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Diverting the Danube: The Gabcikovo-Nagymaros Dispute and International Freshwater Law

by
Aaron Schwabach†

We have laid waste to our soil and the rivers and the forests that our forefathers bequeathed to us.— Vaclav Havel

I. INTRODUCTION	291
II. THE GABCIKOVO-NAGYMAROS DISPUTE.....	292
A. Background	292
B. The Gabcikovo-Nagymaros Project	293
C. Opposition to the Gabcikovo-Nagymaros Project	297
D. The Provisional Solution: Gabcikovo	299
E. Environmental Problems	301
F. Related Problems	303
III. OTHER MAJOR DIVERSION PROJECTS ON THE DANUBE	304
A. The Iron Gate	304
B. The Danube-Black Sea Canal	309
C. The Rhine-Danube Canal	309
IV. THE PARTIES AGREE TO SUBMIT THE DISPUTE TO THE ICJ.....	311
V. TREATIES AND INTERNATIONAL AGREEMENTS GOVERNING THE USE OF THE WATERS OF THE DANUBE	313
A. Before World War I	314
B. Between the Wars	317
C. After World War II	319
D. Environmental Impact Assessment Legislation	322
VI. CUSTOMARY INTERNATIONAL LAW GOVERNING THE USE OF THE WATERS OF TRANSBOUNDARY RIVERS ..	323
A. Sources of Customary International Law	323
1. State Practice: The Riparian States of the Danube	324
2. Other Sources of Customary International Law	324

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B.	Customary International Law Approaches to Transboundary Watercourses	325
C.	Absolute Territorial Sovereignty: The Harmon Doctrine	325
D.	Absolute Territorial Integrity	326
E.	Limited Territorial Sovereignty	327
1.	Decisions of International Tribunals	327
a.	The Trail Smelter Arbitration	327
b.	The Lac Lanoux Arbitration	327
2.	Decisions of Municipal Courts	329
a.	The Donauversinkung Case (Baden v. Wurttemberg)	329
b.	Societe Energie Electrique	330
3.	Aspirational Documents and Pronouncements of International Bodies	330
a.	The Stockholm Declaration	330
b.	The Helsinki Rules	331
c.	The World Charter for Nature	332
d.	The Rio Declaration	332
e.	The ILC Draft Articles	334
F.	The Community Theory	336
1.	Historical Overview	336
2.	Contemporary Approaches	338
a.	The River Oder Case	338
b.	The Bellagio Draft Treaty	338
c.	The United Nations Approach: The Mar del Plata Report	339
d.	Agenda 21	339
VII.	SHOULD THERE BE DIFFERENT RULES FOR DIFFERENT RIVERS?	340

I.

INTRODUCTION

Fresh water is essential for prosperity, well-being and the maintenance of human life. We live in a time when demand for fresh water is rapidly surpassing available resources. Nations compete with each other for these resources under rules of international law that are often conflicting or vaguely defined. The decision of the International Court of Justice in the Gabcikovo-Nagymaros dispute should provide the most effective statement to date of the customary international law regarding the use of international freshwater resources.¹

1. Of course, it is possible that, even if an opinion is published, the Court will confine itself, as did the Permanent Court of International Justice in the *Meuse* case, *infra* note 264, to questions of treaty interpretation, and not apply or discuss customary international law. The Court could also, with the consent of the parties, decide the case *ex aequo et bono*, in accordance with Article 38(2) of

The Court's decision should also provide a restatement of the law governing the use of the waters of one of the world's great rivers, the Danube. The Danube's "Law of the River" has gone through alternating periods of chaos and order throughout its history. Until recently, international law has chiefly been concerned with navigational uses of the river. After the chaotic period before World War I, a brief orderly interlude ensued under the Treaties of Trianon, Versailles, and Bucharest following the Allied victory. When the treaty regime began to grow disorderly again, the Permanent Court of International Justice in the Danube Commission Case stated the existing Law of the River.² Following the chaos of World War II, a period of order again ensued under Soviet domination. Like the Warsaw Pact and the Council for Mutual Economic Assistance, this orderly regime has all but disappeared. The Law of the River is once again uncertain. The Court's decision will thus not only provide its first statement of the law of non-navigational uses of the Danube, but will also bring about a return to stability in the Law of the River.

Ultimately, the Court's decision will have world-wide implications. The International Court of Justice is not a common law court; therefore, its decisions lack *stare decisis* effect. Nonetheless, its decisions provide important restatements and clarifications of the law on the topics which they address. International freshwater law is a topic which is long overdue for review by the Court.

This article will attempt to explore the current legal regimes governing the non-navigational uses of international rivers generally, as well as the development of the Danube's Law of the River. Section II sets out the history of the Gabcikovo-Nagymaros dispute, while Section III discusses other major diversion projects on the river. Section IV discusses the submission of the Gabcikovo-Nagymaros dispute to the International Court of Justice. Section V deals with the treaty regimes governing non-navigational uses of the Danube from the nineteenth century through the present time. Section VI discusses customary international law approaches to the non-navigational uses of transboundary rivers generally. Section VII, the conclusion, discusses the desirability (or lack thereof) of a uniform body of international freshwater law.

II.

