the enormous investments already made, the abandoning of hope of economic recovery of damage already incurred, further massive expenditure to deal with the social and environmental consequences of leaving the Project in its unfinished state - and a failure to resolve all those problems to which the 1977 Treaty had been directed. Slovakia thus elected the only other possibility open to it

⁶ These losses are considered in greater detail in Chapter IX, below.

⁷ See, e.g., R. Zimmerman, The Law of Obligations: Roman Foundations of the Civilian Tradition, Juta & Co., Cape Town, 1990, at pp. 576, et seq.

⁸ G.H. Treitel, Remedies for Breach of Contract: A Comparative Account, Oxford University Press, Oxford, 1988, at p. 381.

- to attempt approximate application or performance as the only means of fulfilling not only the purposes of the 1977 Treaty, but the continuing obligation to implement it in good faith.

7.21 The entitlement of a party injured by a breach of treaty to seek to give best effect to its terms - the doctrine of approximate application - necessarily entails certain departures by the injured party from the original terms. If the violating party could be compelled to fulfil its obligations to the letter, there would be no dispute. The point was clearly put by Judge Lauterpacht:

"It is a sound principle of law that whenever a legal instrument of continuing validity cannot be applied literally owing to the conduct of one of the parties, it must, without allowing that party to take advantage of its own conduct, be applied in a way approximating most closely to its primary object. To do that is to interpret and to give effect to the instrument - not to change it⁹."

Judge Lauterpacht observed that in order to give effect to the treaty there are permissible such modifications in its application as are necessary to maintain - but no more - the realisation of the objectives. In this case - as in others relating to South West Africa in 1950 and in 1955 - the Court was faced with the maintenance of the integrity of a special status in rem provided for by a treaty - the effective performance of the sacred trust for civilisation that underlay the mandate system. It was not acceptable that South African non-compliance with the obligations of the mandate should allow South Africa to proclaim its termination, or preclude the United Nations from ensuring whatever approximate performance was achievable.

7.22 But the doctrine of approximate application is not limited to treaties establishing a regime in rem¹⁰. The underlying reasons of principle and policy are not hard to find. First, there is an important community interest in the stability of international treaty relations. The substantive law of treaties provides the limited circumstances in which obligations freely entered into may in fact not be put into effect. To refuse the ability of the injured party to put the treaty into best effect, merely because

⁹ Advisory Opinion on Admissibility of Hearings of Petitioners by the Committee on South West Africa, ICJ Reports 1956, Sep.Op., at p. 46.

¹⁰ For its treatment as a doctrine of general application, see, Rosenne, Breach of Treaty, Grotius, Cambridge, 1985, at pp. 95 - 101.

the other party has refused to perform its part, is in effect to widen the tolerated circumstances for non-performance and to put in jeopardy the stability of treaty relations.

7.23 Second, it will frequently be the case that no proper satisfaction for breach of treaty can be achieved save through an approximate measure of performance. The need for compensation for financial loss and quantifiable harm is a real need for Slovakia. But financial compensation alone will not be able to eradicate the environmental harm of leaving the works of the unitary G/N Project in the unbalanced, unfinished state. Nor can it of itself guarantee the environmental benefits of flood protection. Nor can it guarantee the draught depths required by the Danube Commission for safe navigation. Nor would there be the possibility to move from unclean energy supplies to secure, clean energy. Nor would future income be guaranteed to continue providing these and other desirable outcomes. All of these objectives cannot be achieved by money alone. To achieve them to any significant degree requires either Hungarian cooperation - or introducing such modifications as are necessary to achieve at least part of these objectives in the absence of Hungarian cooperation.

7.24 Third, a State may not benefit from its own wrongdoing¹¹. A State that is in major breach of its obligations, and has caused massive harm, loss and damage thereby, may not seek to preclude the other party from putting the treaty into effect as best it may. It is remarkable to find Hungary, having proclaimed its refusal to proceed with the 1977 Treaty, insisting that the 1977 Treaty is to be the yardstick of what Slovakia may do. In its 1992 Declaration supporting its purported termination of the 1977 Treaty, Hungary states:

"The Contracting Parties determined very precisely the work to be carried out in the original Treaty in 1977 and in the subsequent related agreements. The diversion of the Danube near Bratislava was not part of them in any form. During the implementation of a treaty neither of the parties has the right to activities that are not authorized to by the treaty: such a behaviour amounts to a material breach of the treaty¹²."

¹¹ Jurisdiction of the Courts of Danzig, PCIJ, Series B, No. 15, pp. 26-27.

¹² Annex 17, at p. 26.

The reference to "during the implementation of a treaty" is astonishing, given that Variant "C" was conceived because of Hungary's continuing violations of the 1977 Treaty and its clear statements that it did not intend to implement the Treaty. Under this view of treaty law, one party may ignore the terms of a treaty and not perform; but the other party is constrained in its performance by the very provisions of the treaty that the offending party has prevented from coming into operation.

7.25 Acting under these principles, Czechoslovakia began preparatory work for a temporary solution. The decision of Hungary to cease all work on the Gabčíkovo section effectively prevented Czechoslovakia from benefitting from the Dunakiliti weir - which was commonly owned and completed. And without that, the Danube could not flow into the bypass canal. The only solution was to build a new weir at a point where Czechoslovakia had sole sovereignty. Thus the Danube was dammed on Czechoslovak territory at rkm 1851 about ten kilometres upstream from the 1977 Treaty damming site. Unfinished work on Czechoslovak territory abandoned by Hungary would be finished, there would be a temporary reduction of the reservoir quantity by confining it to Czechoslovak territory; and the Gabčíkovo system would be put into place through the damming of the Danube¹³.

7.26 As has been explained in Chapter V above, Variant "C" was chosen with the greatest care, many other alternatives being also carefully studied in the search to find the optimum solution to the Hungarian refusal to continue its obligations. At the end of the day, each of these other alternatives, with their sub-variants had to be rejected, either because they were economically absolutely impossible or because they would be possible only with the cooperation of Hungary¹⁴.

7.27 Variant "C" allows for important structures of the 1977 Treaty Project to become operational: much of the reservoir; the whole complex of the headwater canal; the whole complex of the Gabčíkovo step; the whole complex of the tailwater canal. It also allowed certain objectives of the 1977 Treaty to be realised, at least in the areas influenced by the Gabčíkovo section of the Project. The details, in relation to the objectives of flood control, improvement of navigation conditions,

¹³ For full details under each of these heads, see, para. 5.26, et seq., above.

¹⁴ See, paras 5.14 to 5.25, above.

utilisation of power potential, improvement of ground water regime, improvement of agricultural conditions and environmental protection, are specified in detail above at Chapter V, Section 3.

7.28 That Variant "C" is no more and no less than a best effort to secure the realisation of the 1977 Treaty is emphasised by its temporary nature and reversibility. Brief technical explanations have been given in Chapter V, Section 4, to demonstrate this reversibility.

7.29 If Hungary would resume the fulfilment of its obligations under the 1977 Treaty and would dam the Danube at the Dunakiliti weir, as originally envisaged, the entire reservoir could be filled. Variant "C" could then be rendered inoperable and merged into the Project as originally envisaged simply by opening all the gates, allowing the water to pass freely to the Dunakiliti weir. (Of course, only if the operation of Nagymaros were put into effect would the whole Project as envisaged in the 1977 Treaty be realised.) Indeed, had the EC Working Group of Independent Experts found - which it did not - that ecological considerations dictated that all the structures associated with Variant "C" be removed, a new bed could have been constructed between the closure and the inundation weir. Although there would necessarily be substantial costs involved in decommissioning Variant "C", care has been taken to ensure its reversibility.

7.30 There is a further reason why Slovakia was entitled to seek to have the terms of the 1977 Treaty put into effect: it was only that way that the safety of its inhabitants can be guaranteed. Every State has the right to territorial integrity - a right that is denied when its territory is repeatedly exposed to the ravages of uncontrolled flooding. And it is the very object of legitimate government to provide the people of a State with the safety they cannot secure for themselves: "The legitimate object of government is to do for a community of people, whatever they need to have done, but

cannot do at all, or cannot so well do, for themselves ...¹⁵". Without the key elements of the 1977 Treaty being put into effect, the dangers of flooding would continue.

7.31 The question of the maintenance of the bypass canal was also urgent, for there was serious risk of damage to the insulation of the bottom of the canal and to the dykes of the headwater canal. Under the 1977 Treaty, gradual filling had been planned to commence in December 1989, but the insulation layers were now exposed to atmospheric effect. Costly pumping of water (protested by Hungary, whose very failures had made it necessary) provided a short term adequate protection for the headwater canal bottom; but there remained the problem of protecting the insulating layers of the internal dyke slopes. Longer term and more comprehensive solutions were needed¹⁶.

7.32 Again, prolongation of the uncompleted state of the Project had negative effects on the environment. Lands due to be returned to cultivation remained indefinitely under construction sites. The branch system was condemned to further degradation. The ground water level continued to decrease, with a strong negative impact on forestation, especially in the Žitný Ostrov region, harming, *inter alia*, the wildlife of the inland delta of the Danube. Irrigation systems remained without water in the Rusovce and Čunovo areas, adversely affecting agriculture.

7.33 Defensive measures against these negative environmental factors needed to be taken. Variant "C" provided the possibility to complete some of the 1977 Treaty structures, to achieve some of the 1977 Treaty purposes, and to contain the negative impact on the environment of Hungary's unilateral acts and failures. Hungary has at all times been aware of the defensive need for the measures under Variant "C"¹⁷.

¹⁵ Abraham Lincoln, written fragment dated July 1, 1854. The claim of a society to protection of its security or safety has been described by Pound as "the paramount social interests" (Pound, "Social Interests" *Jurisprudence*, Vol. 3, pp. 264 - 324, ss. 93-99). As demonstrated by Julius Stone (*Social Dimension of Law and Justice*, Stevens, London, 1966, Ch. 6), the duty of the State to satisfy this claim is reflected in State legislation and control over road construction, safety of vehicles, buildings, conditions of work, public sanitation, the provision of police and fire services, compulsory insurance, anti-terrorism measures, and many other aspects of public life.

¹⁶ See, paras. 5.12 to 5.13, above.

¹⁷ See, e.g., letter of the Prime Minister of Czechoslovakia to the Prime Minister of Hungary, 23 April 1992, Annex 108.

B. Variant "C" and the Duty to Mitigate Losses

7.34 It is a general principle of international law that a party injured by the non-performance of another contract party must seek to mitigate the damage he has sustained. Thus the "claimant is not entitled to damages for losses he could have avoided by reasonable efforts"¹⁸. Mitigation of damages is also an aspect of the performance of obligations in good faith. Further, insofar as non-performance by one party may cause physical harm, including harm to the environment, a failure by the other party to take action to mitigate this consequence will be regarded as contributing to the loss.

7.35 An important reason for the putting into operation of Variant "C" was to avoid further significant loss and damage, of both an economic and ecological nature, that would occur from the stated intention of Hungary to cease all work, permanently, on Nagymaros and then at Gabčíkovo.

7.36 The fact that Czechoslovakia's work was so far advanced at the time of Hungary's refusal to proceed exacerbated the situation, as vast sums had already been expended. Work had also been done by Czechoslovakia on behalf of Hungary, under the Protocol revisions to the 1977 Treaty and its scheduled timetable.

7.37 The potential losses thus included investments made without the prospects of gains therefrom. Three elements may be identified: (1) research, construction and monitoring costs, without the production of electricity or revenues from improved navigation; (2) the prospect of further expenditures to provide necessary alternative, albeit inadequate, antiflood protective measures; (3) the prospect of expenditure to minimise the environmental damage and degradation caused by leaving existing constructions in their unfinished state.

7.38 It was necessary, as a practical matter and as a matter of law, to seek to mitigate these losses and expenses, and from the outset this was perceived as an important factor. Studies revealed that the only other alternative that would not require the cooperation of Hungary would in fact entail significantly greater economic losses

¹⁸ Judge Mosk, Craig v. Minister of Energy, 3 Iran-US Claims Tribunal Reports, at p. 293. See, also, 22 Iran-US Claims Tribunal Reports, at p. 244; 26 Iran-US Claims Tribunal Reports, at pp. 161-162.

than those already sustained by Czechoslovakia. Variant "C" was thus the only realistic option for the mitigation of damages.

7.39 Moreover, to delay further the work on Variant "C" - which, for reasons that have been explained above in Chapter IV, would in reality have delayed the damming of the Danube for another full year - would have entailed the certainty of continuing and mounting losses. The concession to refrain from works directly connected with closing the riverbed for a period of six months (until the end of June 1991) was the maximum that could be offered consistent with the duty to mitigate.

7.40 Finally, special considerations relating to mitigation obtain in international watercourses. There is a more general duty to prevent harm - "The mitigation of harmful conditions". A watercourse state should "take all appropriate measures" to mitigate harmful conditions, including those resulting from human conduct, and including flood conditions and continued siltation and erosion¹⁹. Slovakia concluded, after expert studies, that to leave the Project in its unfinished condition, or to destroy what had been achieved since 1977, would necessarily entail these damaging consequences, which it was obliged to avoid to the best of its ability.

SECTION 3. Variant "C" and Other Issues of International Law

7.41 It is the view of Slovakia, as indicated above, that the lawfulness of Variant "C" falls to be tested by reference to the 1977 Treaty. Variant "C" serves, by reference to the doctrine of approximate application, to implement the 1977 Treaty as far as possible in the face of Hungary's non-compliance, making such minimum deviations from what was intended in the 1977 Treaty as Hungary's non-performance requires.

7.42 However, in its 1992 Declaration, Hungary advanced a plethora of reasons, wholly unrelated to the 1977 Treaty, for the illegality of Variant "C". Thus it was stated that the provisional solution constitutes a breach of the sovereignty and territorial integrity of Hungary; that it violates the frontiers of Hungary; that it violates the 1976 Boundary Waters Management Agreement; that it violates the rules and principles of customary international law on the utilisation of international environmental

¹⁹ See, ILC Draft Article 24, The Law of Non-Navigational Uses of International Watercourses, A/CN.4/447, p. 11, 3 March 1993.

resources; that it violates the prohibition of transboundary harm; and that it contradicts "the spirit" of the 1948 Danube Convention on the Danube. Notwithstanding that Variant "C" simply represents an endeavour by Slovakia to put into operation what Hungary had already agreed to under the 1977 Treaty, Slovakia will address these claims.

A. The Treaty-Based Diversion, Variant "C", Conflicts With No Peremptory Rule of International Law Relating to the Diversion of International Waters

7.43 Hungary asserts that Variant "C" violates a peremptory rule prohibiting the diversion of boundary waters. Again, Hungary ignores the fact that diversion of the Danube was always envisaged under the 1977 Treaty. Further, that diversion was always to be onto Czechoslovak territory. The G/N Project entailed a 25 km long bypass canal diverting part of the Danube from the original riverbed - exactly where the Danube forms the border river between Slovakia and Hungary towards the Gabčíkovo step on Czechoslovak territory. Thereafter, the waters were to return to the old natural bed of the Danube. If, as Slovakia contends, the 1977 Treaty remains in force, no issue of violation of Hungarian sovereignty arises. Hungary has simply exercised its sovereignty to agree, in the 1977 Treaty, to a diversion of the international watercourse onto Slovak territory. The phenomenon of an agreement to be constrained, through the free exercise of sovereignty in a treaty, is well established²⁰.

7.44 There has thus been consent to diversion under the 1977 Treaty. This specific consent could not be set aside by later allegations by Hungary of contrary norms. In any event, the diversion in Variant "C" violates no peremptory rules of international law protecting the sovereignty and territorial integrity of Hungary²¹. The relevant requirement of international law is not in fact articulated as a peremptory norm at all. It is that the flow of a boundary river be not subjected to arbitrary, unreasonable or harmful interference. Variant "C", reluctantly introduced, carefully fashioned, reversible, in conformity with treaty obligations, is not arbitrary or unreasonable, and occasions no harm. So long as the waters are returned, even substantial changes in river

²⁰ See, S.S. "Wimbledon", Judgments, 1923, PCIJ Series A, No. 1, at p. 25.

²¹ This is asserted by Hungary in its 1992 Declaration, Annex 17, p. 26.

flow require no consent of the other riparian²². It is clear from the Lake Lanoux Case that this principle is not restricted to the application of the particular treaty arrangements governing that international lake. Neither the shared sovereignty of other riparians, nor notions of ownership or prior appropriation, make it otherwise:

"The rule that States may utilise the hydraulic power of international watercourses only on condition of a prior agreement between the interested States cannot be established as a custom, even less as a general principle of law²³."

Further, "the subjecting by one State of such rivers to a form of development which causes the withdrawal of some supplies from its basin, are not irreconcilable with the interests of another State²⁴".

7.45 The action France took in Lake Lanoux had an undoubted potential for impact upon Spain. Indeed, the alterations were much more significant than that effected by Variant "C". The waters of the Carol were to be diverted to the Ariège, employed in a hydroelectric plant, and then piped through a tunnel back to the Carol. Spain - which was not itself claimed to be in violation of the Treaty of Bayonne of 1868 or the Additional Act of the same date, had no right of veto. Hungary, which is indeed in violation of the 1977 Treaty, and whose own actions have exactly necessitated the introduction of Variant "C", is in an even worse position than was Spain to demand a veto.

7.46 Nor must it be forgotten that States have a right to development. The right of a State to develop its natural resources was recognised in Principle 21 of the 1972 Stockholm Declaration on the Human Environment. The Stockholm Declaration²⁵ refers to "the sovereign right [of States] to exploit their own resources pursuant to their

²² See, Lake Lanoux Arbitration (France v. Spain), 24 International Law Reports (1957), p. 101.

²³ Ibid., p. 130.

²⁴ Ibid., p. 119.

²⁵ 11 International Legal Materials (1972), 1416, at Principle 21, p. 1420.

own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction." The Rio Declaration on Environment and Development, adopted at the United Nations Conference on Environment and Development (UNCED) in 1992,²⁶ contains a nearly identical principle (Principle 2), the only difference being the insertion of the words "and developmental" before "policies". Thus, there is if anything an even greater emphasis today on the need to allow States the freedom to develop their natural resources pursuant to their own policies, and in a way that is sustainable.

7.47 In any event - and the point must be made again - the diversion of the Danube has been agreed to by treaty. The fact that the diversion occurs 10 km beyond the intended location is attributable to the fault of Hungary in renegeing on the treaty obligations as they affect the bypass canal.

B. Variant "C" is Lawful under the Danube Convention of 1948

7.48 Nor is Hungary assisted by its allegation, in paragraph 5(c) of Part III of its 1992 Declaration that the provisional solution contravenes the Danube Convention of 1948. The Convention, silent on the question of diversion, is part of the larger corpus of international law that makes non-arbitrariness and reasonableness the test. Hungary contends that Article 3 "makes it clear that lawful interventions can only be carried out by agreement with the riparian states".

7.49 Article 3 does no such thing. On the contrary, it stipulates an obligation upon riparians to maintain their sections in a navigable condition, and indeed to improve navigable conditions. The 1977 Treaty, which Hungary has refused to implement, was directed to this important legal obligation. By Variant "C", among other things, Slovakia seeks to fulfil this international obligation. The permission of the recalcitrant State is hardly necessary. Further, the second paragraph of Article 3 provides that "The riparian State may within their own jurisdiction undertake works for the maintenance of navigation, the execution of which is necessitated by urgent and

²⁶ 31 International Legal Materials (1992), 874, at Principle 2, p. 876 See, also, Principle 3, p. 877, which supports the right to development.

unforeseen circumstances"²⁷. That is exactly what Slovakia has done. The improved navigation channel required by the Danube Commission, and to be implemented by the 1977 provisions, was always to have been on Czechoslovak territory. Hungary has dishonoured its 1977 Treaty obligations (as elaborated in Chapter VI above). It has also failed to comply with its duty under Article 3 of the Danube Convention to improve the navigable channel. This dishonouring by Hungary of its obligations has presented an "urgent and unforeseen circumstance", and Slovakia has done, on its own territory, what is necessary to address the situation - the damming of the Danube and the provision of a satisfactory navigation channel.

7.50 Czechoslovakia has also complied with its obligations regarding notification about suspension of navigation on the Danube²⁸.

C. Variant "C" Does Not Conflict with the Inviolability of Hungary's Frontiers

7.51 It is a strange phenomenon for a State to insist that it has lost territory to a neighbour when the neighbour has made no such claim, and indeed publicly affirms its continued respect for the previous frontier. But this is the position adopted by Hungary - partly, it would seem, to secure some sort of psychological advantage, and partly as a curious consequence of its own suspension and purported termination of the 1977 Treaty.

7.52 Variant "C" has no effect whatever on the frontiers between Hungary and Slovakia; and Slovakia makes no claim upon one inch of Hungarian territory.

²⁷ The full text of Article 3 provides: "The Danubian States undertake to maintain their sections of the Danube in a navigable condition for river-going and, on the appropriate sections, for sea-going vessels, to carry out the works necessary for the maintenance and improvement of navigation conditions and not to obstruct or hinder navigation on the navigable channels of the Danube. The Danubian States shall consult the Danube Commission (Art.5) on matters referred to in this article. The riparian States may within their own jurisdiction undertake works for the maintenance of navigation, the execution of which is necessitated by urgent and unforeseen circumstances. The States shall inform the Commission of the reasons which have necessitated the works, and shall furnish a summary description thereof."

²⁸ See, para. 4.84, above.

7.53 The legal situation is clear, and may be traced from the Treaty of Trianon to the present time. The border between Czechoslovakia and Hungary was determined at the end of World War I by the Peace Treaty of Trianon of 4 June 1920. under Article 27, the part of the frontier with Hungary:

"...vers l'amont et jusqu'à un point à fixer à 2 kilometres environ à l'Est de Antonienhof (Est de Kittsee)..."

It is constituted by:

"...le cours principal de navigation du Danube."

7.54 After the Munich Conference of September 1938, Czechoslovakia was deprived of the Sudeten (its border parts with Bohemia and Moravia); and in November 1938 it was further deprived of a considerable part of its territory on the south of Slovakia as a result of the notorious so-called Vienna Award.

7.55 After World War II, the frontiers of Czechoslovakia were reinstated as they stood on 1 January 1938. Article 1, paragraph 4, of the Peace Treaty of Paris of 10 February 1947 provided for the line of the common frontiers between Hungary and Czechoslovakia as follows:

"(1)(4)(a)... The decisions of the Vienna Arbitration Award of November 2, 1938 are declared null and void.

(b) The frontier between Hungary and Czechoslovakia from the point common to the frontier of those two States and Austria to the point common to those two States and the Union of Soviet Socialist Republics is hereby restored as it existed on January 1, 1938, with the exception of the change resulting from the stipulations of the following subparagraphs.

(c) Hungary shall cede to Czechoslovakia the villages of Horvath-Jarfalu, Oroszvar and Dunacsun, together with their cadastral territory as indicated on Map No. 1A annexed to the present Treaty. Accordingly, the Czechoslovak frontier on this sector shall be fixed as follows: from the point common to the frontiers of Austria, Hungary and Czechoslovakia, as this existed on January 1, 1938, the present Hungarian-Austrian frontier shall become the frontier between Austria and Czechoslovakia as far as a point roughly 500 metres south of hill 134 (3.5 kilometres northwest of the Church of Rajka) this point now becoming common to the frontiers of the three named states: thence the new frontier between Czechoslovakia and Hungary shall go eastward along the northern

cadastral boundary of the village of Rajka to the right bank of the Danube at a point approximately 2 kilometres north of hill 128 (3.5 kilometres east of the Church of Rajka) where the new frontier will, in the principal channel of navigation of the Danube, join the Czechoslovak-Hungarian frontier as it existed on January 1, 1938: the dam and spillway within the village limits of Rajka will remain on Hungarian territory²⁹."

7.56 It will be seen that Article 1(4)(c) refers back to the frontier in the principal channel of navigation in the Danube, as it stood on 1 January 1938.

7.57 The multilateral determinations of the Treaty of Paris of 1947 were confirmed bilaterally, in the Treaty Between the Czechoslovak Republic and the Hungarian People's Republic Concerning the Regime of State Frontiers, of 13 October 1956³⁰. Article 1(1) reiterates that:

"The State frontiers between the Czechoslovak Republic and the Hungarian People's Republic are defined in article 1, paragraph 4(b) and 4(c) of the Treaty of Peace signed at Paris on 10 February, 1947...."

Article 2(3) further provides:

"On sectors where it runs over water, the frontier line shall follow the middle of the bed of unnavigable rivers, canals or streams, or in the case of navigable rivers, the median line of the main navigable channel at the lowest navigable level."

7.58 The System of weirs, and the intended bypass canal envisaged in the negotiations for the 1977 Treaty, clearly required some thought to be given to where the frontier would now run. At a certain stage in the negotiations the technical experts on both sides thought the best solution would be for the border to follow the navigation channel into the new bypass canal that was to be constructed³¹. This territorial gain to Hungary would be compensated upon the other common part of the state border. But, at the end of the day, Hungary having changed its mind, the Governments of both parties

²⁹ The villages of Horvath-Jarfalu, Oroszvar and Dunacsun are today called Jarovce, Rusovce and Čunovo respectively.

³⁰ See, 300 United Nations Treaty Series, 150.

³¹ See, para. 2.03, above.

agreed otherwise. Chapter IX of the 1977 Treaty is devoted to the boundary issue. Article 22 provides:

"(1) The Contracting Parties have, in connection with the construction and operation of the System of Locks, agreed on minor revisions of and changes in the character of the State frontier between the Hungarian People's Republic and the Czechoslovak Socialist Republic, as follows:

(a) Subsequent to the construction of the System of Locks, the moveable character of the State frontier in the old bed of the Danube between the r.km 1840 and r.km 1811 segments shall remain unchanged, and the position of that frontier shall be defined by the centre line of the present main navigation channel of the river;

(b) In the r.km 1842-1840 sector, up to the division of the bed, the State frontier shall run, as though fixed, along the centre line of the present main navigation channel;

(c) In the Dunakiliti-Hrušov headwater area, the State frontier shall run from r.km 1842 along the centre line of the present main navigation channel up to boundary point 161. V.O.a;

(d) In the Dunakiliti-Hrušov headwater area, the State frontier shall run from boundary point 161 V.O.a to boundary stone No.1.5 in a straight line in such a way that the territories affected, to the extent of about 10-10 hectares, shall be offset between the two States.

(2) The revision of the State frontier and the exchange of territories provided for in paragraph 1 shall be effected by the Contracting Parties on the basis of a separate treaty.

(3) The Contracting Parties shall, in the tailwater canal and the headwater canal, and in the main shipping lane in the Dunakiliti-Hrušov headwater area extending to r.km 1850.4, continue without change to exercise the rights and comply with the obligations to which they were entitled, or by which they were bound, in the sector of the river before the conclusion of this Treaty, notwithstanding that the international shipping lane has in this sector been shifted to the tailwater canal, or headwater canal, respectively, situated in Czechoslovak territory."

7.59 The situation could not be clearer. The parties had clearly determined that the line and location of the frontier was to remain unchanged. It was no longer to be characterised by the median of the main navigable channel (which would henceforth be shifted to Czechoslovak territory). It was to be characterised differently (as specified in Article 22), but would remain where it was.

7.60 Due to the refusal of Hungary to proceed with construction in either the Nagymaros or the Gabčíkovo sections of the Project, the agreed bypass canal

has been introduced through the mechanism of Variant "C". Hungary's purported termination of the 1977 Treaty is without effect and the diversion of navigation into an improved channel on Slovak territory was envisaged. So was the retention of the previous frontier in its previous location.

7.61 Because of Hungary's refusal to carry out its undertakings under the 1977 Treaty, it has been necessary for the damming for the diversion to begin some 10 km distant from the point envisaged. But the intention of the parties under the 1977 Treaty is clear. The diverted stretch running from rkm 1852 to rkm 1842 has no impact upon the frontier, just as the rest of the bypass canal has no impact upon the frontier. Variant "C" is, moreover, a provisional solution without prejudice to the fulfilment of the provisions of the 1977 Treaty.

7.62 Hungary refuses to carry out agreed provisions that would allow for an agreed new navigation channel, without alteration to the frontier; and then proclaims that Slovakia, by itself establishing the navigation channel, has altered the frontier to Hungary's advantage and thereby violated its territorial integrity. This claim can only be described as surrealistic.

D. Variant "C" is in Conformity with the 1976 Boundary Waters Management Agreement

7.63 The Government of Hungary has claimed that the provisional solution, Variant "C", violates the 1976 Boundary Waters Management Agreement³².

7.64 Such an assertion is not warranted. The 1976 Boundary Waters Management Agreement specifies certain obligations, general (Article 3) and specific (Articles 8-13) in relation to water resource management measures that could entail certain consequences (Article 2).

7.65 The 1976 Boundary Waters Management Agreement is applicable to the generality of boundary rivers and not limited simply to that stretch of Danube which is part of the common frontier between Hungary and Slovakia. It thus applies, for example, to the Ipeľ River and the Tizsa River. But so far as the common stretch of the

³² Annex 4.

Danube is concerned, the 1977 Treaty is in certain regards a lex specialis in respect of the obligations undertaken in 1976.

7.66 The obligations of the 1976 Boundary Waters Management Agreement attach to measures that have consequences for water flows, the building of dams, flood control works, the amelioration of water resources, exploitation of water energy, the laying out of navigation routes and flood protection (Article 2). The first obligation of Article 3 in respect thereof is of consultation and agreement. This was achieved by the 1977 Treaty which, as has been shown above in Chapter VI, was exactly directed to all of the above matters. The 1977 Treaty represents the "mutual agreement" required in Article 3(10)(a) of the 1976 Agreement. At the heart of that mutual agreement was that the structures of Gabčíkovo-Nagymaros should be built, and that improved navigation for the benefit of all users under the Danube Convention should be achieved through a bypass canal, which would not itself result in a new frontier. The 1977 Treaty provisions provided the specific means by which much of the 1976 Agreement was to be achieved.

7.67 The duty of each party to perform measures for flood protection (Article 10) and for protection against pollution (Article 11) and for safeguarding the navigation route (Articles 6 and 12) are all elaborated by the lex specialis of the 1977 Treaty. By its failure to perform its obligations under the 1977 Treaty, it is in fact Hungary that violates the agreements reached under the 1976 Agreement.

7.68 Variant "C", which puts in place, to the extent possible, the provisions of the 1977 Treaty in the face of Hungary's breach of its obligations, is clearly also consistent with the 1976 Agreement. As has already been demonstrated, Variant "C" supports the 1977 Treaty in respect of a bypass canal to provide better navigation. It is equally in conformity with the 1976 provisions, which had provided the starting point.

7.69 It is true that, the frontier not being affected by either the deviation provisions of the 1977 Treaty or their approximation in Variant "C", the "boundary waters" remain in the old riverbed of the Danube. And the 1976 Agreement remains determinative as to obligations relating to that because the 1977 Treaty is not a comprehensive lex specialis for every commitment in the earlier instrument.

7.70 Article 5 of the 1976 Agreement provided for the establishment of a Czechoslovak-Hungarian Commission for Boundary Waters³³. This Commission was duly established (and indeed was functioning in the run-up to the 1977 Treaty). Water purity remains under the regulation of the 1976 Agreement, and the Commission has in fact adopted measures on this matter³⁴.

7.71 On 26 August 1993, Terms of Reference were agreed for the EC Working Group of Independent Experts to formulate recommendations on a Temporary Water Management Regime³⁵. The hope is to arrive at a temporary agreement pending final determination of issues by the Court. This hoped for agreement will determine the amount of water needed to be retained in the old riverbed. The works needed will also be determined by mutual agreement.

E. Variant "C" is in Conformity with the Rules and Principles of Customary International Law that Regulate Shared Watercourses

7.72 Slovakia emphasises again that Variant "C" is to be understood in the context of treaty arrangements entered into in 1977 and which remain in existence to this day. In pointing to principles arising under the developing customary international law, Hungary seeks to divert attention from the applicable regime of law: pacta sunt servanda.

7.73 In any event, Variant "C" also conforms with general international law.

7.74 Hungary's 1992 Declaration refers to various sources of soft law to support the principle of reasonable and equitable use of transboundary natural resources. Slovakia has no quarrel with the proposition that evolving international law does indeed require reasonable and equitable use of such shared resources; but it notes

³³ Annex 4.

³⁴ Annex 4 and see, para. 3.15, et seq., above.

³⁵ Annex 33.

both that this principle is selectively applied, and that Variant "C" fully conforms to it while Hungary's entire conduct, from 1977 onwards, has been unreasonable and inequitable.

7.75 In 1991 the International Law Commission completed the first reading of its Draft Articles on the Law of the Non-Navigational Uses of International Watercourses. These draft articles are now receiving the attention of governments, many of whom are now offering detailed responses and suggestions³⁶. Hungary's comments are to be found at A/CN.4/447/Add.2, 18 May 1993, where it discovers a "no harm rule" (notwithstanding the ILC reference to "significant harm" and the earlier Helsinki Rules test of "substantial injury") and, even more surprisingly, purports to find it in the Lake Lanoux Case, "according to which construction and functioning of abnormal installations, i.e. installations exceeding normal technical and political risks, are prohibited". Hungary nowhere explains what is meant by an installation exceeding a normal political risk. But what the Tribunal said was in any event different - that Spain needed to show, but had not, "that the proposed works would entail an abnormal risk in neighbourly relations or in the utilization of waters"³⁷. And nor has Hungary shown this. Risks "of the same kind which today are found all over the world" could give rise to no complaint, said the Tribunal. Installations similar to those envisaged in the G/N Project are in use throughout the Danube basin³⁸. The Project constituted no "abnormal risk".

7.76 Articles 1-6 and 8-10 have now been adopted on 2nd Reading by the Drafting Committee, but not yet by the Plenary. The extended work leading to the formulation of the Commission's draft articles based itself on all the relevant case law, as well as the various ILA Rules, including those adopted at Helsinki in 1966³⁹. Attention was also paid to the contributions of the Institut de Droit International to the subject⁴⁰.

³⁶ See, e.g. The Law of Non-Navigational Uses of International Watercourses, A/CN.4/447 and Add., 3 March 1993.

³⁷ Lake Lanoux Arbitration (France v. Spain), 24 International Law Reports (1957), p. 101, at p. 123.

³⁸ See, para. I.13, above.

³⁹ ILA, Report of 52nd Conference, Helsinki (1966), pp. 478-533.

⁴⁰ For a convenient survey, see, Yearbook of the International Law Commission, 1974, Vol. II, Part II, pp. 199-205, 357-365.

As is well known, the Helsinki Rules spoke of the entitlement of each "basin state" to a "reasonable and equitable share in the beneficial uses of the water of an international drainage basin" (Art.IV); and provided that what is "a reasonable and equitable share" is to be determined in the light of all the circumstances, including by reference to listed criteria (Article V). Among the listed criteria are (e) the economic and social needs of each basin state, (f) the population dependent on the waters of the basin in each basin state, (g) the comparative costs of alternative means of satisfying the economic and social needs of each basin state, (h) the availability of other resources, (i) the avoidance of unnecessary waste in the utilisation of waters of the basin, (k) the degree to which the needs of a basin state may be satisfied, without causing substantial injury to either party.

7.77 It is immediately apparent that the 1977 Treaty was an agreement designed, inter alia, to provide each party with a reasonable and equitable share of the beneficial uses of the Danube. Variant "C", Slovakia's defensive response to the huge harm and damage caused by Hungary in reneging on these arrangements, is strongly supported by reference to these criteria. Slovakia reserves the right to develop these arguments, should it deem necessary, at a later stage of the written proceedings.

7.78 The ILC Draft Articles speak of "Equitable and reasonable utilisation and participation" in Article 5 - an article which has found general favour in the responses of States. Article 5(1) provides that an international watercourse shall be used and developed by watercourse States with a view to attaining optimal utilisation thereof and benefits therefrom consistent with adequate protection of the watercourse. Variant "C" is exactly directed to this objective, and the ready participation of Slovakia in the PHARE programme attests to the importance given to balancing optimal utilisation with ongoing monitoring, adjusting and improving. Article 5(2) provides that watercourse States have the right to utilise the watercourse and the duty to cooperate in the protection and development thereof. Variant "C" is the only means by which the Danube can, in the present circumstances caused by Hungary, be utilised optimally. The evidence of Slovakia's cooperation with Hungary regarding Variant "C" is ample, as the Court is briefly reminded below.

7.79 Nor should it be ignored that Article 5 refers to participation as well as to utilisation. Equitable participation is expected - and this was exactly what had

been envisaged under the 1977 Treaty. But Hungary has refused to participate to the achievement of these common beneficial ends.