THE GABCIKOVO-NAGYMAROS DISPUTE

A. *Background*

The Danube River flows 1,776 miles from its source near Donaueschingen³ to the Black Sea. On the way, it passes through or along the borders of Germany, Austria, Slovakia, Hungary, Croatia, Serbia, Bulgaria, Romania, and the

the Statute of the International Court of Justice, 59 Stat. 1055, T.S. No. 993, 3 Bevans 1153, 1976 U.N.Y.B. 1052.

2. Advisory Opinion No. 14, Jurisdiction of the European Danube Commission Between Galatz and Braila, Advisory Opinion, 1927 P.C.I.J. (ser. B) [hereinafter P.C.I.J. Danube Commission Case]. See generally *infra* notes 160, 195-96 and accompanying text.

3. Arguably, the Danube begins at Furstenberg Castle in Donaueschingen. A plaque over a small spring on the castle grounds bears the legend "Hier entspringt die Donau."

Ukraine. The Danube has always divided this region as much as it has united it. In the time of Alexander, the Danube (then known as the Ister) formed the northern frontier of the Hellenistic empire, beyond which lay the Scythians.⁴ Throughout most of the history of the Roman Empire and its Byzantine successor, the Danube (then Danuvius) formed the northern boundary of the Empire. Trajan campaigned against the Dacians in that area from 101 to 105 A.D., and Marcus Aurelius defeated the Marcomanni there in 181 A.D.⁵ By about 600 A.D., the Danube formed the boundary between the Christian lands to the south and pagan Europe to the north. The Avars, Goths, and Huns crossed the Danube in a series of incursions, bringing about the eventual downfall of the Western Roman Empire. After the fall of Constantinople, the Danube separated the Ottoman Empire from its Orthodox vassal states to the north and marked the northern boundary of Muslim Europe.⁶

From East to West, the Danube basin has historically been occupied by very different cultures and civilizations. After the fall of Constantinople, it flowed from the world of Christianity to the world of Islam. Later, it flowed from capitalist Western Europe to communist Eastern Europe. Today, it flows from the relatively stable, developed countries of the West to the emerging Eastern European nations.

From Ulm to the Black Sea, the river is navigable year-round, except for the section between Bratislava, Slovakia and Nagymaros, Hungary, which is intermittently impassable during three months of the year.⁷ Between Bratislava and Komarno, the river flows above an alluvial cone hundreds of meters deep.⁸ The river cuts through multiple channels in a huge inland delta,⁹ creating one of Central Europe's last remaining large wetlands and providing a habitat for what is estimated to be more than 5,000 animal species.¹⁰

B. *The Gabčíkovo-Nagymaros Project*

The Gabčíkovo-Nagymaros project was first conceived in 1951,¹¹ and its design reflects the industrial gigantism of the Stalinist era.¹² As originally con-

4. THE TIMES ATLAS OF WORLD HISTORY 76-77 (Rev. ed. 1984).

5. Pascale Costa, *Les effets de la guerre sur les traités relatifs au Danube, dans le cadre d'une étude globale du droit conventionnel du Danube*, in THE LEGAL REGIME OF INTERNATIONAL RIVERS AND LAKES/LE REGIME JURIDIQUE DES FLEUVES ET DES LACS INTERNATIONAUX 203, 205 (Ralph Zacklin & Lucius Cafišch eds., 1981).

6. THE TIMES ATLAS OF WORLD HISTORY, *supra* note 4, at 170-71, 196-97.

7. See, e.g., Treaty of Trianon, *infra* note 183, art. 275; Treaty of Versailles, *infra* note 183, art. 331; P.C.I.J. Danube Commission Case, *supra* note 2, at 153.

8. Miroslav B. Liska, *The Gabčíkovo-Nagymaros Project — Its Real Significance and Impacts*, EUROPA VINCET, Nov. 1992, at 7.

9. *Id.*

10. WWF Österreich Communiqué: Repercussions of the Power Station 1 [hereinafter Repercussions of the Power Station].

11. Karoly Percezl & George Libik, *Environmental Effects of the Dam System on the Danube at Bos-Nagymaros*, 18 AMBIO 247, 247 (1989). (Bos is the Hungarian name for Gabčíkovo.)

12. Transformation of nature was seen as an end in itself, rather than as a means to economic, public welfare, or even strategic benefits, and without regard to "capitalist" efficiency concerns. See Judit Galambos, *Political Aspects of an Environmental Conflict: The Case of the Gabčíkovo-*

ceived, the primary purpose of the project was to enhance the navigability of the Danube.¹³ As a result of the oil crisis of the early 1970s, however, the Hungarian government decided that the project's main purpose should be energy production, with navigability and flood control as secondary concerns.¹⁴

In 1963, Hungary and Czechoslovakia entered into negotiations to reach a joint plan for diversion of the Danube's waters. In 1968, the two countries set up a special River Administration for the Rajka-Gonyu sector of the Danube.¹⁵ The Rajka-Gonyu Agreement was signed on February 27, 1968, as the Prague Spring was beginning. Czechoslovakia registered the agreement on July 15, on the eve of the Soviet invasion.¹⁶ By 1976, the two governments had accepted a Joint Agreed Plan for the project.¹⁷ The two parties signed a treaty in 1977¹⁸ under which the contracting parties agreed to divert the course of the Danube through a series of dams and reservoirs.¹⁹

Nagymaros Dam System, in *PERSPECTIVES ON ENVIRONMENTAL CONFLICT AND INTERNATIONAL RELATIONS* 72, 75-76 (Jyrki Kakonen ed., 1992). Thus, Hungary found itself building a steel industry, even though it lacked the necessary raw materials; growing cotton, even though the conditions for cotton-growing were poor; and building hydroelectric plants on rivers flowing through the plains. *Id.*

At least one proponent of the dam now argues that the Gabcikovo-Nagymaros project was *not* the product of the Stalinist era, having been conceived before World War II: "The idea to construct a dam on the Danube river at Gabcikovo was not a brainchild of socialism; it had already been entertained earlier — during the interwar period." Jozef Prokes, *The Dam In Its True Light*, *EUROPA VINCET*, Nov. 1992, at 12 (sidebar to Liska, *supra* note 8). Dr. Prokes is the vice president of the National Council of the Slovak Republic.

For those who can read Slovak, an extremely detailed history of the Gabcikovo-Nagymaros project can be found in EGIL LEJON, *GABCIKOVO-NAGYMAROS: STARE A NOVE HRIECHY* (1994) (many of the maps, charts, and graphs are labeled in English or German).

13. Enhanced navigability would primarily benefit the Soviet Union, which at the time carried most of the goods on that part of the Danube. Galambos, *supra* note 12, at 75. Galambos also argues that Soviet pressure was a major factor in Hungary's consent to the plan.

14. Perczel & Libik, *supra* note 11, at 247-48. There were severe floods in Hungary in 1954 and in Slovakia in 1965. Liska, *supra* note 8, at 8; Peter Heywood & Karoly Ravasz, *Danube Diversion Stirs Controversy*, *ENGINEERING NEWS REC.*, Feb. 9, 1989, at 22.

15. Agreement Concerning the Establishment of a River Administration in the Rajka-Gonyu Sector of the Danube, Feb. 27, 1968, Czechoslovakia-Hung., 640 U.N.T.S. 50 [hereinafter *Rajka-Gonyu Agreement*] (English text begins at 640 U.N.T.S. 66)[Note: To avoid confusion between the former Czechoslovakia and the current Czech Republic, this article does not use the Bluebook abbreviation "Czech." for Czechoslovakia.].

16. Alexander Dubcek, a Slovak reformer, became the leader of the Czechoslovakian Communist Party in early 1968. In March and April, respectively, the hard-line president and premier were replaced by reformers. In July, the Soviet Union and four of its satellites demanded an end to the reform movement in Czechoslovakia; on August 20, the Soviet Union, along with Bulgaria, East Germany, Hungary, and Poland, invaded Czechoslovakia. Alexander Dubcek resigned on April 17, 1969, to be replaced by Gustav Husak. *THE WORLD ALMANAC AND BOOK OF FACTS* 1996, at 757 (1996) [hereinafter *1996 WORLD ALMANAC*]. Husak, also a Slovak, favored development projects (such as Gabcikovo-Nagymaros) that would be built in Slovakia. Galambos, *supra* note 12, at 77.

17. Declaration of the Government of the Republic of Hungary on the Termination of the Treaty Concluded Between the People's Republic of Hungary and the Socialist Republic of Czechoslovakia on the Construction and Joint Operation of the Gabcikovo-Nagymaros Barrage System, art. I(1), 32 I.L.M. 1260, 1262 (1993) [hereinafter *Hungarian Declaration of Termination*].

18. Treaty Concerning the Construction and Operation of the Gabcikovo-Nagymaros System of Locks, Sept. 16, 1977, Czechoslovakia-Hung., 1109 U.N.T.S. 235, 32 I.L.M. 1247 [hereinafter *Gabcikovo-Nagymaros Treaty*].

19. Heywood & Ravasz, *supra* note 14, at 22; Gabcikovo-Nagymaros Treaty, *supra* note 18, arts. 1, 14.

As initially planned, the Gabčíkovo-Nagymaros project would extend over 124 miles of the Danube valley, from Bratislava to Nagymaros.²⁰ Embankments blocking the Danube at Dunakiliti in Hungary would create a twenty-three square mile reservoir just outside of Bratislava.²¹ At Dunakiliti, a weir would divide water from the reservoir, sending at least 90 percent of the flow through a 15.5 mile diversion canal on Czechoslovakian territory and returning 2.5 to 10 percent of the water to the original riverbed.²²

The diversion canal, an above-ground concrete bathtub 15.5 miles in length, up to 60 feet in height, and ranging from 900 to 2,000 feet in width, would feed water through the 720 megawatt Gabčíkovo power plant before returning it to the Danube five miles downstream.²³ To prevent seepage, the canal would be lined with plastic.²⁴ Possible aesthetic problems notwithstanding, the canal would also provide a shipping route around obstacles in the Danube.

Engineers designed the Gabčíkovo power plant to operate in periodic surges. Each surge of water through the Gabčíkovo barrage would flow downstream as a flood wave to Nagymaros, in Hungary, where it would be absorbed by the Nagymaros barrage.²⁵ These periodic releases from Gabčíkovo would power the 160 megawatt power plant at Nagymaros.²⁶ The dam at Nagymaros would serve the additional function of raising the water level in the 68 miles between Nagymaros and the diversion canal, allowing shipping to pass over obstacles in the river.²⁷

Under the terms of the 1977 treaty, the project was to be completed and the power plants put into operation from 1986 to 1990.²⁸ Hungary and Czechoslovakia were to jointly own and operate the main structures (the Dunakiliti dam, the by-pass canal, and the locks at Gabčíkovo and Nagymaros), while construction was to be divided equally.²⁹ Hungary undertook to perform all of the construction in its own territory and twelve per cent of the project value in

20. Rudolph Chelminski, *The Not-so-blue Danube: A Storied Link Between Europes Old and New*, SMITHSONIAN, July 1990, at 32, 39, 40; Gabčíkovo-Nagymaros Treaty, *supra* note 18, art. 1(2,3).