7.80 Article 6 of the ILC Draft enumerates factors relevant to equitable and reasonable utilisation. Whether on the basis of (b) "the social and economic needs of the watercourse state concerned", (c) "existing and potential uses of the watercourse", or (f) "the availability of alternatives, of corresponding value, to a planned or existing use", Variant "C" is clearly an equitable and reasonable utilisation, and lawful.

7.81 It has yet to be decided whether the ILC's Draft Articles should serve as a proposed framework for future treaties; or as a guide to applicable general international law in the absence of watercourse treaties. In this case, of course, there is already a Treaty. But, whether by reference to the 1977 Treaty itself, or to these developing principles of watercourse law, Variant "C" is lawful. It is also well within the accepted bounds of State practice.

7.82 It is clear from the Diversion of Waters from the Meuse that the test in deciding upon the legality of unenvisaged acts within the context of a watercourse treaty is whether the obligations of the parties under the treaty are interfered with, and whether the achievement of the objectives of the treaty is harmed⁴¹. The parties had entered into a treaty on 12 May 1863 establishing a regime for taking water from the Meuse, including a definitive settlement of the regime of diversion of water from the Meuse for the feeding of navigation canals and irrigation channels. After various difficulties between the parties, the Netherlands proceeded to construct and complete the Juliana Canal and constructed the Bosscheveld Lock. Faced with this prospect, the Belgian Government decided to construct a "great new waterway" from Liège to Antwerp, the Albert Canal⁴². It was to be fed with water obtained from the Meuse. The Court found that, in the absence of a provision requiring the consent of Belgium, the Netherlands was entitled to dispose of the waters of the Meuse at Maastricht provided that the treaty obligations incumbent on it were not ignored⁴³.

⁴¹ Diversion of the Waters from the Meuse, Judgment, 1937, PCIJ Series A/B, No. 70, p. 4.

⁴² Ibid., at p. 15.

⁴³ Ibid., at p. 30.

7.83 Far from ignoring the 1977 Treaty obligations incumbent upon it, Variant "C" is the vehicle whereby - the only vehicle whereby - Slovakia can bring to fruition the treaty obligations jointly incumbent upon it and Hungary, given Hungary's refusal to carry out obligations which were its responsibility alone. Applying the test of the Diversion of the Waters of the Meuse case, Variant "C" is not specifically prohibited by the 1977 Treaty, precludes no rights agreed thereunder, and not only is fully compatible with the objectives of the Treaty regime, but is also the only means to achieve them, at least in part.

7.84 Nor does alteration to the prior condition of the common part of a river as such violate either the 1977 Treaty or general international law. In the Diversion of Waters from the Meuse case Belgium claimed, in the course of its oral argument, that the erection of a Borgharen barrage by the Netherlands had interfered with the navigability of the Meuse below Maastricht, on the part of the river common to both states. The Court found the action not prohibited per se, but dependent upon quantifiable proof of injurious effect. (Belgium, unlike Hungary, had not previously refused to carry out its own obligations relating to the Meuse, causing harm to the Netherlands). In the event, such evidence was not forthcoming⁴⁴. Even the dissenting opinion of Sir Cecil Hurst was based on his assessment that the construction of the barrage excluded the safeguarding of interests of navigation on the Meuse on the stretch between Maastricht and Venlo, which was incompatible with a purpose of the Treaty⁴⁵.

7.85 Hungary has not shown "significant" harm caused by Variant "C". It has not, contrary to its claims, lost the use of 40 km of its waters. The 1977 Treaty always provided for the diversion of the Danube. Hungary has not even lost the shared use of the 10 kilometres of Danube above the point at which the damming was envisaged under the 1977 Treaty. Any impacts upon Hungarian territory - which do not amount to significant harm - are due to Hungary's refusal to fulfil its obligations under the 1977 Treaty.

7.86 No one State can refuse to fulfil its obligations under a treaty and then protest against the efforts of the injured party to put the treaty into effect. This is a

⁴⁴ Ibid., at p. 30.

⁴⁵ Ibid., at p. 35.

fortiori when the treaty concerns an international watercourse, in which - both as a matter of treaty law and of general international law - there are shared interests. The party that turns its back upon the agreement that specifies the sharing of interests, and the burdens in realising them for the common good, cannot assert a veto over the exercise of the rights under the treaty of the other riparian: "This community of interest in a navigable river becomes the basis of a common legal right, the essential features of which are the perfect equality of all riparian States in the user of the whole course of the river and the exclusion of any preferential privilege of any one riparian State in relation to the others⁴⁶." By violating its own obligations under the 1977 Treaty, and seeking to preclude the putting into effect of the agreed objectives of that Treaty through Variant "C", Hungary is demanding a "preferential privilege" in relation to Slovakia.

F. Slovakia Was Fully Prepared to Cooperate with Hungary in Respect of Variant "C"

7.87 The scope and content of a duty to cooperate in respect of the use of watercourses is presently receiving some attention in the comments and observations of states to the ILC's draft articles. Article 5(2) refers to a duty to cooperate in the protection and development of the watercourse; Article 6(2) stipulates that this entails, when the need arises, entering into consultations in a spirit of cooperation. In putting Variant "C" into effect Slovakia has complied with such requirements of general international law. And it is Slovakia who has complied with, and Hungary who has ignored, Article 8 - the general obligation to cooperate "on the basis of sovereign equality, territorial integrity and mutual benefit in order to attain optimal utilisation and adequate protection of an international watercourse." Hungary offers not cooperation for optimal use balanced with adequate protection, but total non-cooperation directed at a return to a mythical pristine past.

7.88 Slovakia here briefly recalls all the elements, both in the run up to Variant "C", and subsequent to its implementation, that evidence a full cooperation in the adequate protection of the Danube. Full details are to be found in Chapter IV above.

⁴⁶ Territorial Jurisdiction of the International Commission of the River Oder, Judgment No. 16, 1929, PCIJ, Series A, No. 23, at p. 27. See, also, Lake Lanoux Arbitration (France v. Spain), 24 International Law Reports, p. 101, at p. 132, which rejects the operation of a veto.

7.89 Throughout, Czechoslovakia and then Slovakia have offered the possibility of revising technical elements of the G/N Project, to meet any objectively verified environmental needs. To that end, Czechoslovakia has suggested meetings of the experts of both countries with impartial experts, but Hungary has refused, being interested only in the non-implementation and eventual abandonment of the Project. Czechoslovakia proposed, in 1990, to address a request for technical guidance to the EC Commission; this was refused by Hungary. In 1990, Czechoslovakia alone decided to participate in a PHARE project, to study the problems of the ground waters along the Danube. Czechoslovakia has not sought to exclude the impact of Variant "C" from this study.

7.90 In 1991 Czechoslovakia responded cooperatively to Hungary's unilateral and illegal acts by reviewing at a technical level all possible matters of concern, to see what problems there might be, and how they could be minimised or eliminated. The seriousness with which Czechoslovakia took its responsibilities is shown by the fact that one of the options fully studied was that urged by Hungary - namely, the abandoning of the Project with a complete rehabilitation of the area. This option was found technically impossible, there being no suitable place to store the vast waste from demolished constructions, the prospect of prolonged environmental harm, and the absence of any resolution of the energy, flood control and navigation problems. The proposal would also have entailed the disbursement of vast financial resources, for no return.

7.91 Even when it began work on Variant "C", Czechoslovakia continued to seek a solution to the problems. It proposed that the EC Commission provide assistance and chair an expert trilateral commission. Czechoslovakia undertook not to engage in work in the bed of the Danube during the trilateral negotiations. It further undertook to accept whatever recommendations the fact finding trilateral commission might propose to resolve the problem⁴⁷. Czechoslovakia had made clear that Variant "C" would be temporary, to allow for reversing if either Hungary resumed fulfilment of its obligations or if the experts found Variant "C" environmentally unacceptable. Hungary's response was to pull out of the meetings a few days before they were due to commence in May 1992. But Hungary, if it had acceded to the earlier

⁴⁷ See, paras. 4.72, et seq., above.

Czechoslovak proposals, would have had in its hands by July 1991 the results of expert surveys as to the impact of Variant "C", to allow objective decisions as to further work on the temporary solution. The reality is that Hungary had no interest in mutual cooperation.

7.92 Czechoslovakia had sought EC involvement in the entire controversy over the 1977 Treaty, to get objective assessment of the issues involved. It suggested EC impact monitoring. Hungary resisted any EC involvement at all. Eventually, when it was clear that the provisional solution was indeed a reality, the EC's involvement was accepted - but only in relation to Variant "C", and not the wider issues.

7.93 The readiness of Slovakia to cooperate in monitoring, objectively identifying problems, and taking necessary action, continues to the present time. It has been actively and positively involved in the Working Group of Monitoring and Water Management Experts for the Gabčíkovo System of Locks⁴⁸.

7.94 Any international law duty of cooperation incumbent upon Slovakia has been fully met. But it must also be remembered that Hungary and Czechoslovakia entered into a treaty: there is no obligation to consult for the sole purpose of terminating a treaty. Any duty of cooperation within a treaty is to seek objectively to identify and resolve problems within the treaty commitments. This Czechoslovakia has always done, just as Slovakia does today.

SECTION 4. Conclusion on Variant "C"

7.95 The clear starting point for the Court must be the 1977 Treaty, voluntarily entered into by Czechoslovakia (and now binding upon Slovakia) and by Hungary. As international judgments and awards have repeatedly made clear, disputes are to be settled by reference to the treaties entered into by the parties, rather than by

⁴⁸ This clear from the EC Working Group report of 2 November 1993 and the EC Water Management report of 1 December 1993. Annexes 19 and 33.

reference to general principles of international law⁴⁹. This principle has recently been reaffirmed in Territorial Dispute (Libyan Arab Jamahiriya v. Chad)⁵⁰.

7.96 The test for the lawfulness of Variant C is thus that applied by the Court in Diversion of the Waters of the Meuse - namely, whether it violates the treaty agreed between the parties. The only circumstances in which compatibility with the 1977 Treaty would not be the relevant test would be (a) if the 1977 Treaty itself, for reasons anterior to the introduction of Variant "C", had been lawfully suspended or terminated; or (b) because the treaty had become void because it contravened a newly emergent rule of jus cogens that came into existence subsequent to its conclusion. Slovakia will show in Chapter VIII below, that neither of these circumstances applies.

⁴⁹ See, Diversion of the Waters of the Meuse, Judgment, 1937, PCIJ Series A/B, No. 70, at p. 16; Territorial Jurisdiction of the International Commission of the River Oder, Judgment No. 16, 1929, PCIJ Series A, No. 23, at p. 22; see, also, Lake Lanoux Arbitration (France v. Spain) 24 International Law Reports (1957), p. 101 at pp. 120-121.

⁵⁰ Territorial Dispute (Libyan Arab Jamahiriya v. Chad), Judgment, I.C.J. Reports, 1994, at p. 38.

CHAPTER VIII. THE LEGAL JUSTIFICATIONS OFFERED BY HUNGARY FOR SUSPENSION, ABANDONMENT OF ITS OBLIGATIONS, AND THE TERMINATION OF THE 1977 TREATY

SECTION 1. Preliminary Comments

8.01 On 13 May 1989, the Government of Hungary notified the Czechoslovak Ambassador in Budapest that Hungary was suspending the construction of the common project at Nagymaros. Mention was made of the need to consider again the seismic and ecological impacts of the construction. No written explanation was given. Hungary's action may, from the legal point of view, be described as the unilateral suspension of its performance under a treaty.

8.02 On 20 July 1989, the Prime Minister of Hungary stated that the decision to suspend work related to all structures connected with peak performance and was valid for all sections of the Danube. Hungary thus suspended its work obligations not only at Nagymaros but now at the Dunakiliti dam and elsewhere in the Gabčíkovo section.

8.03 After suspending its performance and proposing the postponement of the damming of the Danube near to Dunakiliti for 3-5 years, Hungary in October 1989 announced that it was permanently abandoning treaty performance at Nagymaros, thus excluding from the Project the achievement of peak energy operation. On 30 October 1989, Hungary invoked an "ecological state of necessity" and on 30 November 1989 the Hungarian Government made proposals as to the conditions on which work might be resumed, although, at Gabčíkovo only¹.

¹ See, paras. 4.46 - 4.50, above.

8.04 On 10 January 1990 Hungary announced its suspension of all work, save for maintenance in the Gabčíkovo section, until an amended or new treaty would be reached².

8.05 On 23 April 1991 the Hungarian Parliament called for negotiations for the termination of the 1977 Treaty³.

8.06 On 7 May 1992 Hungary decided to terminate the 1977 Treaty. On 19 May 1992 the Declaration conveying the decision to terminate the 1977 Treaty was handed to the Czechoslovak Embassy in Budapest (the "1992 Declaration").

8.07 From the legal point of view, this sequence may be classified as follows:

- The oral notification of 13 May 1989 was not of suspension of the 1977 Treaty as a whole, but of performance by Hungary of its own obligations in respect of part of the 1977 Treaty. But as the key obligations at Nagymaros were the sole responsibility of Hungary, this amounts to unlawful suspension of the operation of the 1977 Treaty in part.
- The statement of 20 July 1989 was an affirmation of non-performance by Hungary at Gabčíkovo, coupled with a demand that Czechoslovakia, too, suspend performance of its obligations. The obligations relating to the Gabčíkovo section of the 1977 Treaty being common, this part of the 1977 Treaty was not in fact suspended - though Hungary refused to perform for an unspecified period.
- In October 1989 Hungary announced its permanent non-performance of the 1977 Treaty as it related to Nagymaros.

² See, para. 4.55, *et seq.*, above.

³ See, para. 4.69, *et seq.*, above.

This was a de facto abandonment of the 1977 Treaty, which in the clearest terms envisaged the unity of the Gabčikovo and Nagymaros elements.

- On 7 May 1992 Hungary decided upon the termination of the 1977 Treaty in its entirety.

8.08 The justifications of Hungary for suspending and then permanently abandoning its obligations were made orally (13 May 1989 and 20 July 1989) or in diplomatic Notes and in the letter of the Prime Minister of Hungary of 26 February 1992⁴. Justifications are offered for the termination of the 1977 Treaty in the 1992 Declaration. This last document refers to various events but does not seek to make any clear legal distinction between the different refusals to perform and the eventual purported termination.

SECTION 2. The International Law Rules Governing the Suspension and Termination of Treaties

8.09 The legal justifications offered by Hungary fall to be judged by reference to the 1969 Vienna Convention on the Law of Treaties. Hungary is clearly anxious about the legality of its conduct by reference to the Vienna Convention and, in its 1992 Declaration, it searches for a way to have the best of all worlds - to apply it when it suits and not when it does not. Hungary tries to accomplish this in two ways - first, by contending that not all relevant provisions of the Vienna Convention are opposable to Hungary; and second, by constructing alleged justifications totally outside of the Vienna Convention scheme.

8.10 As to the first technique to avoid the clear requirements of the law of treaties, Hungary proclaims in its 1992 Declaration that the Vienna Convention cannot directly be applied in the legal disputes concerning the 1977 Treaty because the Vienna Convention entered into force for both countries after 1977. It might be indirectly

⁴ Annex 106.

applicable - but this does not mean that its norms literally apply in the present case. But Hungary cannot pick and choose in this way.

8.11 It is true that the Vienna Convention has no retroactive application (Article 4). But many of its terms reflect pre-existing rules of international law. Part V of the Convention is widely accepted as reflecting international law. Thus, insofar as Hungary is entitled to invoke the general rules of international law to support its actions, these are already to be found, incorporated with care, in the Vienna Convention⁵.

8.12 Hungary's other attempts to avoid the operation of the law of treaties are equally unacceptable. The inescapable starting point is that treaties are to be performed in good faith (Article 26, Vienna Convention). To ensure that this is so, the Convention formulates carefully the rules governing claims of invalidity, termination or suspension. Article 42(2) provides:

"The termination of a treaty, its denunciation or the withdrawal of a party, may take place only as a result of the application of the provisions of the treaty or of the present Convention. The same rule applies to suspension of the operation of a treaty." (Emphasis added).

It could not be clearer that a party suspending performance, or claiming to terminate the treaty, must bring itself within the principles set out in Articles 54 to 62 of the Vienna Convention. If it cannot do so, its suspension will be unlawful and its purported termination without legal effect.

8.13 Suspension or termination may be permitted if termination or suspension is implied by the conclusion of a later treaty on the same subject matter (Article 59); if there has been a material breach (Article 60); if there has occurred a supervening impossibility of performance (Article 61); or if there has been a fundamental change of circumstances (Article 62). "Necessity" is not a ground for suspension or termination under the Vienna Convention. Still less can be found a ground of "ecological necessity". Nor is what Hungary sometimes describes as "ecological risk" a ground

⁵ See, further on this point, para. 6.57, *et seq.*, above.

recognised by the Vienna Convention. Only if what Hungary chooses to term "ecological necessity" actually constitutes a supervening impossibility of performance, or a fundamental change of circumstances, can it afford a legal justification for suspension or purported termination.

8.14 Equally, Hungary cannot invoke a "defence" to justify its own breaches by reliance on broader heads of "circumstances precluding wrongfulness" elaborated in the current work of the International Law Commission on the law of State responsibility. Moreover, any claim by Hungary to suspend or terminate as a "countermeasure", presupposes a breach by Slovakia. But Article 60 of the Vienna Convention makes clear that a "material breach" is the essential precondition to an entitlement to suspend or terminate. And a material breach either exists or does not exist - and by reference to the criteria in the Convention. The invocation of "countermeasures" is at once legally incorrect and without purpose.

8.15 In the Rainbow Warrior Case, New Zealand argued that a State Party to a treaty, excusing its own non-performance, was not entitled to set aside the grounds specified in the Vienna Convention and rely instead on grounds within general State responsibility⁶. This argument was not accepted by the Tribunal, which offered as its reasons that Article 60 of the Vienna Convention "gives a precise definition of the concept of material breach of a treaty" while the appropriate remedies for breach is a subject that belongs to the law of state responsibility⁷.

8.16 Slovakia believes that the Tribunal's response ignores all save one paragraph of Article 60 (Article 60(3)). Material breach is in fact relevant exactly to the remedies stipulated elsewhere in Article 60, which are manifestly not reserved for the law of State responsibility. Slovakia contends that this arbitral award does not correctly state the relationship between the law of treaties and the law of State responsibility, and reserves its right to invite the Court so to find, in the context of the dispute between Hungary and Slovakia.

⁶ Rainbow Warrior, 82 International Law Reports, p. 499 at pp. 549-551.