21. Gabčíkovo-Nagymaros Treaty, *supra* note 18, art. 1(2)(a,b); Heywood & Ravasz, *supra* note 14, at 22.

22. Heywood & Ravasz, *supra* note 14, at 22; Repercussions of the Power Station, *supra* note 10, at 1; Gabčíkovo-Nagymaros Treaty, *supra* note 18, arts. 1(2)(c), 14.

23. Heywood & Ravasz, *supra* note 14, at 22; Chelminski, *supra* note 20, at 39; Gabčíkovo-Nagymaros Treaty, *supra* note 18, art. 1(2)(d). While the enhanced navigability would benefit the Soviet Union, and the generation of electricity would, theoretically, benefit Hungary, the bypass canal would benefit only Slovakia, by disrupting the ethnic Hungarian territory (*see infra* note 92 and accompanying text) and by enabling Bratislava to replace Csepel (Budapest) as the major inland port in the region. Galambos, *supra* note 12, at 75, 79.

24. Mark Schapiro, *The New Danube*, MOTHER JONES, Apr./May 1990, at 72.

25. Gabčíkovo-Nagymaros Treaty, *supra* note 18, arts. 1(3), 10(4).

26. Heywood & Ravasz, *supra* note 14, at 22; Gabčíkovo-Nagymaros Treaty, *supra* note 18, art. 1(3)(b).

27. Heywood & Ravasz, *supra* note 14, at 22.

28. Gabčíkovo-Nagymaros Treaty, *supra* note 18, art. 4(4).

29. *Id.* art. 8.

Czechoslovakia.³⁰ In 1978, shortly after the treaty was signed, the Czechoslovakian government began construction at Gabčíkovo.³¹ The Hungarian government had barely begun construction by 1981.³²

Hungary's delay in building resulted from a variety of economic pressures and environmental concerns. In May, 1980, many Hungarian scientists and engineers openly criticized the Gabčíkovo-Nagymaros project at a public debate.³³ Journalist Janos Vargha, who was to become one of the dam's most dedicated and visible opponents, published an article condemning the project as environmentally disastrous in November, 1981.³⁴ The Hungarian government stopped construction on Nagymaros in 1981, ostensibly so that Hungary's Academy of Sciences could study the project's environmental effects. Some Hungarian officials later maintained that the environmental studies were a ruse and that the real reason for halting construction was economic.³⁵

In 1982, Hungary appointed a new commissioner, Peter Havas,³⁶ to coordinate the project with Czechoslovakia, although Havas later stated that his task was "to stop the project or put it off until the 1990s."³⁷ Meanwhile, Czechoslovakia went ahead with the project, eventually performing construction that had initially been allocated to Hungary.³⁸ In 1983, Hungary agreed to resume work on its side of the project, and Czechoslovakia agreed to accept a four-year delay in completion of the project.³⁹ A February, 1984 lecture by Janos Vargha launched the Committee for the Danube, Eastern Europe's first grass-roots environmental organization. The Duna Koer (Danube Circle) eventually grew out of this Committee.⁴⁰

30. Heywood & Ravasz, *supra* note 14, at 22; Gabčíkovo-Nagymaros Treaty, *supra* note 18, art. 5(5). Specifically, Hungary undertook to build everything which was to be built on its own territory, plus the following installations on Czechoslovakian territory: the Dunakiliti Hrusov head-water installations on the right bank, the tail-water canal of the by-pass canal, the deepening of the bed of the Danube below Palkovicovo, the "improvement" of the old bed of the Danube, the operational (transport and maintenance) equipment of the Gabčíkovo system of locks, and the flood-control works of the Nagymaros head-water installations in the lower Ipeľ district. *Id.*

31. WWF Communique: Chronology of the Gabčíkovo Mega-Project 1 [hereinafter WWF Chronology].

32. Heywood & Ravasz, *supra* note 14, at 22.

33. Galambos, *supra* note 12, at 80.

34. Janos Vargha, *Egyre tavolabb a jótól*, VALOSAG, Nov. 1981; Schapiro, *supra* note 24, at 72.

35. Heywood & Ravasz, *supra* note 14, at 23. Miklos Szanto, general manager of Oviber (the Hungarian state-owned company responsible for the Hungarian side of the Gabčíkovo-Nagymaros project), stated that, "[t]he stopping between 1981 and 1983 was for financial reasons, not for environmental reasons." Laszlo S. Nagy, head of water resources management at Hungary's Ministry for the Environment and Water Management, stated that "the Hungarian government wanted to stop all investment" owing to "the deterioration in Hungarian trade." *Id.*

36. In Hungary, names are written with the family name first, given name last. In Slovakia, names are written in the Western manner. To avoid confusion, all Hungarian names in this article have been written in the Western style, with given name first, family name last.

37. Heywood & Ravasz, *supra* note 14, at 22.

38. *Id.*

39. *Id.*

40. Galambos, *supra* note 12, at 88-89. Duna Koer is also spelled Duna Kor.

Galambos gives a history of the Hungarian environmental movement. Although the Danube Circle is the most widely known Hungarian environmental group, there are several others, including

After protests by Austrian environmentalists halted plans to build a hydroelectric power plant in a nature reserve at Hainburg, Austria began to take an interest in the Gabčíkovo-Nagymaros project.⁴¹ In May, 1986, Austria and Hungary signed an agreement by which Austrian banks agreed to supply loans for the building of Nagymaros.⁴² Under the agreement, Austrian companies were guaranteed 70 percent of all building contracts, and Austria was to receive 1.2 billion kw/h year, or one-third of the power expected from the entire Gabčíkovo-Nagymaros project.⁴³ Hungary was to supply Austria with 22 billion Austrian schillings worth of electricity no later than the year 2015.⁴⁴ Under the agreement, Austrian banks and the Austrian utility company Österreichische Elektrizitätswirtschaft AG advanced 6.5 billion Austrian schillings⁴⁵ for construction costs. The Hungarian government paid much of this to the Austrian main contractor, Österreichische Donaukraftwerke AG.⁴⁶

C. Opposition to the Gabčíkovo-Nagymaros Project

Work resumed on the Hungarian side in 1988 and was immediately met by organized opposition from the Danube Circle.⁴⁷ Although independent political action was uncommon in pre-1989 Eastern Europe, Hungarian involvement in the project produced strong political opposition. In Hungary, as in many other Eastern European countries in the late 1980s, environmentalism was closely linked to the struggle against Stalinist regimes.⁴⁸ The Hungarian Parliament

the Blues, the Friends of the Danube, and ISTER. *Id.* at 89; HILARY F. FRENCH, WORLD WATCH PAPER 99 — GREEN REVOLUTIONS: ENVIRONMENTAL RECONSTRUCTION IN EASTERN EUROPE AND THE SOVIET UNION 29 (1990).

41. Schapiro, *supra* note 24, at 72. Austria's power industry was experiencing a crisis. Earlier, environmental protesters had prevented the operation of a fully-completed nuclear power plant at Zwentendorf and had forced Austria to abandon plans for a joint hydroelectric plant with Czechoslovakia at Wolfsthal. Galambos, *supra* note 12, at 90-91. Austria had reached a level of development and distribution of wealth at which domestic environmental concerns took precedence over development concerns. Because Austria is a democracy with a high degree of political involvement, it was unable to carry out further development when such development conflicted with the environmental interests of the Austrian people. This NIMBYism forced Austria to attempt to locate economically desirable but environmentally harmful facilities outside the country. *See also generally infra* notes 180-81 and accompanying text.

42. WWF Chronology, *supra* note 31, at 1; Heywood & Ravasz, *supra* note 14, at 23-24; Schapiro, *supra* note 24, at 72; Galambos, *supra* note 12, at 81.

43. Heywood & Ravasz, *supra* note 14, at 22.

44. David Lewis, *Hungary Agrees to Consider Referendum on Danube Dam Project*, REUTER LIBR. REP., Mar. 8, 1989, at 1. As of May, 1995, 22 billion Austrian schillings equalled approximately \$2.26 billion U.S. (9.75 Austrian schillings equalled one U.S. dollar in May, 1995). 1996 WORLD ALMANAC, *supra* note 16, at 741. (9.75 Austrian schillings equalled one U.S. dollar in May, 1995.)

45. As of May, 1995, 6.5 billion Austrian schillings equalled approximately \$666.67 million U.S. *See id.*

46. Heywood & Ravasz, *supra* note 14, at 22.

47. Denise Hamilton, *Danube "Blues" Alter Politics for Hungarians*, L.A. TIMES, Aug. 13, 1989, at Part 1, 1; Schapiro, *supra* note 24, at 74.

48. A Danube Circle co-founder who later became secretary of the Hungarian Academy of Sciences Soros Foundation Committee stated: "The fight over the Danube was like a school for politics." Janos Vargha added: "People thought that if it is possible to stop this dam, we can change the total system. And if we're not able to do that, everything will remain the same." Schapiro, *supra* note 24, at 74.

voted to continue construction on the Gabčíkovo-Nagymaros project in October, 1988.⁴⁹ On March 8, 1989, after Hungarian environmentalists collected more than 130,000 signatures calling for a referendum on the project, Hungarian Prime Minister Miklos Nemeth announced that the government was willing to study the possibility of holding a referendum on the Gabčíkovo-Nagymaros investment. Four Gabčíkovo-Nagymaros supporters, including former head of state Pal Losonczi and Speaker Istvan Stadinger, resigned following Nemeth's announcement.⁵⁰ Danube Circle spokesperson Andras Szekfu responded to Nemeth's announcement by saying "of course if there is a referendum we will win it."⁵¹ At the same time, however, he referred to the announcement as "half a victory," calling for work on the project to be suspended pending the referendum.⁵² Supporters of the referendum worried that continuing to spend money on a construction project that would never be completed would hurt Hungary's ability to repay the Austrian loan. On the other hand, Environment Minister Laszlo Marothy argued that compensation to Austria would make cancellation of the project more costly than completion.⁵³