⁷ Ibid., at pp. 550-551.

8.17 Hungary seeks to justify its termination as a countermeasure to the alleged "serious breach of treaty" represented by Variant "C". Slovakia believes Variant "C" to be consistent with the 1977 Treaty, and with international law more generally. In any event, if Hungary cannot bring itself within the terms of Article 60, it cannot achieve the same result through the invocation of countermeasures. There are various reasons why this should be so. Before turning to these Slovakia first notes that termination under Article 60 is lawful; a countermeasure is, by contrast, an otherwise unlawful act, in respect of which wrongfulness is precluded if the circumstances and conditions precedent are met. Hungary cannot simultaneously argue that it lawfully terminated for material breach under Article 60; and that responsibility for its unlawful termination is precluded by its characterisation as a countermeasure. Again, as with its simultaneous reliance on termination by material breach and termination for reasons of state of necessity, Hungary must determine whether it believes it has acted lawfully or unlawfully (but with responsibility precluded). At the moment its legal case for termination rests indiscriminately on whatever principles of international law seem to hand.

8.18 Nothing in the text of Article 60, or its travaux préparatoires, or the texts of learned commentators, leads to the view that the State Parties to the Vienna Convention believed that they were also leaving open - by reference to the law of State responsibility or otherwise - the possibility of termination or suspension on different grounds. On the contrary, the evidence is that Article 60 was deliberately drafted in narrow terms, to reflect the importance of the principle of pacta sunt servanda. The Special Rapporteur, Sir Humphrey Waldock, said that in putting forward the text of Article 60 a prime consideration was to prevent abusive assertions of a breach by a State wishing to terminate a treaty no longer to its political advantage⁸. And the Commission had in its Final Report emphasised that "it is not open to a State simply to allege a violation of the treaty and pronounce the treaty at an end"⁹. The provisions on termination were fashioned accordingly. Reliance on the loose and uncertain provisions of countermeasures within the law of State responsibility undermine what was so

⁸ See, 2nd Report on the Law of Treaties, A/CN.4/156, Adds 1-3, Yearbook of the International Law Commission 1963, Vol. II, pp. 73-4.

⁹ Final Report on the Law of Treaties, A/CN.4/SER.A/Add.1, Yearbook of the International Law Commission, 1966, Vol. II, p. 254.

carefully formulated, after prolonged discussion, under Article 60 of the Vienna Convention.

8.19 Article 30 of Part I of the ILC Draft Articles on State Responsibility provides:

"The wrongfulness of an act of state not in conformity with an obligation of that State towards another State is precluded if the act constitutes a measure legitimate under international law against that other State, in consequence of an internationally wrongful act of that other state."

8.20 Article 11 of Part Two of the Draft Articles currently under consideration provides¹⁰:

"1. As long as the State which has committed an internationally wrongful act has not complied with its obligations under articles 6 to 10 bis, the injured State is entitled, subject to the conditions and restrictions set forth in articles ..., not to comply with one or more of its obligations towards the State which has committed the internationally wrongful act, as necessary to induce it to comply with its obligations under articles 6 to 19 bis.

2. Where a countermeasure against a State which has committed an internationally wrongful act involves a breach of an obligation towards a third State, such a breach cannot be justified as against the third State by reason of paragraph 1."

8.21 Article 12 provides:

"1. An injured State may not take countermeasures unless:

(a) it has recourse to a [binding/third party] dispute settlement procedure which both the injured State and the State which has committed the internationally wrongful act are bound to use under any relevant treaty to which they are parties; or

¹⁰ Articles 11 and 12 have been adopted by the Drafting Committee at the 1993 session but have not yet been discussed in Plenary.

(b) in the absence of such a treaty, it offers a [binding/third party] dispute settlement procedure to the State which has committed the internationally wrongful act.

2. The right of the injured State to take countermeasures is suspended when and to the extent that an agreed [binding] dispute settlement procedure is being implemented in good faith by the State which has committed the internationally wrongful act, provided that the internationally wrongful act has ceased.

3. A failure by the State which has committed the internationally wrongful act to honour a request or order emanating from the dispute settlement procedure shall terminate the suspension of the right of the injured State to take countermeasures."

8.22 The controls put in place under Article 60 are partly achieved by the importance of materiality of the breach; and partly by providing orderly procedures to be followed. The restriction of Article 60 to a narrowly defined concept of "material breach" is an indication that the international community is not prepared to go very far in admitting that a breach of a treaty, however grave, operates in itself to put the treaty at an end. At the most it is a ground, if duly established, for the injured party to terminate the treaty in an orderly way. In that sense:

"[A]rticle 60 has an important role in performing the function of preserving the jural relations created by the treaty and not allowing them to be arbitrarily disturbed, whatever be the political and legal strains under which they may have come¹¹".

The articles on countermeasures in the law of State responsibility clearly pull in a different direction. And that is why, in determining justifications for suspension and termination, it is essential to stay within the Vienna Convention system.

8.23 There can be no artificial and rigid separation of the law of treaties and the law of State responsibility¹²; but the uncertain scope and content of countermeasures under the law of State responsibility cannot be applied and interpreted so as to render without purpose the deliberately circumscribed provisions of Article 60 of

¹¹ Rosenne, Breach of Treaty, Grotius, Cambridge, 1985, p. 43.

¹² Simma, "Reflections on Article 60 of the Vienna Convention on the Law of Treaties and its Background in General International Law", 20 Osterreichische Zeitschrift für Öffentliches Recht (1970).

the Vienna Convention. Norms emanating from the different branches of international law must supplement and support each other, not render each other nugatory.

8.24 The same conclusion is reached by comparing the status of the Vienna Convention provisions on the law of treaties with those of the ILC's drafts on countermeasures. The former represents a corpus of already well established law, now codified and widely accepted. The Court in the Case concerning the Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) has confirmed that Article 60 of the Vienna Convention codifies customary international law¹³. The ILC's examination of countermeasures represents work in progress, with uncertainties and remaining problems clearly visible. In any case, they cannot operate to effect a *de facto* revision for States Parties to the Vienna Convention, nor to put in question established principles of general international law¹⁴.

8.25 The point is illustrated by the case concerning the Air Services Agreement of 27 March 1946 (United States v. France) where the Tribunal did permit the use of countermeasures suspending a particular provision¹⁵. However, the countermeasure at issue - the prohibition of the operation of certain services by Air France so long as the embargo on Pan Am was maintained by France - the aim specifically stated by the Tribunal was to "restore equality between the Parties and to encourage them to continue negotiations"¹⁶. The measures in that case were within the treaty, directed at ensuring that it was carried out. This clearly would not apply to the termination of the 1977 Treaty in its entirety by Hungary. In so far as the Air Services Agreement Case Tribunal might be said to be advancing any broader proposition that the putative law of countermeasures under State responsibility prevails over the provisions

¹³ Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, ICI Reports 1971, p. 16, at p. 47.

¹⁴ And, see, Bowett, "Treaties and State Responsibility", in Melanges M. Virally, Le Droit international au service de la paix, de la justice et du développement (1991) 137.

¹⁵ Case concerning the Air Services Agreement of 27 March 1946, (United States v. France), 54 International Law Reports (1979), p. 304 at pp. 337 - 341.

¹⁶ Ibid., p. 339, at para. 90.

of the Vienna Convention (sed non), Slovakia reserves the right to invite the Court to reject such a view.

SECTION 3. The Justification of an "Ecological State of Necessity"

8.26 The 1977 Treaty contains no provisions envisaging suspension or termination. There is, however, a provision on the settlement of disputes (Article 27) which provides that if the Government Plenipotentiaries are unable to reach agreement on a matter in dispute, it shall be referred to the Governments of the Contracting Parties for decision. This carries two implications. The first is that any remedies which a party may claim it has in a dispute may not be exercised until the procedures in Article 27 have been complied with. The second is that Article 27 necessarily implies that the Contracting Parties will in good faith try to ascertain impartially such facts as may be needed to resolve the dispute. Hungary resorted to unilateral measures without any prior consultation whatever : the suspension for 2-3 months of work at Nagymaros; the permanent abandonment of work at Nagymaros; the abandonment of its work obligations in the Gabčíkovo section. It also blocked every attempt by Czechoslovakia to obtain impartial assessments of the "facts" unilaterally asserted by Hungary as a justification for such suspension.

8.27 These general observations have a particular bearing on Hungary's major claim of "ecological necessity", which it seems to invoke indiscriminately in respect of suspension, abandonment and termination. But, if the principle of pacta sunt servanda is not to be applied, rather more rigour is required.

A. There Was No "Ecological State of Necessity" by Reference to the Scientific Facts

8.28 Objective expert opinion does not show the existence of an imminent ecological disaster, or an ecological state of necessity, either at that time of suspension of the works at Nagymaros and then at Gabčíkovo, or at the moment of purported termination. As at this time, the best available impartial evidence of the expected environmental impact of the Project was offered by the Bechtel and HQI reports, which Slovakia has already considered in great detail in Chapter II above. These

reports were commissioned individually by the parties, they were proposed by well known companies after extensive reviews and they both arrived at the same conclusion: there was no imminent ecological disaster. The following is a brief summary of the important findings of these reviews:

Water quality and quantity

The HQI report:

"Suite à cette analyse sommaire, il nous apparaît que les risques de détérioration de la qualité de l'eau sont faibles¹⁷."

Translation:

"As a result of this concise analysis, it appears to us that the risks of a deterioration in water quality are very low."

The Bechtel report:

"As previously discussed, the water quality in the Hrušov - Dunakiliti reservoir will be improved...¹⁸."

"Water quality in the side arms will be improved...¹⁹."

"The water quality in the Mosoni will be equal to or better than the past water quality...²⁰."

"The planned operation of the project will not significantly alter the flow characteristics or hydrology of the river downstream of Nagymaros²¹."

¹⁷ The HQI report, op. cit., p. 52.

¹⁸ The Bechtel report, op. cit., p. 2-6.

¹⁹ Ibid., p. 2-8.

²⁰ Ibid. Hungary alone enjoys the benefits of improvements in the water quality of the Mosoni Danube.

²¹ Ibid., p. 2-18.

"The extensive mitigation measures planned by the project to control the impacts on ground water conditions appear adequate²²."

Drinking water

The Bechtel report:

"The net change to the aquifer ground water supply due to the altered recharge regime will be minimal - possibly increasing or decreasing slightly²³."

"... the project can not have a measurable impact on the performance of the wells [that supply Budapest]²⁴."

The side arms

The Bechtel report:

"These interception channels will transport the reservoir seepage to the Szigetköz side arm channels and will maintain the local ground water near historic levels²⁵."

"Natural vegetation occurring in the vicinity of the Danube side channel/oxbows is not expected to experience significant adverse impacts²⁶."

Agriculture and forestry

The Bechtel report:

²² Ibid., p. 1-10.

²³ Ibid., p. 2-15.

²⁴ Ibid., p. 2-18.

²⁵ Ibid., p. 2-15.

²⁶ Ibid., p. 2-24.

"The project will provide several benefits to agricultural and forestry production in the Szigetköz with installation of the artificial recharge system²⁷ ."

The HQI report:

"Le rabattement de la nappe à l'aval du projet pourra être bénéfique pour l'agriculture dans cette région où le drainage est requis²⁸ ."

Translation:

"The lowering of the water table in the downstream section of the Project may be beneficial to agriculture in this region where drainage is required."

The safety of the constructions

The HQI report:

"Les principes de conception des ouvrages ont pris en compte la complexité de fonctionnement du projet et les difficiles conditions de fondation des ouvrages de référence²⁹ ."

Translation:

"The design principles of the structures took into account the complexity of Project operation and the difficult conditions with regard to the foundations of the major structures."

"Les plans et devis, leur application et le contrôle de qualité correspondant en général aux standards appliqués pour ce type d'ouvrages³⁰ ."

²⁷ Ibid., p. 1-13.

²⁸ The HQI report, op. cit., at p. 85.

²⁹ Ibid., p. 78.

³⁰ Ibid.

Translation:

"The designs and estimates, their application and the quality control correspond in general to the applicable standards for this type of structure."

"...ces phénomènes [de secousses sismiques et la liquéfaction possible des sables silteux] n'étaient pas à craindre, comme l'indiquaient les données historiques³¹."

Translation:

"...these phenomena [seismic shocks and the liquefaction of silted sands] were not to be feared, as indeed the historical data indicated."

"Les digues les plus élevées bordant le canal d'aménée sont à l'abri de tout risque du fait de la substitution des matériaux liquéfiables³²."

Translation:

"The highest dykes of the headwater canal are immune to any risk due to the substitution of materials subject to liquefaction."

The various reports of the EC Working Group experts were not of course in front of Hungary when it purported to terminate the 1977 Treaty. But there, too, no evidence of imminent ecological disaster is to be found³³.

B. Hungary did Not Believe, at the Moment it Unlawfully Suspended, Abandoned its Performance under and Terminated the 1977 Treaty, that a State of Necessity Existed

8.29 To invoke a State of ecological necessity, a State must believe it exists. And it must have held that deep and genuine belief at the moment it decided to act contrary to its international obligations.

³¹ Ibid., p. 70.

³² Ibid., p. 81.

³³ See, Chapter V, above.

8.30 But the history of the matter, and the events of 13 May 1989 (suspension at Nagymaros), 20 July 1989 (suspension also of works on the Gabčíkovo section) and 19 May 1992 (notification of termination) show otherwise.

8.31 On the same date as the conclusion of the 1977 Treaty, there was also concluded the 1977 Mutual Assistance Agreement³⁴. This Agreement provided an agreed timetable for construction, with work to start by 1978. It was already an amendment, made at Hungary's request, to the distribution of obligations that had been agreed to in the negotiations leading up to the 1977 Treaty, reflected first in the Joint Investment Task of 1964, and amended in 1967, and then in the elaboration of the Joint Contractual Plan agreed to in August 1978, and referred to in Article 1(4) of the 1977 Treaty³⁵. Hungary wanted a postponement of two years on the construction timetable, due to two factors: its belief in the stable energy situation up to 1987, and limited investment possibilities. The solution reached, reflected in the 1977 Mutual Assistance Agreement, was not to delay, but for Czechoslovakia to take over part of the works heretofore attributed to Hungary, and a redistribution of energy allocations.

8.32 Hungary's financial problems, coupled with its perceptions at given moments of time about its own energy needs, were to be the key to 15 years of prevarication and unreliability.

8.33 In February 1981, Hungary once more asked for a slowdown in construction, again citing economic difficulties³⁶. At the meeting in Budapest on July 1-2, 1981, the Prime Minister of Hungary informed the Czechoslovak Prime Minister that economic problems were causing Hungary to seek the postponement of putting the first structures into operation by three years. Later, Hungary confirmed that it sought the interruption of works even until 1990, with only maintenance of existing structures continuing.

³⁴ Annex 5.

³⁵ Annex 3.

³⁶ See, in particular, the letter of Deputy - Prime Minister Marjai, discussed at para. 3.37, et seq., above.

8.34 As brought out in Chapter III, Hungary sought to delay the Project for entirely economic reasons. Although there was some discussion of ecological factors at the 18th session of the ESTC Committee (31 May - 1 June 1982), when that Hungary agreed to hand over its studies on ecological impacts for joint study, no such technical studies were received by Czechoslovakia. And the evidence confirms that Hungary's real concern was economic³⁷.

8.35 Czechoslovakia rejected an interruption of the works until 1990 but was prepared, in a spirit of cooperation, to countenance a three year delay in putting the hydroelectric power station at Gabčíkovo into operation, provided that it secured compensation for the consequential damages. As negotiations proceeded, Hungary proposed that Czechoslovakia take over certain of its allocated works on the tailwater section of the bypass canal. The records of the 18th session of the ESTC Committee (31 May - 1 June 1982) show that Hungary was interested in having yet more of its work done by Czechoslovakia (increasing the economic exposure of Czechoslovakia), and avoiding the payment of compensation for losses occasioned by the interruptions.

8.36 During the course of 1983 the ESTC Committee called upon Academies of Sciences of both countries to engage in cooperative work on environmental impact. In the meantime nothing was found to preclude agreement being reached in the autumn of that year, in the form of two Protocols signed on 10 October 1983. The first postponed by four years the agreed dates for putting into operation the various structures. They were now to come into operation in the period 1990-1994. The second amended the 1977 Mutual Assistance Agreement, altering deadlines for the finishing of specified works. Instruments of ratification were exchanged in 1984. Both instruments entered into force in 1984.

8.37 Thus, in 1984, having reviewed the situation since its unilateral stoppage in 1981, Hungary saw no ecological disaster that would prevent the work going forward in the same form, albeit on a delayed timetable and with readjusted allocations of work obligation. It produced no evidence, either by itself or in joint work,

³⁷ Ibid.

that would have supported any claim of grave risk - and the new agreements it signed were not at all directed to such issues. This reality is reflected in the admission in the 1992 Declaration that:

"By the mid-eighties it became evident that the construction of the Nagymaros dam exceeded the possibilities of Hungary both in financial and technological terms³⁸."

8.38 That Hungary's inconsistency has been motivated by other factors is further illustrated by the fact that almost immediately thereafter it began to request an acceleration of the Nagymaros project construction. This new demand, which placed considerable further economic strains on Czechoslovakia, reflected Hungary's changed perceptions of its energy needs. But once again environmental factors were mentioned. Thus the proposal was stated to be based in part on the "protection of [the] environment and the surrounding countryside"³⁹. Whether to interrupt the 1977 Treaty schedule (as in 1983), or whether to accelerate it (as requested from 1985), the environment could conveniently be offered as an argument to bolster the real reason, which was economic in nature.

8.39 As recently as 6 February 1989, this request for acceleration was acceded to in a new Protocol, which replaced the Protocol of 10 October 1983. It provided for the final structures to be put in place 15 months earlier than previously envisaged. Nothing was altered in the component elements of the Project, which Hungary apparently did not regard as dangerous or presenting the likelihood of an imminent catastrophe.

8.40 Hungary had indicated a concern regarding water purity. The question of water purity in the Danube is generally regulated in the 1976 Boundary Waters Management Agreement; issues of water purity that would henceforth arise in relation to the G/N Project would continue to be dealt with through the mechanisms of the 1976 Agreement. Accordingly, extraordinary sessions of Government Plenipotentiaries under the 1976 Agreement were arranged and a Joint Boundary Waters

³⁸ Annex 17, at p.5.

³⁹ Annex 49.

Commission set up⁴⁰. The Joint Boundary Waters Commission proposed an extension of the sampling and monitoring procedures already in place - samples would now be taken 26 times a year, at 54 locations on the Hungarian side and at 45 locations on the Czechoslovak side. The techniques to be used would allow the monitoring of all possible water pollution from the Danube and its tributaries in both territories. An agreement to bring these jointly negotiated procedures into operation was discussed by the Ministers at their meeting on 7-8 April 1989 and agreement was reached. There were further technical negotiations on 3 May 1989, and the agreement was ready for signature.

8.41 But now the Hungarian delegation refused to sign the protocol of the meeting after these painstaking efforts to address any possible risk to water quality. The reason given was that first the Hungarian Parliament must decide whether to call for a referendum on the construction of the Nagymaros part of the Project.

8.42 But the agreement at the technical level showed that Hungary believed that - certainly if these measures were taken - no ecological disaster in the form of water pollution would ensue.

8.43 Nonetheless, a few days later, it suspended work at Nagymaros, and has found it convenient to invoke an ecological necessity in which it clearly did not believe and of which it provided no evidence. But at that time, Hungary claimed to believe in an ecological emergency only in relation to Nagymaros and peak hour operation. Other environmental factors were apparently not so serious that they could not be resolved by the parties.

8.44 As for the declared termination of the 1977 Treaty, the diplomatic history of the affair between July 1989 and May 1992 shows that Hungary responded to various political pressures rather than to a genuine belief of imminent peril. It has not shown that it was genuinely led by new information in this period to believe that the 1977 Treaty provisions themselves nor Variant "C" constituted a genuine environmental disaster.

⁴⁰ See, paras. 3.13 - 3.24, above.

8.45 In May 1989 Hungary announced the suspension of its work obligations at Nagymaros, following it in July 1989 with a refusal to perform its obligations in the Gabčíkovo section, and an announcement of permanent non-performance at Nagymaros in October 1989.

8.46 It is hard to see what objective scientific information caused the change of positions taken on Nagymaros between February 1989 and May 1989; or between May 1989 and October 1989; or between February 1989 and July 1989 as far as the Gabčíkovo section is concerned. Nor did Hungary seem anxious to resolve any problems that might require attention.

8.47 In early May 1989, when it appeared that ecological anxieties about water pollution could be met through better monitoring methods, Hungary withdrew from negotiations for an agreement on this issue and indeed refused to sign minutes of the last meeting⁴¹.

8.48 In October 1989, Czechoslovakia indicated it would agree to Hungary's proposal for an agreement on technical, operational and ecological guarantees if Hungary would proceed with preparatory work for damming the Danube at Dunakiliti. Czechoslovakia further offered to meet Hungary's expressed concerns, to conclude a special agreement by which the peak operation of the Project would be restricted or even excluded if subsequent research showed this to be necessary. Yet further, Czechoslovakia said the parties could go back to the more extended dates envisaged, prior to the Protocol of 6 February 1989, for the completion of the Nagymaros part of the Project, thus allowing time for further study.

8.49 None of this was acceptable to Hungary. Czechoslovakia was required to abandon its obligations under the 1977 Treaty, too. After years of inconsistency, exemplified by stoppages and then a demand for acceleration, Hungary then decided that ecological factors placed it in a state of necessity which allowed of only one outcome - the mutual decision not to build the dam and put Gabčíkovo into operation. No suggestions were offered as to how the navigation, flood, energy and

⁴¹ See, para. 3.24, above.

consequential environmental problems were to be dealt with. In April 1991, Czechoslovakia again suggested expert studies to identify problems, and to propose solutions. To meet purported anxieties about a "state of necessity", Czechoslovakia even proposed that such expert studies be completed by July 1991, so that rational decisions could then be made on the best course of action. But Hungary's response was negative.

8.50 Hungary's 1992 Declaration, which offers justifications for the termination, speaks not just of Variant "C", but of the Project in its entirety. But just as Hungary had avoided objective assessment of a proclaimed ecological necessity requiring it to suspend and abandon its obligations under and performance of the 1977 Treaty in 1989, so Hungary determinedly avoided objective, third party verification of a state of necessity requiring termination of the 1977 Treaty in May 1992. Between the end of July 1989 and May 1992 Hungary showed no interest in objective appraisal of alleged problems - still less of proposals that would allow risks to be removed or minimised, and the 1977 Treaty to be complied with. Czechoslovakia proposed the creation of a trilateral committee in September 1990. The proposal was repeated, at various levels, throughout the next year⁴².

8.51 After Hungary refused to make a joint request to the EC, Czechoslovakia, in October 1990, decided to participate in a PHARE project, whereby independent experts would study, *inter alia*, problems relating to the quality of underground waters on the territory where the G/N Project was being built⁴³. No matching proposal was received from the Hungarian side, allowing a joint application. Czechoslovakia thus made its own application, and this project of the EC has been carried out on Slovak territory alone.

8.52 Nor did Hungary seek an objective determination of any alleged state of emergency in respect of the introduction of Variant "C" by Slovakia in the autumn of 1992. Again, there has been merely the unilateral invocation of a crisis, but no attempt to verify it.

⁴² See, para. 4.79, *et seq.*, above.

⁴³ See, para. 4.02, above.

8.53 Czechoslovakia continued to push again, in July 1991 and December 1991, for the establishment of an expert tripartite commission, with EC members⁴⁴. In January 1992 Czechoslovakia affirmed its readiness to establish a trilateral expert commission to start work as soon as possible⁴⁵. If the Commission found that the overall ecological impact of the proposed temporary solution was negative, Czechoslovakia would stop work on it. This Czechoslovakia was prepared to do, even though vast expenditures had already been made on the Project. Hungary merely reiterated that the work on Variant "C" placed it in a state of ecological necessity and insisted that Czechoslovakia stop all work under the 1977 Treaty regardless⁴⁶.

8.54 On 24 April 1992 Czechoslovakia accepted the terms that the Vice President of the Commission had specified - agreement that the expert commission should have no preconditions imposed on its work and that its findings would be accepted⁴⁷. By the time Hungary proceeded in May 1992 to purport to terminate the 1977 Treaty, studies of the experts could have been available to the parties. Appropriate solutions could have been proposed in the light of what problems were objectively identified.

8.55 But Hungary was not interested in objectively identifying any problems relating to the G/N Project, because there was only one solution that it wanted. And this solution was desired for a mixture of economic and political reasons - reasons far removed from the alleged "ecological necessity" that Hungary would never put to the test.

8.56 Hungary's response to Czechoslovakia's acceptance of 24 April 1992 came shortly afterwards. On 7 May 1992, the Hungarian Government adopted a

⁴⁴ See, para. 4.80 (and related fn.), above.

⁴⁵ See, para. 4.72, *et seq.*, above.

⁴⁶ See, para. 4.75, above.

⁴⁷ See, para. 4.80, above.

Resolution purporting to terminate the 1977 Treaty⁴⁸. Hungary was not interested to have objective assessment of the facts underlying the dispute; and it could only countenance one solution, regardless of what a scientific examination might show. Neither suspension nor abandonment of its various obligations could be legally justified.

8.57 In August 1992 Czechoslovakia again urged that a joint request for assistance should be passed to the EC Commission⁴⁹. Hungary briefly appeared to agree - but when it came to the meeting to prepare the joint request to the EC Commission, Hungary would not proceed unless work by Slovakia for the damming of the Danube (envisaged under the 1977 Treaty, and to be made feasible under Variant "C") was halted. Rather than proceed with an expert assessment, Hungary embarked on a political campaign within the EC. As late as October 1992 Czechoslovakia was proposing that a tripartite commission examine all ecological impacts of the Gabčíkovo scheme, and confirming that it would accept the findings. Hungary continued to impose conditions that pre-assumed the findings such a commission might make, and rendered its establishment impossible. As discussed in Chapter IV above, it was only at the very end of October 1992 that a tripartite commission was eventually established, its mandate limited to Variant "C" as opposed to an examination of the whole Project.

C. The Invocation of an "Ecological State of Necessity" Ignores the Provisions of the 1977 Treaty.

8.58 Article 27 of the 1977 Treaty envisages its own dispute settlement procedure - namely, bilateral negotiation (necessarily based on objective scientific data and not on unverified unilateral assertion). Further, the 1977 Treaty has its own built-in mechanisms for constant monitoring, and adjusting work specifications, to meet environmental problems as they arise. Full use of such mechanisms therefore precluded the unobserved development of any situation which could be characterised as a state of necessity and any negative developments could be resolved within the 1977 Treaty framework.

⁴⁸ See, para. 4.81, above.

⁴⁹ See, para. 4.82 (and related fn.), above. See, also, para. 4.92, *et seq.*, above.

8.59 Similarly, detailed provisions for water control in boundary waters were put into place by the 1976 Boundary Waters Management Agreement⁵⁰. Water amelioration, protection of surface and underground waters, flood protection and maintenance of the bed of the Danube, were all anticipated as an ongoing process. These provisions have been both in operation and effective. The 1977 Treaty itself, in Articles 13-17, has its own detailed provisions for ensuring environmental controls and dealing with problems.

8.60 The 1979 Joint Statute Agreement, fully anticipated by the 1976 Agreement and the 1977 Treaty, is full of mechanisms for monitoring and addressing any ecological problems. Under Article 4 modifications could be approved to technical procedures adopted in the Joint Contractual Plan. Compliance techniques for water balance were provided for. Arrangements were put in place regarding flood control, flood ice disposal, and all emergencies. Article 5 envisages constant contact and emergency meetings should the need arise. Article 10 specifies what falls for ongoing analysis and adjustment under the mechanisms of the 1976 Agreement.

SECTION 4. Hungary's Claims to Suspend or Terminate by Reliance on "Ecological Necessity" Cannot Be Justified Under Articles 60-62 of the Vienna Convention

8.61 Even if an objective "state of necessity" existed, in which Hungary believed, it cannot be justified - as legally it must be - by the provisions of the Vienna Convention. Only if the dangers rendered performance impossible under Article 61, or constituted a fundamental change of circumstances within Article 62, might grounds exist to justify Hungary's behaviour. Slovakia will show this not to be so.

A. Hungary has Demonstrated no Supervening Impossibility of Performance under Article 61

8.62 Hungary claims in its 1992 Declaration, apparently as a ground distinct from that of "state of necessity" that "[t]he termination of the 1977 Treaty cannot

⁵⁰ See, para. 3.13, et seq., above.

be considered wrongful because international law accepts the principle ad impossibilia nemo tenetur, that is one cannot be obliged to perform the impossible"⁵¹. Hungary further invokes The Russian Indemnity Case to confirm that a treaty obligation need not be performed if the obligation is "self-destructive"⁵².

8.63 Slovakia briefly notes that this is simply a repackaging of the argument of state of necessity. And neither is it formulated in terms of the requirements of Article 61, nor does it meet them. Article 61(1) limits impossibility of performance to impossibility resulting "from the permanent disappearance or destruction of an object indispensable for the execution of the treaty". Nothing in the present case makes Article 61 applicable⁵³.

B. Hungary Has Demonstrated No Fundamental Change of Circumstances under Article 62

8.64 Hungary's claim, advanced in its 1992 Declaration apparently consists of three points: (1) Article 62(1)(b) is not applicable law in relation to this dispute; and may thus be ignored; (2) that there existed the Council of Mutual Economic Assistance and socialist governments in Hungary and Czechoslovakia in 1977, which situation has now changed; and (3) there has been fundamental change in that the importance of environmental factors has increased worldwide.

⁵¹ See, Annex 17, at p. 24.

⁵² United Nations Reports on International Arbitral Awards XI, 443.

⁵³ Even if any such separate ground for suspension and termination could be admitted, as part of the law of State responsibility, Hungary would not meet the criteria. There was no question of physical impossibility either in the Russian Indemnity Case or in the construction of the Gabčikovo-Nagymaros Treaty structures. The Latin maxim has no application. The Russian Indemnity Case concerned either force majeure or state of necessity. The Ottoman Government referred to force majeure to describe the very difficult financial situation which led it not to pay its debt to the Russian Government; but the commentary to Article 33 of the ILC says that the circumstance in which the Ottoman Government found itself "was much more like a state of necessity". (Yearbook of the International Law Commission 1980, Vol. II, Part II, p.36). In any event, the Permanent Court of Arbitration clearly thought the test for a state of necessity was that the existence of the Ottoman Empire was imperilled or that its internal or external situation was seriously endangered (United Nations Reports on International Awards XI, at 443). The Court thought the claim a "manifest exaggeration" (ibid.). And so is Hungary's claim, whether it is a claim of necessity or repackaged, inappropriately, as a claim of impossibility.

8.65 Slovakia will address each of these points in turn.

8.66 Article 62(1) of the Vienna Convention provides:

"1. A fundamental change of circumstances which has occurred with regard to those existing at the time of the conclusion of a treaty, and which was not foreseen by the parties, may not be invoked as a ground for terminating or withdrawing from the treaty unless:

(a) the existence of those circumstances constituted an essential basis of the consent of the parties to be bound by the treaty; and

(b) the effect of the change is radically to transform the extent of obligations still to be performed under the treaty."

8.67 Hungary refers in the 1992 Declaration to Article 62(1)(a), and continues:

"The preamble of the 1977 Treaty stated explicitly that the construction of the barrage system 'would significantly contribute to bringing about the socialist integration of the member states of CMEA'. Obviously, the historical changes that took place in both countries in 1989 could not be foreseen. These changes resulted in a complete turnover of the domestic and international situation, including the end of the CMEA and the 'socialist integration'. It is also obvious that this led to radical changes in the circumstances of the barrage system, putting similar gigantic constructions in a different light. These changes made it possible for environmental considerations to become a priority, at least in Hungary⁵⁴."

8.68 The concept of an entitlement to invoke fundamental change of circumstances as a ground for termination of a treaty has a long history, considerably predating the Vienna Convention; and so has the great caution shown by international tribunals in accepting the claim in particular cases before them: Free Zones of Upper Savoy and the District of Gex⁵⁵. The reason is not hard to find: "it is the function of the

⁵⁴ Annex 17, at p.25.

⁵⁵ Free Zones of Upper Savoy and the District of Gex, Judgment, 1932, P.C.I.J., Series A/B, No. 46, p. 96, at p. 158.

law to enforce contracts or treaties even if they become burdensome for the party bound by them"⁵⁶.

8.69 The importance given to compliance with agreements is illustrated by the response of the Permanent Court in the Serbian Loans Case, (this time to a claim of force majeure to excuse non-performance). The Court stated:

"It cannot be maintained that the war itself, despite its grave consequences, affected the legal obligations of the contracts between the Serbian Government and the French bondholders. The economic dislocations caused by the war did not release the debtor state...⁵⁷."

8.70 The prime requirement of Article 62 is that change of circumstances be truly fundamental. Even major changes then have to be tested by reference to the essential basis of consent (Article 62(1)(a)) and the transformation of the obligations to be performed (Article 62(1)(b)).

8.71 In the Free Zones Case the Permanent Court examined the change of circumstances relied on by France for denunciation of the free zones agreements with Switzerland - the establishment of Federal Customs in 1849 - and made reference also to other undoubted changes, including those relating to the food supply requirements of Geneva, the development of communications and technical progress generally. But these failed, because they had "no bearing on the whole body of circumstances - circumstances essentially governed by the geographical configuration of the Canton of Geneva and of the surrounding region - which the High Contracting Parties had in mind at the time that the free zones were created"⁵⁸.

8.72 The "whole body of circumstances" that Hungary and Czechoslovakia had in mind when the 1977 Treaty provisions for the G/N System were

⁵⁶ Oppenheim, 9th ed., Vol.2, p.1307.

⁵⁷ Serbian Loans, Judgment No. 14, 1929, PCIJ Series A, No. 20, at pp. 39-40.

⁵⁸ Free Zones of Upper Savoy and the District of Gex, Judgment, 1932, P.C.I.J., Series A/B, No. 46, p. 96, at p. 158.

agreed were indeed also the circumstances governed by the geographical configuration of the stretch of the Danube from Bratislava via Gabčíkovo-Nagymaros up to Budapest. These circumstances have been fully described in Chapter I, and include the propensity to severe and uncontrolled flooding, the problems of securing a navigation channel of suitable depth, and the possibility of securing clean energy from the natural resources of the Danube. Applying the test of the Permanent Court, the political changes that have occurred in recent years in Hungary and in Slovakia - and in Central and Eastern Europe more generally - "have no bearing in [this] whole body of circumstances". These problems and possibilities have not been altered by these changes.

8.73 The essential basis of the consent of the parties to be bound by the treaty (Article 62(1)(a)) lies to secure certain objects and purposes. These are to be ascertained not just from the text of the treaty but from the history of negotiations⁵⁹. The circumstances that led to the prolonged negotiations between Hungary and Czechoslovakia, and the purposes and objectives of the 1977 Treaty, related to the physical geography of the Danube and the energy, transport, agricultural and flood protection needs of the parties. Notwithstanding the preambular reference to "socialist integration", this was quite clearly not the "essential basis" of the common consent.

8.74 That "fundamental change" is not per se a ground for termination, unless it has affected the object and purpose of the obligations undertaken, is illustrated by the Court's Advisory Opinion in the South West Africa Case⁶⁰. In that case there had been an important institutional change, perhaps even more striking than the internal restructuring of Hungary and Czechoslovakia - namely, the disappearance of the League of Nations, which was assigned supervisory functions under the Mandate Treaty. The Court held that the obligations were undertaken to secure the sacred trust of civilization referred to in Article 22: "Their 'raison d'etre' and original object remain"⁶¹. And so it is with the objects of the 1977 Treaty.

⁵⁹ Fisheries Jurisdiction (United Kingdom v. Iceland), Jurisdiction of the Court, Judgment, I.C.J. Reports 1973, p. 3, at p. 17.

⁶⁰ International Status of South West Africa, Advisory Opinion, I.C.J. Reports 1950, p. 128.

⁶¹ Ibid., at p. 133.

8.75 Hungary claims that the provisions of Article 62(1)(b) are not part of customary international law, and therefore do not govern the relations between itself and Slovakia in so far as its invocation of rebus sic stantibus is concerned.

8.76 In any event, Slovakia is of the view that Article 62(1)(b) was indeed confirmatory of general international law, and not a "new" element in the law relating to rebus sic stantibus. The drafting history of the Vienna Convention shows that this provision appeared in the earliest of drafts⁶² and was consistently present, with small drafting changes, through to the ILC's Final Draft Article 59. The travaux further reveal no suggestions by ILC members or in the Sixth Committee of the General Assembly that the requirement that finds its final form in Article 62(1)(b) does not represent the customary international law on the requirements of rebus sic stantibus.