The Hungarian government halted all work on Nagymaros in May, 1989.⁵⁴ In June, the Hungarian government informed the Czechoslovakian government that it had stopped the project for environmental reasons.⁵⁵ The Czechoslovakian government rejected the Hungarian concerns as "unfounded."⁵⁶ At a meeting of prime ministers Ladislav Adamec of Czechoslovakia and Miklos Nemeth of Hungary on July 20, Nemeth informed Adamec that Hungary would suspend work at Nagymaros and Dunakiliti until October 31, 1989 and suggested an even longer period of suspension (up to five years).⁵⁷ The two prime ministers met again on October 26. They again failed to reach any agreement, and Czechoslovakia informed Hungary of its proposed "provisional solution": diverting the Danube through Czechoslovakian territory and operating the Gabčíkovo plant without Nagymaros.⁵⁸

Just eight days earlier, on October 18, 1989, the Hungarian National Assembly had amended the constitution to prepare for multiparty free elections and the drafting of a new constitution.⁵⁹ Less than two weeks after the amendment,

49. *Id.* at 75.

50. Lewis, *supra* note 44, at 1.

51. *Id.*

52. *Id.* Hungarian Parliament member Janos Avar also urged that construction be suspended pending developments. *Id.*

53. *Id.* at 2.

54. See Hamilton, *supra* note 47, at Part 1, 1. It is interesting to note that *supporters* of the dam gathered 117,000 signatures (including that of the mayor of Nagymaros) on a *pro-dam* petition. *Id.*

55. Hungarian Declaration of Termination, *supra* note 17, art. I(9-11).

56. *Id.* art. I(11).

57. *Id.* art. I(12).

58. See *id.* See also *infra* notes 61-82 and accompanying text.

59. THE WORLD ALMANAC AND BOOK OF FACTS 1991 41 (1991) [hereinafter 1991 WORLD ALMANAC].

on October 31, 1989, the Hungarian Parliament voted 186 to seven, with 74 abstentions, to scrap the Nagymaros project.⁶⁰

D. The Provisional Solution: Gabčíkovo

With Nagymaros abandoned, the Czechoslovakian government had two options: scrap the nearly-completed Gabčíkovo barrage or complete Gabčíkovo and run it at less than full capacity. Czechoslovakia opted for the latter course, despite opposition from Czech, Slovak, Hungarian, and Austrian environmentalists.⁶¹ On November 30, 1989, Hungary proposed a "modification" to the 1977 treaty, delaying construction at Gabčíkovo until extensive scientific and environmental investigations had been concluded, and basing any further decisions on the result of those investigations.⁶² This modification could have postponed operation of the Gabčíkovo plant indefinitely. Somewhat disingenuously, the Hungarian Declaration of Termination claimed that "the government of the Socialist Republic of Czechoslovakia never replied to this proposal."⁶³ In fact, one week later the government of the Socialist Republic of Czechoslovakia no longer existed. On December 7, a new Communist-minority Cabinet was formed. On December 8, the Communists agreed to relinquish power, and President Gustav Husak resigned on December 10.⁶⁴ By the end of the month, Vaclav Havel was President and "Prague Spring" leader Alexander Dubcek was Speaker of the Parliament.⁶⁵

In Hungary, opposition to the Gabčíkovo-Nagymaros project had been nearly synonymous with opposition to one-party rule. Many Hungarians therefore expected that Czechoslovakia would feel similarly and, having rejected communism, would also reject the dam.⁶⁶ Among the Czechs, there was little support for the project. In Slovakia, however, Gabčíkovo became a symbol of Slovak nationalism, closely identified with Slovakia's efforts to achieve independence and establish itself as a nation.

In February of 1990, more than 60,000 people in Austria, Czechoslovakia, and Hungary protested against continuation of the Gabčíkovo project.⁶⁷ Throughout 1990 and 1991, Hungary repeatedly requested that Czechoslovakia stop work on the project, though Czechoslovakia continued to work on the

60. *Hungarian Parliament Gives Permission to Scrap Dam*, REUTER LIBR. REP., Oct. 31, 1989. If the Communist MPs hoped to appease the voters by shutting down Nagymaros, they were unsuccessful. In the April, 1990 elections the Communists (rechristened "Socialists") won only 8.5% of the seats. 1991 WORLD ALMANAC, *supra* note 59, at 39.

61. See generally Repercussions of the Power Station, *supra* note 10, and WWF Chronology, *supra* note 31.

62. Hungarian Declaration of Termination, *supra* note 17, art. I(13).

63. *Id.* Throughout the rest of the document, the Czechoslovakian government is usually referred to as "the Czechoslovak Party."

64. 1991 WORLD ALMANAC, *supra* note 59, at 45. Husak had been a proponent of the Gabčíkovo-Nagymaros project. See *supra* note 16.

65. 1991 WORLD ALMANAC, *supra* note 59, at 45.