8.77 In the Fisheries Jurisdiction Case, the Court stated that Article 62 of the Vienna Convention "may in many respects be considered as a codification of existing customary law"⁶³. Later the Court stated, in general terms but using the essential wording of Article 62(1)(b): "in order that a change of circumstances may give rise to a ground for invoking the termination of a treaty, it is also necessary that it should have resulted in a radical transformation of the extent of the obligations still to be performed"⁶⁴. The Court clearly thought this principle of general application. The Court considered: "The change must have increased the burden of the obligation to be executed to the extent of rendering the performance something essentially different from that originally undertaken"⁶⁵. The political changes in Hungary and Slovakia did not make the treaty obligations "essentially different from those undertaken".

8.78 Hungary is unable to meet the requirements of Article 62(a)(b), which is applicable both under the Convention and under general international law, as the

⁶² See, draft Article 22(2)(c)ii, 2nd Report of Professor Waldock, Yearbook of the International Law Commission 1963, Vol. II, p. 79.

⁶³ Fisheries Jurisdiction (United Kingdom v. Iceland), Jurisdiction of the Court, Judgment, I.C.J. Reports 1973, p. 3, at p. 18.

⁶⁴ Ibid., at p. 21.

⁶⁵ Ibid.

internal political changes to which it alludes are irrelevant to the extent of the obligations still to be performed.

8.79 Slovakia further submits that a claim to terminate by reason of rebus sic stantibus should be treated with the greatest reserve where the claiming party has fulfilled a modest part of its obligations to date, while the other party has fulfilled, at considerable effort and financial burden, nearly all of the obligations incumbent upon it.

8.80 Hungary's observation in its 1992 Declaration devoted to fundamental change, that "the importance of environmental resources and values has increased not only in Hungary, but all over the world" is true, but without any legal point. The 1977 Treaty is not a multilateral treaty. It has had from the outset its own monitoring and adjustment procedures that allow a flexible response to developing environmental concerns and knowledge. The ESTC Committee was at the heart of this constant review. The Joint Commission appointed under the 1976 Boundary Waters Management Agreement also had an important role to play⁶⁶. Reports of Ministers could be studied, national studies could be exchanged⁶⁷. A State seriously interested in these environmental factors would avail itself of these technical and scientific opportunities and not create a major environmental problem by its abandonment of work in the absence of any environmental guarantees or plans.

C. Hungary Has Demonstrated No Material Breach by Czechoslovakia or Slovakia under Article 60

8.81 The alleged breaches identified by Hungary are twofold: a failure by Czechoslovakia to fulfil its duties for the protection of nature and water quality; and the introduction of Variant "C".

⁶⁶ See, para. 3.03, above.

⁶⁷ See, paras. 8.84 - 8.94, below.

The Alleged Failure to Fulfil Duties for the Protection of Nature and Water Quality

8.82 Hungary refers in its 1992 Declaration to a failure by Hungary to fulfil duties prescribed in the 1977 Treaty for the protection of nature and water quality, referring in particular to Articles 15 and 19 of the Treaty⁶⁸. Article 15(1) provides that the "Contracting Parties shall ensure, by the means specified in the joint contractual plan, that the quality of water in the Danube is not impaired as a result of the construction and operation of the System of Locks". Article 19 provides that the "Contracting Parties shall, through the means specified in the joint contractual plan, ensure compliance with the obligations for the protection of nature arising in connection with the construction and operation of the System of Locks".

8.83 Hungary has not yet specified in what ways these provisions have been violated. It appears to take the impairment of water quality and a failure to protect nature as a given fact inherent in the construction and operation of the G/N System; and to deduce from that unverified starting point a breach of treaty on Czechoslovakia's part. Slovakia has shown in Chapter III above the measures agreed in the Joint Boundary Waters Commission for monitoring and improving water quality.

8.84 As discussed in Chapter III above, the 1985 Report of the Joint Boundary Waters Commission noted that 620 sewage treatment plants had been constructed on the Czechoslovak side of the common reach of the Danube, and 77% of all sources of water pollution had their own sewage treatment facilities. The report also referred to Czechoslovak plans to construct, between 1985 and 1990, 25 sewage treatment plants, and between 1990 and 1995, 95 more plants. The details, and the comparison with Hungarian water sewage constructions, are also to be found in Chapter III above. The figures clearly show that Czechoslovakia had in fact exceeded its planned construction schedule of sewage treatment plants.

8.85 The reports of the independent missions suggest, regarding water quality, that there are some problems, but problems that could be overcome before the G/N System is put into operation. Furthermore these problems antedate the 1977 Treaty

⁶⁸ Annex 17, p. 25.

arrangements, and are not caused by the G/N Project. So far as Variant "C" is concerned, the EC has been satisfied with water quality. The EC Working Group report of 2 November 1993 found that in general no ground water quality changes could be identified after the damming of the Danube⁶⁹.

8.86 As for the protection of nature, the 1977 Treaty does of course entail some changes which entail alterations in the previous environmental status quo that affects scenery, vegetation, fish, animals, flora and fauna. This was what Hungary agreed to. But provisions were put in place to ensure the importance of minimising harm on the one hand, and taking all opportunities to improve the status quo ante, on the other⁷⁰.

8.87 Slovakia has fully complied with its obligations under Articles 15 and 19 of the 1977 Treaty, in the sense that no impairment of water quality or disregard for the protection of nature occurred by reason of the construction of the Treaty System or the putting into operation of Variant "C"; and in the sense that Slovakia has played its full role in ensuring this. Furthermore, there have in fact been certain enhancements of the situation as it was before the damming.

8.88 Hungary asserts in its 1992 Declaration that its "facts" imply "the violation of (a) provision(s) essential to the accomplishment of the object and purpose of the treaty" within the meaning of Article 60(3)(b) of the Vienna Convention and that Hungary can thus invoke a material breach of a bilateral Treaty as a ground for terminating the Treaty⁷¹.

8.89 Slovakia, fully up to date in its current obligations, has fulfilled around 90% of the construction obligations for which it was responsible, has adhered to all monitoring requirements, and sought over the years to accommodate its partner's inconsistent demands. It finds it breathtaking that Hungary should claim material breach by Slovakia.

⁶⁹ See, para. 5.56, above.

⁷⁰ See, para. 6.132, et seq., above.

⁷¹ Annex 17, p. 26.

8.90 Further, Hungary's invocation of Article 60(3)(b) is simply not understood.

8.91 The fact that some problems have arisen from time to time regarding water quality which require attention and adjustments, does not amount to a "material breach". These adjustments are absolutely normal in a project of these dimensions.

8.92 Article 60(3) of the Vienna Convention defines a material breach as a repudiation of the treaty not sanctioned by the Convention, or the violation of a provision essential to the accomplishment of the object or purpose of the treaty. The purpose of the 1977 Treaty is specified in Article 1 thereof. The ILC Commentary on the use of the term "material breach" rather than "fundamental breach" indicates that this permits reference to a wider range of purposes⁷². The wider range of purposes was the improvement of navigation, the provision of clean and inexpensive energy, and flood control. There has been no material breach whatever by Slovakia, and Hungary cannot pretend to have suspended and then terminated the 1977 Treaty under Article 60 of the Vienna Convention.

The Claim that Variant "C" Represents a Material Breach of the 1977 Treaty

8.93 Materiality of breach can only be tested by reference to the objects and purposes of the treaty (Article 60(2)(b)). The 1977 Treaty envisaged improvements in flood control, energy and navigation. Variant "C", far from being action that violated the accomplishment of the object and purpose of the 1977 Treaty, was the only available vehicle for accomplishing the object and purpose as nearly as possible.

8.94 This has been elaborated at length in Chapter VII above. Variant "C" caused no harm; closely approximated to what was intended under the 1977 Treaty; and entailed a departure from what was envisaged in terms of the reduction of the size of

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Yearbook of the International Law Commission 1966, Vol. II, p.255.

the reservoir by confining this to Czechoslovak territory. Moreover, it was reversible. It could not have constituted a material breach in the sense of Article 60.

8.95 Hungary had endeavoured by its earlier abandonment of work to render the 1977 Treaty inoperative. But, as Judge Lauterpacht reminds us in the Admissibility of Hearings of Petitioners Case:

"Neither is it necessarily rendered impotent and inoperative as the result of the action or inaction of one of the parties. It continues in being subject to adaptation to circumstances which have arisen⁷³."

Variant "C" was such an adaptation - still directed exactly towards the achievement of the mutually agreed objects and purposes of the 1977 Treaty.

8.96 Hungary can only lawfully suspend or terminate the 1977 Treaty if it comes within the international law principles codified in Article 60 of the Vienna Convention. To do so, it has to show that Variant "C" itself constituted a material breach on the 1977 Treaty; and also that this breach had occurred before any Hungarian response by suspending or terminating the Treaty. Hungary clearly cannot meet these conditions.

8.97 It provides no grounds whatever for a purported termination by virtue of Article 60(3)(b) of the Vienna Convention.

SECTION 5. Hungary's Actions Are Not Lawful, Even As Countermeasures

8.98 Slovakia has explained why it believes that the Vienna Convention provides the sole test for legality of suspensions and purported termination of a treaty. But even were that not so, Hungary's acts are not justified under international law.

⁷³ Admissibility of Hearings of Petitioners by the Committee on South West Africa, Advisory Opinion, ICJ Reports, 1956, p. 23, at p. 49.

A. If Countermeasures Apply At All Within a Treaty Relationship, in Respect of Measures Already Regulated under Article 60 of the Vienna Convention, They Must Be Directed to Certain Purposes:

8.99 Countermeasures are to be distinguished from punitive acts. As such they serve two possible functions, neither of which is applicable in the present case. The first consists of acts designed to bring pressure on the defaulting State to persuade it to end its illegal behaviour and resume its legal obligations. It is immediately apparent that Hungary cannot bring itself within this category. Slovakia's legal obligations are to perform what is required of it by the 1977 Treaty. Even if it were accepted (which it is not) that Variant "C" is in breach of the 1977 Treaty, Hungary is most certainly not engaging in countermeasures in order to secure compliance by Slovakia with the terms of that Treaty. All Hungary's efforts over the years have been directed to avoiding its own performance, and securing non-performance by Slovakia too of its legal obligations.

8.100 The second function of countermeasures is to re-establish an equilibrium between the parties⁷⁴. Slovakia has already contended that the specific provisions of the Vienna Convention relating to suspension and termination of treaties necessarily provide the preconditions and mark the limits of any exercise of countermeasures. In the Air Services Agreement Case, the arbitral tribunal found the suspension of a particular obligation to be of a corrective nature, aimed at restoring equality between the parties⁷⁵. But in any event, it is plain that, even if suspension could be said to operate to re-establish equilibrium within a treaty relationship, termination cannot. It simply ends the relationship.

8.101 Hungary does not claim that its unlawful suspensions of the treaty in May-July 1989 were countermeasures. It claims rather that its decision to terminate in May 1992 was a countermeasure. But - even leaving aside the problem of suspension and termination as countermeasures when they go beyond the provisions of Article 60 of the Vienna Convention - its termination does not come within either of the recognised

⁷⁴ See, Sicilianos, "The Relationship Between Reprisals and Denunciation or Suspension of a Treaty", 4 European Journal of International Law (1993) 341 at 344.

⁷⁵ Case Concerning the Air Services Agreement of 27 March 1946, (United States v. France), 54 International Law Reports (1979), p. 304 at p. 339, para.90.

categories. It does not seek to secure Slovakia's compliance with the 1977 Treaty it is alleged to have broken - and indeed, Hungary had already declared the operation of the 1977 Treaty suspended some two years earlier. Further, termination of the 1977 Treaty could achieve neither Slovakia's compliance with it nor the re-establishment of an equilibrium between the parties.

B. If Countermeasures Apply At All Within a Treaty Relationship in Respect of Measures already Regulated under Article 60 of the Vienna Convention, Certain Preconditions Must be Met

There Must Have Been a Prior Attempt to Secure Reparation, Which Has Been Rejected

8.102 This requirement was alluded to extensively in the 1979 Report of the Special Rapporteur Professor Ago⁷⁶. The Commission cited the Naulilaa arbitration, which spoke of reprisals being carried out "after an unfulfilled demand - in response to an act contrary to the law of nations". Czechoslovakia has committed no act contrary to the law of nations. Hungary has demanded that Variant "C" be not proceeded with. Czechoslovakia clearly agreed to desist if Hungary would itself resume its obligations under the 1977 Treaty; and has constructed Variant "C" so as to be reversible upon Hungary's return to the 1977 Treaty provisions. As one commentator observes, Professor Riphagen in his draft in 1985 was "responding to the concern to distinguish between the case in which the situation created by the internationally wrongful act is irreversible, from one in which it is not"⁷⁷.

There Must Have Been Recourse to Third Party Settlement to Determine the Existence of a Wrongful Act

8.103 Article 12 of Part Two of the current draft articles on State Responsibility proposes:

⁷⁶ Yearbook of the International Law Commission 1979, Vol. II, Part 2, p. 116, paras. 4 and 7.

⁷⁷ Alland, International Responsibility and Sanctions: Self-Defence and Countermeasures in the ILC Codification of Rules Governing International Responsibility, in United Nations Codification of State Responsibility, eds. Spinedi and Simma, (1987) at 170.

"1. An injured State may not take countermeasures unless:

(a) it has recourse to a [binding/third party] dispute settlement procedure which both the injured State and the State which has committed the international wrongful act are bound to use under any relevant treaty to which they are parties."

Slovakia notes as follows: Hungary is not "an injured State" within Article 12(1) - it is Slovakia which has been injured by Hungary's conduct. Further, Hungary has not followed the procedures envisaged under Article 27 of the 1977 Treaty (see above, at paragraphs 6.153 *et seq.*). These procedures, specific to the 1977 Treaty and agreed to by both parties, are entirely different from the types of measures envisaged in Article 11 of the ILC articles. Nor has it waited for any determination by the Court on the alleged unlawfulness of Variant "C" and the remedy. For Hungary simply to pronounce Variant "C" as "internationally wrongful" and unilaterally proceed to engage in countermeasures is exactly that type of abusive exercise of countermeasures in a decentralised system that has so worried many members of the Sixth Committee - especially those from less powerful countries - when commenting on the ILC proposals⁷⁸.

The Countermeasure Must Be Proportionate to the Prior Breach of Obligation

8.104 The requirement of proportionality is inherent in international law and specifically relevant to countermeasures⁷⁹. But there has been no "prior breach" by Slovakia, because Variant "C" represents only measures agreed to by Hungary under the 1977 Treaty.

⁷⁸ See, Report of the International Law Commission, A/CN.4/453, 12 May 1993, pp.23-30. For the contrasting views of a United States author supporting the adoption of a rule "allowing a state to implement countermeasures without risk of later liability when it acts upon a good faith belief that it is the victim of a breach, even though that belief later turns out to be erroneous in light of the results of an arbitration", see Damrosch, 74 American Journal of International Law (1980) 785-795.

⁷⁹ Naulilaa Arbitration, *op.cit.*, *supra*; and Report of the Special Rapporteur, Yearbook of the International Law Commission, 1979, Vol.II, Part Two, p.118, fn. 595. See, also, Rosenne, *op.cit.*, *supra*, p.353: "... restrictions that involve the proportionality principle are valid just as much for reprisals as for the denunciation or suspension of a breached treaty". See, further, on the firm need for proportionality in countermeasures, Case Concerning the Air Services Agreement of 27 March 1946 (United States v. France) Case 54 International Law Reports, p. 304 at p. 338.

8.105 In any event, it is self evident that the purported termination of the 1977 Treaty was not proportionate to any alleged violation by Czechoslovakia. The diversion of the Danube's waters was envisaged under the 1977 Treaty. The only change has been a reduction in the volume of the reservoir by confining this to Czechoslovak territory only. But that fact is attributable solely to Hungary's non-performance of its obligations. Everything else that has happened was intended to happen by the terms of the 1977 Treaty entered into by Hungary. The framework of the Treaty was kept. Moreover, and importantly, the purported termination of the 1977 Treaty in May 1992 occurred even before Variant "C" was finally put in place, when it was fully understood by Hungary that the measure was reversible, upon performance by Hungary.

SECTION 6. Hungary's Claim as to the Priority to be Accorded to Subsequent Environmental Rules

8.106 The nature of Hungary's claim, advanced under paragraph 6 of Part III of the 1992 Declaration, is not for the moment clear to Slovakia. In the first place, it is said to contain "reasons" for the termination of the 1977 Treaty, rather than legal justifications. And in paragraph 7, which refers to the co-terminology of grounds for suspension and grounds for termination under the Vienna Convention, it is stated "[t]herefore it is sufficient here to refer to Chapter III, sections 3, 4 and 5 of the present Declaration" - but no reference is made to section 6.

8.107 It is contended by Hungary that the rules of general international law on environmental protection take precedence over earlier or contrary treaty provisions, and it relies on the principle of lex posterior derogat legi priori, lex specialis derogat legi generali. The formulation chosen by Hungary is not that of jus cogens, superveniens, presumably because Article 64 of the Vienna Convention, which deals with jus cogens superveniens, was clearly not a mere codification of international law. Hungary, having taken the position that it is not bound in respect of this dispute by the Vienna Convention as such, but only by the general international law as it codifies, is thus unable to avail itself of Article 64. In any event, it matters not, because Hungary would not be able to show the existence of relevant jus cogens superveniens. Hungary, having affirmed the 1977 Treaty in all its substantive elements in February 1989, then suspended

performance at Nagymaros in May 1989. It would thus need to show the emergence of a relevant pre-emptory norm between February and May of 1989.

8.108 In addition, Hungary would need to show that a pertinent rule of jus cogens existed - that is to say, a rule that is at once specific, applicable to the facts, and generally accepted by the world community as falling within this very special category of general international law.

8.109 Faced with these dilemmas, Hungary has apparently settled for a different claim: lex posterior derogat legi priori, lex specialis derogat legi generali. This claim is made without reference to the Vienna Convention. Slovakia affirms again that the Vienna Convention, representative for the most part of customary international law, is the applicable law for the interpretation of the 1977 Treaty; and that the Vienna Convention is also applicable by virtue of the fact that Hungary affirmed the 1977 Treaty in February 1989, which was subsequent to the entry into force for it of the Vienna Convention.