66. See generally Galambos, *supra* note 12.

67. WWF Chronology, *supra* note 31, at 1.

Gabcikovo plant.⁶⁸ By April 22, 1991, Czechoslovakia was able to announce that the Gabcikovo plant was 90 percent complete.⁶⁹ Environmentalists from Czechoslovakia and neighboring countries, however, joined to interrupt construction. On July 3, 1991, activists from the Slovak environmental group EUROCHAIN occupied the construction site and successfully prevented the flooding of the diversion canal.⁷⁰ Activists from the Slovak environmental groups EUROCHAIN and SZOPK, as well as from the World Wildlife Fund (Austria), Global 2000, the Danube Circle, Reflex, and other Eastern European environmental organizations continued to interfere with construction activities at Gabcikovo throughout the summer of 1991. Despite numerous arrests, the deportation of many Austrian activists, and some reports of police brutality, construction at Gabcikovo was almost completely halted.⁷¹

On July 15 and 23, 1991, the government of Slovakia (at this point still part of Czechoslovakia) reaffirmed its commitment to completing the Gabcikovo project. The government of Czechoslovakia, concerned that an official rejection from the federal government would encourage Slovak separatism, confirmed the decision on July 25, 1991. This prompted the first voluntary protest by the citizens of the Gabcikovo region in two hundred years. On August 4, 1991, 1,500 people from the surrounding villages demonstrated against the completion of the Gabcikovo plant.⁷²

Throughout the second half of 1991 and the first half of 1992, Czechoslovakia and Hungary engaged in a series of negotiations to set up a trilateral investigating committee to resolve the dispute, with the European Community as the third party.⁷³ In April of 1991, the Hungarian Parliament authorized the government to negotiate with Czechoslovakia to terminate the treaty.⁷⁴

These negotiations proved unsuccessful. In November of 1991, Czechoslovakia began construction of its "provisional solution."⁷⁵ The provisional solution required Slovakia to build several additional structures not called for in the original Gabcikovo-Nagymaros plan. Perhaps the largest of these was a lateral dam eleven kilometers long, ranging in height from five to seven meters. The provisional solution also includes a system of weirs and an intake structure feeding water into the Moson Danube, replacing the function of the weir at Dunakiliti; closure of the Danube bed and connecting dams; a protected construction pit for second-phase structures; an auxiliary ship lock; an additional weir; and an additional hydroelectric power station to use the energy of the sanitary flow.⁷⁶ In 1993, the Slovak government estimated the cost of completion of

68. Hungarian Declaration of Termination, *supra* note 17, art. I(19, 24).

69. *Id.* art. I(19).

70. WWF Chronology, *supra* note 31, at 2.

71. *Id.* at 2-3.

72. *Id.*

73. Hungarian Declaration of Termination, *supra* note 17, art. I(20-24).

74. *Id.* art. I(10).

75. Liska, *supra* note 8, at 10.

76. Miroslav B. Liska, *The Gabcikovo-Nagymaros Project — Its Real Significance and Impact*, Feb. 1993, at 7. Slovakia refers to a "temporary solution," which Hungary calls the "provi-

these additional structures at 8.5 billion crowns.⁷⁷ On May 19, 1992, Hungary informed Czechoslovakia that it was unilaterally terminating the treaty.⁷⁸ On July 17, 1992, Slovakia declared its "sovereignty," and, on July 23, the two parts of the country agreed on a plan for partition.⁷⁹

In October, with the provisional solution largely complete, Slovakia began diverting water from the Danube.⁸⁰ On October 26, 1992, with just over two months of national existence remaining, the Czechoslovakian government came near to collapse over the Gabčíkovo question. The Cabinet divided along ethnic lines. The five Czech ministers had called for an immediate halt to the diversion of the Danube to allow time for a European Community Commission to be sent to study the project's environmental impacts. The five Slovak ministers opposed the idea. The Slovak Foreign Minister, Milan Knazko, told the Czechs: "[y]ou can make any decision you want. Slovakia will dam the Danube anyway."⁸¹ On January 1, 1993, Slovakia became an independent nation,⁸² rendering Czech concerns about Gabčíkovo largely irrelevant.

E. Environmental Problems

The two major environmental problems that Gabčíkovo-Nagymaros would have caused, and that the operation of the provisional solution at Gabčíkovo will cause, are the replacement of a steady flow with a periodic flow and the replacement of a permeable river bed with an impermeable lined canal. The Central Danube wetlands depend on a steady flow of water from the river's many channels. Replacing this with intermittent surges of water from Gabčíkovo gives the region the characteristics of a desert subject to periodic floods.

In discussing the environmental impacts of the Gabčíkovo-Nagymaros barrage system, Dr. Gyorgy Kovacs, a leading *proponent* of the dam, listed the following negative effects:

Water replacement in branches of the river will stop, leading to a decline in flora and fauna in the surrounding areas.

sional solution." (This is a pamphlet containing an expanded version of Liska's EUROPA VINCET article, *supra* note 8.)

77. *Id.* In March, 1995, 29 Slovakian crowns were worth \$1.00 U.S.; thus, 8.5 billion crowns equalled about \$293 million U.S. See 1996 WORLD ALMANAC, *supra* note 16, at 816.

78. Hungarian Declaration of Termination, *supra* note 17.

79. 1996 WORLD ALMANAC, *supra* note 16, at 757. On July 3, 1992, Vaclav Havel's bid for reelection was successfully blocked by a Slovak-led coalition. *Id.*

80. Juliet Serenyi, *Danube Project Sours*, CHRISTIAN SCIENCE MONITOR, Dec. 9, 1992, at 19.

81. *Prague Rulers Might Quit Over Dam Dispute*, N.Y. TIMES, Oct. 28, 1992, at A4.

82. 1996 WORLD ALMANAC, *supra* note 16, at 757-58. The Danube does not flow through the Czech Republic, and none of the Gabčíkovo project works were to be built upon or directly affect Czech soil.