8.110 The principle of lex posterior/lex specialis applies either to two general rules of international law, inter se, or to two treaty provisions on the same subject matter and binding on the same parties. The latter is, of course, governed by Article 30 of the Vienna Convention. Hungary appears to say that the specific provisions of the 1977 Treaty are to be set aside in favour of subsequent rules on the protection of the environment. But treaty provisions are specific obligations inter se that remain obligatory, even in the face of subsequent, contrary rules of general international law. Hungary needs to show - but cannot - that a treaty binding on Hungary and Slovakia was concluded on this subject matter after 1977, and was incompatible with the 1977 Treaty⁸⁰.

8.111 In any event, the "lex specialis" said by Hungary to derogate from the 1977 Treaty is neither a lex specialis properly so called, nor is its application apparent to the current dispute. Hungary, in order to justify suspension in 1989, cites instruments prior to that date:

⁸⁰ Further, it will of course be remembered that the 1977 Treaty was effectively affirmed as late as 6 February 1989 by the amending Protocol of that date.

- Principle No.4 of the Stockholm Declaration of 1972 that:
"Nature conservation, including wild life, must therefore receive importance in planning for economic development."

- Principle No.3 of the World Charter for Nature adopted by the General Assembly in 1972, that:
"Special protection shall be given to unique areas, to represent samples of all different types of ecosystems and the habitats of rare or endangered species" and that the conservation of nature must become an integral part of the planning process.

- The Brundtland Report⁸¹ that:

"States shall maintain ecosystems and ecological processes essential for the functioning of the biosphere, shall preserve biological diversity, and shall observe the principle of optimum sustainable yield in the use of living natural resources and ecosystems."

8.112 Slovakia makes the following observations:

First, these instruments are all at most "soft law", and reflect a developing consensus about the importance of environmental factors in decision making. Indeed, the Introduction to the Brundtland Report emphasises the aspirational nature of its work, referring to the principles as those "which ought to be in place now or before the year 2000". These instruments do not constitute discrete binding rules of international law - still less peremptory norms that could bring Article 64 into play.

Second, they are of a considerable generality, and certainly do not constitute a "lex specialis" that could derogate from the 1977 Treaty.

⁸¹ Experts Group on Environmental Law of the World Commission on Environment and Development, Environmental Protection and Sustainable Development, Legal Principles and Recommendations, 1987.

Third, in any event, even were they firm and specific provisions of international law, they would not derogate from treaty provisions agreed inter se between the parties.

Fourth, the principle of lex specialis derogat legi generali operates as a principle of interpretation; it does not operate to suspend and terminate a treaty. To suggest otherwise is to confuse not only the principle of general international law with the subject matter of Article 30 of the Vienna Convention, but to confuse each of these with the suspension provisions in Section 3 of the Vienna Convention.

Finally - even were all this not so - the principles do not necessitate the abandonment of the 1977 Treaty. These important environmental considerations can be met within the 1977 Treaty. The monitoring provisions are exactly directed to ensuring that these environmental factors are fully taken account of. Moreover, Slovakia's continuing concern for such crucial matters as water quality and quantity in the Danube is shown by its participation in preparations for a Water Management Regime and in the PHARE project. None of these has suggested that the environment can only be protected by abandoning the G/N Project and leaving it in its present unfinished state.

* * * * *

8.113 Hungary's actions have already caused massive harm to Slovakia - and harm directed to the heart of its essential interests. Slovakia's essential interests lie in being able to protect its people from flooding, to provide them with clean energy at affordable prices, to improve navigation conditions, to ensure the proper quality of their drinking water and a decent environment to live in. Hungary's unlawful suspension and denunciation of the 1977 Treaty hits at the heart of these essential interests - and hits further through seeking to render without object the huge investments made by Czechoslovakia and Slovakia. Slovakia, a struggling new democracy, is severely damaged in providing for the essential life-needs of its people.

8.114 It is not for Hungary to determine what are the essential interests of Slovakia that require protection. It is extraordinary, arrogant and unacceptable for Hungary to declare in its 1992 Declaration that Hungary's perception of "imminent peril"

is equally true for the Slovak side of the Danube and: "Consequently the termination of the Treaty would not seriously impair an essential interest of the Czech and Slovak Republics"⁸².

* * * * *

8.115 Slovakia concludes that none of the grounds advanced by Hungary for suspending and terminating the 1977 Treaty is sustained by the objective scientific facts, or allowable under international law.

⁸² Annex 17, p. 24.

CHAPTER IX. THE REMEDIES SOUGHT BY SLOVAKIA

9.01 The essence of Slovakia's case against Hungary lies in its claim that Hungary deliberately breached the 1977 Treaty. The case is not one in which there is a controversy over whether the conduct of one Party did or did not, as a matter of treaty interpretation, constitute a breach. The suspension, abandonment of performance and purported termination of the 1977 Treaty by Hungary were all a matter of public record and communicated to Czechoslovakia in the clearest possible terms¹. Thus, as shown in Chapter VI, a prima facie breach was clear. And, if Hungary had no legal justification for these breaches, of the 1977 Treaty², they necessarily entail the international responsibility of Hungary.

9.02 The consequence of that breach is equally clear. In the now classic formulation of the Permanent Court in the Chorzow Factory Case.

"The Court observes that it is a principle of international law, and even a general conception of law, that any breach of an engagement involves a duty to make reparation... The essential principle contained in the actual notion of an illegal act... is that reparation must, as far as possible, wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed³."

9.03 The question is, therefore, what specific remedies is Slovakia entitled to, if the reparation due to Slovakia is to wipe out the consequences of the breach?

I. Declaration that the 1977 Treaty Remains a Treaty in Force, and that Hungary Acted Without Legal Justification in Suspending, Abandoning its Performance and Purporting to Terminate the Treaty

9.04 It is clear that such a declaration is absolutely essential to any resolution of the dispute between the Parties. At the heart of their dispute lies the claim by Hungary that it is entitled to set aside the 1977 Treaty and regard it as lawfully terminated.

¹ See, Chapter IV, above.

² See, Chapter VIII, above.

³ Factory at Chorzow, Merits, Judgment No. 13, P.C.I.J., Series A, No. 17, at pp. 46-47.

Hungary's excuse for non-performance rests on the view that the 1977 Treaty is no longer in force. So this issue must be resolved by the Court.

9.05 Situations have faced the Court in the past in which a finding of the validity and effectiveness of an international agreement was essential to a resolution of a case. Thus the Court's Advisory Opinion on the Status of South-West Africa, in affirming that the territory remained under Mandate, necessarily rejected South Africa's plea that the Mandate Agreement, as a treaty, had lapsed⁴. So, too, in the Hostages Case⁵ the Court found Iran in breach of the Vienna Conventions of 1961 and 1963, and the Convention on the Prevention and Punishment of Crimes against Internationally Protected Persons of 1973, even though Iran regarded these treaties as inapplicable⁶. In the Free Zones of Upper Savoy and Gex Case⁷, the Permanent Court rejected on the facts the French plea that the treaty arrangements of 1815 had lapsed because of the principle *rebus sic stantibus*. In all these cases, since the status or relevance of the treaties was a primary element in the dispute, any resolution of the dispute required the Court to make a declaration as to the validity of the treaties in question. Slovakia is entitled to such a declaration as a necessary part of the remedy of satisfaction.

9.06 Indeed, in a case such as the present it would be impossible to dispose of the contentions of the Parties without determining the validity of the justifications advanced by Hungary for its suspension, abandonment and purported termination, and the current status of, the 1977 Treaty. All the remedies claimed by Slovakia require the Court to express a finding on those points. The whole question of a breach of the 1977 Treaty

⁴ International Status of South West Africa, Advisory Opinion, I.C.J. Reports, 1950, 128 at 132. Although, in that case South Africa did not argue that it had a right to terminate the agreement, as Hungary does in the present case.

⁵ United States Diplomatic and Consular Staff in Tehran, Provisional Measures Order of 15 December 1979, I.C.J. Reports, 1979, p. 7 at para. 41 and, see, also, United States Diplomatic and Consular Staff in Tehran, Judgment, I.C.J. Reports 1980; p. 3, at para. 90.

⁶ Iran regarded the treaties as inapplicable in the circumstances of the case, rather than void or terminated, but nonetheless the effect of the Court's judgment was to hold those treaties valid and applicable in the circumstances.

⁷ Free Zones of Upper Savoy and the District of Gex, Judgment, 1932 P.C.I.J. Series. A/B N° 46 at p.96. The Court held France had failed to show that the 1815 Treaty arrangements were premised on the absence, in 1815, of any customs duties at Geneva so that the imposition of such customs constituted a fundamental change in the conditions obtaining in 1815.

assumes that, at the time of Hungary's purported termination, the Treaty was in force. Moreover, Slovakia does not seek a pure declaratory judgment, without more, so that its application to the Court might run the risk of being declared without further object⁸. The purpose of the declaration in this case is precisely to found its claims for further remedies, as will appear below.

II. Declaration as to the Breach by Hungary

9.07 Slovakia's entitlement to any form of reparation pre-supposes that Hungary is in breach of an international obligation, and that the Court so finds. A declaration to this effect is a perfectly normal part of the judicial function, but it is not a declaratory judgment simpliciter which Slovakia seeks, but rather a determination of breach as the necessary pre-condition to the further orders as to the conduct required of Hungary to make reparation for the breach, including Hungary's liability to pay damages for that breach.

9.08 The breaches in question are breaches of the 1977 Treaty and of the interrelated agreements, and these have been separately identified and explained in Chapter VI. As will be recalled, they are the following.

A. Hungary's Unilateral Interruption of the Works Agreed in the 1977 Treaty During May-October 1989

9.09 Hungary's first unilateral and unlawful "suspension" came on 13 May 1989, initially in relation to the work at Nagymaros (and ostensibly for a two month period), but then on 20 July the suspension was extended to Hungary's work at Gabčíkovo and for a further period until 31 October 1989. Then, during 1989, the breach was aggravated by reason of Hungary's decision to extend the suspension for an indefinite period. On 30 October 1989 Hungary informed Czechoslovakia that it had abandoned the G/N Project in respect of the Nagymaros section.

⁸ This point refers to the Court's judgment in Nuclear Tests (Australia v. France) Judgment, I.C.J. Reports, 1974, 253, at pp. 270-272.

B. Hungary's Purported "Termination" of the 1977 Treaty in May 1992

9.10 Following on the resolution of the Hungarian Parliament of 4 April 1992, the Hungarian Government formally notified the Government of Czechoslovakia on 19 May 1992 that it "terminated" the 1977 Treaty with effect from 25 May 1992.

9.11 That Hungary's conduct, both as regards "suspension", and abandonment of works and "denunciation" and "termination" of the 1977 Treaty, constituted a fundamental breach is beyond question. Slovakia is entitled to a declaration to this effect.

III. An Order for Restitutio In Integrum

9.12 To "wipe out all the consequences of the illegal act," to use the celebrated dictum in the Chorzow Factory Case,⁹ requires the wrongdoing State to re-establish the position which would have existed, had the international wrong not been committed. Restitution in this sense may require conduct of different kinds, according to the circumstances, and in the case of a continuing wrong it requires, first and foremost, cessation of the unlawful conduct.

A. Cessation¹⁰

9.13 The obligation to cease forthwith any conduct found to be unlawful flows as a natural corollary to the findings of breach, and applies to any unlawful conduct of a continuing character. As stated in Article 6 of the current draft of the International Law Commission:

⁹ See, para. 9.02, above.

¹⁰ See, generally, Arangio-Ruiz, Preliminary Report on State Responsibility, Yearbook of the International Law Commission 1988, Vol. II, Part One, p. 6, A/CN. 4/416 and Add. 1, 18 and 27 May, 1988.

"Cessation of wrongful conduct

A State whose conduct constitutes an internationally wrongful act having a continuing character is under the obligation to cease that conduct, without prejudice to the responsibility it has already incurred¹¹."

9.14 Acceptance of the obligation of cessation as a separate obligation (i.e., separate from other forms of reparation) can be seen in the Court's jurisprudence. In the Hostages Case the Court decided that Iran :

"...must immediately terminate the unlawful detention... of United States nationals now held hostage in Iran, and must immediately release each and everyone and entrust them to the protecting power...¹²."

9.15 In the present case the obligation of cessation is of particular importance, because there is evidence that Hungary intends to compound its breach of the 1977 Treaty by embarking upon measures designed to undo the modest measure of performance of the 1977 Treaty which Hungary had completed prior to its breach. The Hungarian Parliament on 7 July 1993 decided to allocate a budget of 800 million Forints (US\$7.8 million) for 1993 to finance the dismantling of the coffer dam, built at Nagymaros, as part of the agreed G/N Project under the 1977 Treaty. A note of protest dated 13 July 1993 was sent by Slovakia (and a copy transmitted to the Court on 4 August 1993)¹³. From this fact alone it is clear that Slovakia runs the risk that Hungary will aggravate the breach by continuing acts which violate its treaty obligations. The situation therefore merits an order from the Court in quite general terms that Hungary must cease all acts or omissions which are incompatible with a bona fide execution of its treaty obligations.

¹¹ Report of the I.L.C. on the Work of its 45th Session (1993) G.A. Off. Rec. 48th Sess. Suppl. No.10 (A/48/10), p. 132.

¹² United States Diplomatic and Consular Staff in Tehran, Judgment I.C.J. Reports, 1980, p. 3 at pp.44-45. In the Rainbow Warrior Case the Court of Arbitration noted that, for the obligation of cessation to apply, the primary obligation breached by the respondent State's conduct must remain in force: Arbitral Award of 30 April 1990, 82 International Law Reports, 500 at 572-3, paras. 113-114 of the Award.

¹³ Annex 140.

B. Restitution in Kind

9.16 In many cases - of which the present case is an example par excellence - mere cessation of a wrong is not enough in itself, and concrete, positive steps are required of the wrongdoing State in order to bring that State back into compliance with its legal obligations. The remedy is not limited to the restitution of property. It extends to cover everything that needs to be done by the wrongdoing State to restore the condition of legality and, where this requires a party to fulfil an obligation of which that party stands in breach, the remedy will embrace an order that the party must specifically perform its obligation. In the present case it covers everything that must be done by Hungary to fulfil its obligations under the 1977 Treaty. As formulated in the current draft Article 7 of the International Law Commission¹⁴, the remedy is the following:

"Restitution in Kind

The injured State is entitled to obtain from the State which has committed an internationally wrongful act restitution in kind, that is, the re-establishment of the situation that existed before the wrongful act was committed, provided and to the extent that restitution in kind:

- a) is not materially impossible;
- b) would not involve a breach of an obligation arising from a peremptory norm of general international law;
- c) would not involve a burden out of all proportion to the benefit which the injured State would gain from obtaining restitution in kind instead of compensation; or
- d) would not seriously jeopardise the political independence or economic stability of the State which has committed the internationally wrongful act, whereas the injured State would not be similarly affected if it did not obtain restitution in kind."

9.17 The International Law Commission found restitution to be the primary remedy, a view that reflected the Judgment in the Chorzow Factory Case, the practice of States, and arbitral decisions¹⁵. In relation to a breach of treaty there is the

¹⁴ G.A. Off. Rec. 48 Sess. Suppl. No. 10 (A/48/10), p. 130.

¹⁵ Ibid pp. 153-156. In its Commentary the Commission cites the Factory at Chorzow Merits Judgment No. 13, P.C.I.J. Series A, No. 17, at p. 48, and a series of arbitral awards (at f.n. 119).

further consideration that the party injured by the breach necessarily seeks, as its primary remedy, the performance of its treaty obligations by the delinquent State. If the primary remedy were to lie in damages or compensation this would be tantamount to allowing the delinquent State to "buy" itself out of those treaty obligations. It would mean that a State could always violate a treaty provided it was prepared to pay for the privilege. It would negate pacta sunt servanda, which presupposes performance, and replace it with the precept that a State unwilling to perform may, even if it has no valid reason not to perform, pay compensation.

9.18 As draft Article 7 makes clear, the duty to make restitution is not absolute, but in fact Hungary cannot show that its excuses for non-performance fall within the permitted exceptions. Proviso (a) cannot apply, because performance of the 1977 Treaty is perfectly possible. Proviso (b) is equally inapplicable. If the 1977 Treaty did, in fact, violate a peremptory norm existing in 1977¹⁶ the Treaty would be a nullity, and Hungary would have sought to declare the Treaty null and void: but in fact Hungary sought first to suspend, then to abandon its performance and then to terminate the Treaty. And Hungary does not, and cannot, identify any new peremptory norm, arising post-1977, which could justify these acts¹⁷.

9.19 Similarly, proviso (c) cannot apply, for the benefit to Slovakia in having the 1977 Treaty implemented is very great¹⁸, and a realistic view would see that same implementation, not as a "burden" to Hungary but as a substantial benefit. That was Hungary's own view, necessarily, when Hungary negotiated the 1977 Treaty. States do not voluntarily enter into treaties in which the burdens outweigh the benefits.

Rosenne, Breach of Treaty, Cambridge, Grotius, 1985, p.124 explains the crucial role of "reinstatement of the performance of the treaty" as a remedy for breach. To the same effect see P.M. Dupuy, "La Responsabilité dans le système international: définition et fonction," 23 Colloquium of the Société Française pour le Droit International (Le Mans, 1990) at p. 14, emphasising that "La mise en oeuvre de la responsabilité vise aussi à la restauration de la légalité internationale."

¹⁶ See, above, Chapter VIII, for a fuller discussion of this point.

¹⁷ The distinction between a violation of a rule of jus cogens as a basis for invalidating (or nullifying) a treaty, and as a ground for termination, is seen in Articles 53 and 64 of the 1969 Vienna Convention on the Law of Treaties.

¹⁸ See, above, Chapter II, Section 3.

9.20 Finally, proviso (d) must be dismissed as inapplicable. A treaty voluntarily entered into cannot be regarded as jeopardising the political independence or economic stability of a party because the parties themselves, in entering into the treaty, have made the judgement that this is not so. Accordingly, the remedy of restitution is fully applicable and Slovakia has no hesitation in seeking an order from the Court that will require Hungary to fulfil its obligations under the 1977 Treaty in full.

IV. Compensation

9.21 The right of an injured party to claim compensation, or damages, as a residual claim to cover all the loss or damage which cannot be met by restitution is clear. In the terms of Article 8 of the International Law Commission draft:

"Compensation

1. The injured State is entitled to obtain from the State which has committed an internationally wrongful act compensation for the damage caused by that act, if and to the extent that the damage is not made good by restitution in kind.
2. For the purposes of the present article, compensation covers any economically assessable damage sustained by the injured State, and may include interest and, where appropriate, loss of profits."

9.22 A claim for compensation is "the most usual form of reparation"¹⁹ and "should be commensurate with the loss, so that the injured party may be made whole"²⁰.

9.23 Once the wrong is established, and assuming that the link of causality²¹ is also proved, so that the damage can clearly be shown to have resulted from the

¹⁹ Factory at Chorzow Merits, Judgment No. 13, P.C.I.J. Series A, No. 17, at p. 47.

²⁰ Lusitania Case, U.S./Germany Mixed Claims Commission 7 United Nations Reports of International Arbitral Awards 32, cited Coussirat-Coustère and Eisemann, Répertoire de la Jurisprudence arbitrale, Vol. II, p. 527.

²¹ See A/48/10, p. 171, para.6, where the International Law Commission supports its preference for causality rather than the distinction between "direct" and "indirect" damage, citing with approval the U.S./German Mixed Claims Commission:

wrong, the injured party is entitled to those damages as of right: no question of discretion is involved, hence the Commission's deliberate choice of the phrase "is entitled". In its Commentary, the Commission emphasised that

"damages must be fully paid in respect of injuries that have been caused immediately and exclusively by the wrongful act"²².

9.24 In the present case, as Chapter VII of the Memorial has shown, the breach by Hungary led ultimately to the adoption by Czechoslovakia of Variant "C". Had Hungary performed its treaty obligations, the construction of Variant "C" would have been unnecessary.

9.25 Nor was Czechoslovakia left with any real choice. Faced with Hungary's recalcitrance, Czechoslovakia had the alternatives of either accepting the breach as a total frustration of the whole G/N Project - and in effect abandoning as total waste the immense work and massive capital expenditures already invested - or attempting to salvage whatever was possible of the work already completed, in a manner consistent with the original aims of the two parties, and without making the realisation of the original scheme permanently impossible. Czechoslovakia made the latter choice not simply because it was the prudent choice, both financially and practically, but also because the law dictated that choice.

9.26 For Czechoslovakia was bound by law to "mitigate its damages"²³. Czechoslovakia could not simply abandon the totality of its investment and incur not only that loss but any further losses arising from flooding, damage to agriculture, disruption of transport and reliance on energy sources in default of the energy expected from the G/N Project. The cumulative total of such losses would have been astronomical. In trying to

"It matters not how many links there may be in the chain of causation connecting Germany's act with the loss sustained, provided there is no break in the chain and the loss can be clearly and definitely traced, link by link, to Germany's act" - Administrative Decision No.II: VII United Nations Reports of International Arbitral Awards, pp. 29-30.

²² Ibid., p.175. See, also Combacau "La responsabilité internationale" in Thierry, Droit International Public (1984), at p.711.

²³ This duty can be postulated as a general principle of law; see, G.H. Treitel, Remedies for Breach of Contract: a Comparative Account, Oxford University Press, Oxford, 1988, 179-192, citing the common law systems, German and French law.

recover such losses from Hungary, Czechoslovakia would almost certainly have encountered the objection that it had failed to mitigate its losses by taking measures on its own territory to utilise the investment it had already made.

9.27 The heads of damage have already been outlined in Chapter VI, for they flow from and relate directly to the Treaty breached by Hungary.

9.28 However, at this stage of the case Slovakia does not request the Court to do more than find that Hungary is in breach of the 1977 Treaty, identify the specific breaches, and declare in quite general terms that Hungary is liable to pay compensation for all the losses and damage to Slovakia caused by those breaches. It is Slovakia's view that, given the complexity of the case, it is not reasonable to ask the Court to do more at this stage. The assessment and quantification of compensation can best be left to the second, or subsequent phase of this case when, perhaps with the assistance of technical experts, the Court can turn to this final aspect of the case. For the Parties, too, the postponement of the pleadings on quantification will have advantages. Until such time as the Court has ruled on the preliminary questions of breach and responsibility, the Parties may find difficulty in focussing their pleadings and co-ordinating the collection of data on the precise questions which the Court's judgment will indicate as relevant to quantification. Thus Slovakia would formally request the Court to receive evidence on, and determine the actual amounts of compensation to be paid, in a subsequent phase of the case.

9.29 This course of action is fully in accord with the Court's own practice. In the Fisheries Jurisdiction Case²⁴ the Court said:

" In order to award compensation the Court can only act with reference to a concrete submission as to the existence and the amount of each head of damage. Such an award must be based on precise grounds and detailed evidence concerning those acts which have been committed It is only after receiving evidence on those matters that the Court can satisfy itself that each

²⁴ Fisheries Jurisdiction (Federal Republic of Germany v. Iceland), Merits, Judgment, I.C.J. Reports, 1974, 175 at p. 204, para. 76. See, also, Corfu Channel Merits, Judgment I.C.J. Reports, 1949, p. 4 at p.36: "The Court... reserves for further consideration the assessment of the amount of compensation...", and Case Concerning Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. United States of America), Merits, Judgment, I.C.J. Reports, 1986, p. 14 at pp. 142-143.

concrete claim is well founded in fact and in law. It is possible to request a general declaration establishing the principle that compensation is due, provided the claimant asks the Court to receive evidence and to determine, in a subsequent phase of the same proceedings, the amount of damage to be assessed."

9.30 It is Slovakia's submission that such compensation, when eventually assessed by the Court, must include both interest and loss of profits. As the International Law Commission has noted, "international practice seems to be in support of awarding interest in addition to the principal amount of compensation"²⁵. As the Commission further notes, the same general recognition has been accorded to the legitimacy of a claim for loss of profits, and the qualifying words "where appropriate", used in draft Article 8, paragraph 2, reflect only the position that the right to claim loss of future profits (lucrum cessans) may not be appropriate in all cases. No such qualification arises in relation to the loss of profits occurring prior to judgment (damnum emergens)²⁶.

9.31 Accordingly, Slovakia's claim for damages will embrace the heads of damage itemised in the following sub-sections. These are given at this stage for purposes of illustration only. Slovakia will, at a subsequent stage of these proceedings, itemise and explain each head of damages, justifying the amounts claimed.

9.32 Moreover, at this stage important elements of any quantification remain matters to be determined. Assuming the Court orders full restitution and Hungary complies by returning to full compliance with its obligations under the 1977 Treaty, when will the entire Project, contemplated in the Treaty, be completed? The point is important because the delay - highly prejudicial to Slovakia in financial terms - will end only on that date.

²⁵ Op. cit., (A/48/10), p. 184, para.25. For a comprehensive survey of the literature and the practice on the awarding of interest, see Arangio-Ruiz, Second Report on State Responsibility. A/CN.4/425,9 June, 1989,57-58, paras. 77-105. He finds only one case (the Montijo Case(1875) 2 Moore 1427) in which interest was not awarded.

²⁶ Ibid., p. 185, paras. 26-27.

9.33 Nevertheless, by way of illustration, the figures given below can be used as general guides to the kind of damages Slovakia has, and will have, incurred. The costs (losses) enumerated in sub-sections A-D below occurred prior to the putting of Gabčikovo into operation by means of the provisional solution. Their occurrence in subsequent years was eliminated by Variant "C".

V. The Losses Caused to Slovakia

1. Losses Caused to Slovakia in the Gabčikovo section

A. Costs incurred during 1990-1992 by Czechoslovakia in protecting the structures of the G/N Project and adjacent areas due to Hungary's non-performance

9.34 Because of the delay, resulting directly from Hungary's breach, it was impossible to fill the reservoir and the bypass canal with water on the agreed date. Thus Czechoslovakia was compelled to expend considerable sums to protect the reservoir and the canal and associated structures until such time as, following the completion of Variant "C", the complex could be filled with water as planned :

a)	Repeated clearing away of vegetation growth before filling the reservoir	57 million CSK
b)	Increased maintenance of seepage canal slopes and inter-dyke areas	82 million CSK
c)	Protection of the headwater canal bottom from vegetation growth	65 million CSK
d)	Protection and repair of the bitumenous sealing of canal slopes	28 million CSK
e)	Anti-flood protection of the structures (waterproofing elements)	134 million CSK
f)	Preservation of the technological and hydrotechnical equipment and bringing it into an operational state again	168 million CSK
g)	Charges for extended temporary occupation of land	90 million CSK

h)	Costs for pumping water into the interrupted water-courses, anti-flood protection, transport of citizens, insurance, protection of structures	50 million CSK
i)	Increased overhead costs, additional studies and research	30 million CSK
	Total ²⁷	704 million CSK

B. Costs of maintaining the old bed of the River Danube pending the availability of the new canal for navigation, 1990-1992, due to Hungary's non-performance

9.35 The delay caused by Hungary's unlawful suspension and termination forced Czechoslovakia to maintain the old riverbed open for navigation until such time as Variant "C" was completed and the new bypass canal opened. Czechoslovakia thus faced additional costs as follows:

a)	Dredging of fords and maintaining navigation lanes rkm 1811-1851.7	37 million CSK
b)	Extended marking of navigation lanes in the Hrušov-Palkovičovo sector	2 million CSK
c)	Extension of the deepening (by dredging) of Bratislava port	17 million CSK
d)	Pumping of Danube water into a water-supply arm	19 million CSK
e)	Delivery of water to the Zitný Ostrov canals	17 million CSK
f)	Continuous revision and monitoring of structures	22 million CSK
g)	Control measurements before filling lock supervision	0.8 million CSK

²⁷ CSK means Czechoslovak Koruna (crowns). In 1992 1 US\$ = 29.50 CSK.

h) Compensation of excess overhead costs	24.10 million CSK
Total	138.8 million CSK

C. Losses to the Czechoslovak navigation authorities due to the unavailability of the bypass canal 1990-1992

9.36 Because the vessels could not use the bypass canal, reliance on the old river had to continue, necessitating the breaking-up of large loads into smaller loads, re-loading, restriction of navigation to the hours of daylight, higher fuel consumption (due to the gradient and rate of water-flow) and longer navigation times.

a) Costs from limiting ship tonnage	79 million CSK
b) Costs from decreased passages of ships	78 million CSK
c) Increased deterioration of ships (damage as a result of accidents caused by low shipping depths)	0.1 million CSK
d) Costs from limited access to the Bratislava Port	20 million CSK
Total	178 million CSK

D. Construction costs of Variant "C" (1991-1992)

9.37 When Hungary returns to full performance of its treaty obligations and the original G/N scheme of the 1977 Treaty is implemented, Variant "C" will cease to operate. The need for Variant "C", as a temporary solution, will disappear. But it will mean that, although necessary as a means of bringing the 1977 Treaty scheme into partial operation, the construction works on Variant "C" will be, in effect, abandoned. The construction costs to Czechoslovakia are as follows:

a) Finishing of structures on Czechoslovak territory by Czechoslovakia in place of Hungary (including research and design works)	416 million CSK
b) New dyke separating the original bed of the Danube from the reduced reservoir between bypass canal and Čunovo plus connection between Čunovo weir and the right side dyke	853 million CSK
c) Weir system at Čunovo (1st phase)	936 million CSK
d) Dam closing the Danube bed	297 million CSK
Total ²⁸	2,502 million CSK

2. Losses Caused to Slovakia in the Nagymaros Section

Losses in the field of navigation and flood protection incurred since 1992 by Slovakia due to the failure of Hungary to proceed with the Nagymaros section of the Project

9.38 Because the water level was not impounded due to the failure of Hungary to complete the Nagymaros section of the Project, the beneficial impacts on navigation and the agricultural use of the water expected since 1992 did not occur. The losses incurred by Slovakia can be evaluated as follows:

	1992	1993
a) Loss of expected ship traffic on the Váh river		0.25 million SK
b) Costs of pumping water for irrigation		8 million SK
c) Losses due to limited access to Komárno Port	8	8 million SK

²⁸ There will be further costs. For example, a second phase to the weir system and auxiliary navigation lock at Čunovo is under construction, and estimated to cost 3,631 mil.SK (SK means Slovak Koruna - Crown. As of 10 February 1994 1 US\$ = 32.68 SK). And the equipment of the power station at Čunovo, necessary to mitigate energy losses, will cost a further 906 million SK.

d)	Increased costs due to restriction on shipping between Sap (Palkovičovo) and Nagymaros (partial unloading of vessels, restricting ship tonnage, loss of utilisation of Bratislava and Komárno ports due to navigational "bottle necks")	-	116 million SK
e)	Flood protection (tailrace canal)	202	
	Total for each year ²⁹	210	132.25 million SK
	Total		342.25 million SK

Should the Nagymaros section remained uncompleted for a longer period, significant additional investments would be needed to substitute the effects of the impounded water level³⁰.

3. Loss of Electricity Production

9.39 The original 1977 Treaty envisaged an average annual production at Gabčíkovo of 2650 GWh and at Nagymaros of 1025 GWh. After 1993, that is when

²⁹ The losses (costs) which appear in 1993 are expected to occur annually until the completion of the Nagymaros section of the Project.

³⁰ Such investments would include, for example:

a)	construction of the Topolníky weir on the Malý Danube	178 million SK
b)	construction of new pumping stations and canals for irrigation (left Danube river bank)	172 million SK
c)	regulation measures on the Ipeľ and facilities for irrigation of 16500 ha of adjacent lands	
	- two weirs with pumping stations	170 million SK
	- irrigation canals	40 million SK
d)	making the estuary of the Váh river navigable	
	- Guta river step	860 million SK
	- the deepening and regulation of the Váh riverbed	466 million SK
e)	costs of pumping irrigation water after implementing b) and c)	21 million SK/year

Nagymaros came into operation, the majority of the Gabčíkovo output would be as peak, or semi-peak production.

9.40 However, due to the non-construction of Nagymaros, it is not possible to gear the operation of Gabčíkovo towards peak production. Moreover, Gabčíkovo has not even achieved the level of base power production anticipated in the 1977 Treaty during its first years of operation.

9.41 This is due to various factors arising directly from Hungary's breaches. For example, the dredging downstream of Sap (Palkovičovo) has not been carried out by Hungary, which has reduced the height of the Gabčíkovo step and, therefore, the power produced. At the same time, due inter alia to the absence of regulation measures in the old riverbed (also forming a part of the Hungarian share of works), an increased discharge into the old Danube of up to 400 m³/s has been channelled into the old riverbed instead of 50-200 m³/s as provided in the Joint Contractual Plan. This has led to a reduction of flow through the Gabčíkovo turbines.

9.42 In terms of the 1977 Treaty schedule, as based on the 1977 Mutual Assistance Agreement, Slovakia's 50 % allocation of power generated (in GWh) during the first years of operation of Gabčíkovo and Nagymaros was to be the following:

	1986	1987	1988	1989
Gabčíkovo	199	1513	1523	1325
Nagymaros			128	512.5
Total G/N	199	1513	1651	1837.5

This would give an overall total for the first four years of operation of 5200.5 GWh.

9.43 This takes into account the fact that Czechoslovakia was to receive 1022.5 GWh from the Hungarian share during the first three years of operation. The dates for the coming into operation of the system (1986-1989) were, of course subsequently modified by the 1983 Protocol. This in turn, was replaced by the 1989 Protocol which provided that Gabčíkovo should start production in 1990 and Nagymaros in 1992. But the 1989 Protocol maintained the principle that, in addition to its own share of electricity

production, Czechoslovakia would receive during the years 1990-1992 the amount of 1022.5 GWh from the Hungarian share.

9.44 By means of the implementation of Variant "C", Slovakia has successfully produced a limited amount of electricity at Gabčíkovo. This amounted to 223 GWh in 1992 and 1963 GWh in 1993, giving a total of 2186 GWh. But, even if Slovakia keeps the whole of Hungary's share of energy, its loss incurred during the four year period of 1990-1993, assuming production in line with the 1977 Mutual Assistance Agreement schedule, amounts to 5200.5 GWh less 2186 GWh, that is 3014.5 GWh.

9.45 In terms of financial loss, the damage is very high due to the non-production of far more valuable peak quality electricity. This loss will continue into the future, as although average yearly production at Gabčíkovo will be 2100 GWh, the value of this will be much less than the value of the peak, semi-peak and base power to which Slovakia is entitled under the 1977 Treaty³¹.

9.46 In broad terms, therefore, even if Hungary fulfils its 1977 Treaty commitments in due course (i.e., if Nagymaros is brought into full production by the year 2000), its breaches will have caused Slovakia very considerable losses;

9.47 If Nagymaros is not built, and Slovakia is forced to continue relying on Variant "C" to implement the 1977 Treaty, the energy production at Gabčíkovo is likely to go no higher than 2100 GWh per year during its lifetime. The lifetime of hydroelectric power stations can conservatively be estimated at 50 years. Even if Gabčíkovo operates at full capacity during such period, but producing energy without taking advantage of a peak production cycle, the future losses over the next 50 years will be prodigious. The losses of Slovakia will moreover be increased by investment and operation costs of measures that substitute for the non-existent Nagymaros.

³¹ The small amount produced at Čunovo, (222 GWh/year, from 1996) can be discounted, its value being used to re-pay the costs of the machinery and equipment installed there.

SUBMISSIONS

On the basis of the evidence and legal arguments presented in this Memorial and reserving the right to supplement or amend its claims in the light of further written pleadings, the Slovak Republic

Requests the Court to adjudge and declare :

1. That the Treaty between Czechoslovakia and Hungary of 16 September 1977 concerning the construction and operation of the Gabčíkovo/Nagymaros System of Locks, and related instruments, and to which the Slovak Republic is the acknowledged successor, is a treaty in force and has been so from the date of its conclusion; and that the notification of termination by the Republic of Hungary on 19 May 1992 was without legal effect.
2. That the Republic of Hungary was not entitled to suspend and subsequently abandon the works on the Nagymaros Project and on that part of the Gabčíkovo Project for which the 1977 Treaty attributed responsibility to the Republic of Hungary.
3. That, the act of proceeding with and putting into operation Variant "C", the "provisional solution", was lawful.
4. That the Republic of Hungary must therefore cease forthwith all conduct which impedes the full and bona fide implementation of the 1977 Treaty and must take all necessary steps to fulfil its own obligations under the Treaty without further delay in order to restore compliance with the Treaty.
5. That, in consequence of its breaches of the 1977 Treaty, the Republic of Hungary is liable to pay, and the Slovak Republic is entitled to receive, full compensation for the loss and damage caused to the Slovak Republic by those breaches, plus interest and loss of profits, in the amounts to be determined by the Court in a subsequent phase of the proceedings in this case.

(Signed)
Dr. Peter Tomka
Agent of the Slovak Republic