When the Czech and Slovak Federated Republic split into the Czech Republic and the Slovak Republic, each of the new states stated that it considered itself bound by the treaty obligations of Czechoslovakia. For a more detailed discussion of the problem of succession to the treaties of Czechoslovakia, see generally Paul R. Williams, *The Treaty Obligations of the Successor States of the Former Soviet Union, Yugoslavia, and Czechoslovakia: Do They Continue in Force?*, 23 DENV. J. INT'L L. & POL'Y 1 (1994).

The large supply of water stored in the thick gravel stratum of the interinsular area of the Danube (Szigetkoz) could serve as a significant water reserve for the capital. However, the main riverbed will be contaminated by large quantities of organic matter and therefore this potential water reserve will be undermined.

Because the dam is to be run at full capacity, the day-to-day fluctuation of the water level will be significant. This will inconvenience shipping and cause environmental damage. The area around Gyor will be particularly affected, because the sewage water of the town will drift back across the mouth of the Moson branch of the Danube.

The flow of water will be slowed, leading to deterioration of water quality and indirectly to pollution of the water in riverside filter systems on the drained stretch as well as between Nagymaros and Budapest. Settling mud will also affect water production unfavorably.

The output of the northern water production plants of the Capital Waterworks between Budapest and Nagymaros would suffer, both qualitatively and quantitatively, through the dredging (bed rearrangement) to be done below Nagymaros.

Because of the impoundment at Nagymaros, there is a danger that the Danube will pollute the karst water reserves of the trans-Danubian mountain range (which supplies 35 settlements with water).⁸³

Only the last two of these concerns, relating to the impoundment of water at Nagymaros and the dredging below it, were partially eliminated by Hungary's withdrawal from the project.

The potential fate of Gyor is more grim than Dr. Kovacs' terse description makes evident. Gyor sits at the confluence of four tributaries of the Danube. It has no sewage treatment plant. As the surge from Gabcikovo passes through, water will flow as much as 12 miles upstream along each of the tributaries, carrying raw sewage and industrial waste up and down the riverbanks.⁸⁴

The possible effects on sub-surface waters are also severe. The Szigetkoz aquifer, a gravel layer containing 14 cubic kilometers of clear water, lies under the area between Bratislava and Gyor.⁸⁵ Impoundment of water behind the Gabcikovo dam will force pollutants into the groundwater; the repeated surges will accelerate the process. The 40 cubic kilometers of water contained in the karstic limestone of the trans-Danubian range is even more vulnerable, since pollutants can enter the water quickly and directly through cracks in the limestone.⁸⁶ In addition, drying out the original riverbed and placing the water in a lined canal will lower the groundwater level by as much as six meters, drying out about 15,000 hectares of productive farmland and 4,000 hectares of forest.⁸⁷

The "decline in flora and fauna" of which Dr. Kovacs warned were already visible in the Szigetkoz wetland by July of 1993. A sign proclaiming a bird sanctuary stood above a cracked, dry creek bed; boats lay stranded on the bot-

83. Perczel & Libik, *supra* note 11, at 248. The Hungarian Declaration of Termination, *supra* note 17, also sets forth, in great detail, the harmful environmental effects resulting from the Gabcikovo-Nagymaros project and Slovakia's provisional solution.

84. Perczel & Libik, *supra* note 11, at 249.

85. *Id.*

86. *Id.* Six cubic kilometers of this water lie within Hungarian territory; more than 50% of Hungary's clear-water reserves are located in or near the Danube. *Id.*

87. *Id.* 15,000 hectares equals 37,065 acres; 4,000 hectares equals 9,884 acres.

tom.⁸⁸ Jozsef Kertesz, chief engineer in the regional water management office, stated "some say the Szigetkoz could last one year, which may be true for the trees, but I don't think it goes for the wildlife. We need very swift intervention to repair the damage."⁸⁹

F. Related Problems

In Slovakia, the environmental problems also have ethnic ramifications. The majority of the population of the Gabčíkovo region of Slovakia (75%) consists of ethnic Hungarians.⁹⁰ (Ethnic Hungarians comprise 11% of the population of Slovakia as a whole.)⁹¹ There is some indication that Hungary initially consented to the 1977 treaty in exchange for a Czechoslovakian agreement to stop closing Hungarian-language schools in Czechoslovakia.⁹²

As a consequence of the diversion of the Danube, the largely ethnic Hungarian villages of Dobrohošť, Vojca, and Bodiky would be isolated. While insist-

88. *Dispute Over Danube Dam Threatens Hungarian Wetlands*, N.Y. TIMES, July 11, 1993, at A10 [hereinafter *Dispute Over Danube Dam*].

89. *Id.*

90. Repercussions of the Power Station, *supra* note 10, at 3.

91. 1996 WORLD ALMANAC, *supra* note 16, at 816. Some Slovaks also fear that Hungary has expansionist designs on the ethnic Hungarian territory; in 1993, Slovak Premier Vladimir Meciar expressed fears for "peace on the southern border." George Jahn, *Slovak-Hungarian Tensions Burn Economic Bridges*, L.A. TIMES, Jan. 17, 1993, at A17. This fear has a historical basis; in 1938, with the connivance of the Third Reich, Hungary took the territory from Czechoslovakia and it was not returned until the end of World War II. For details, see CHARLES WOJATSEK, FROM TRIANON TO THE FIRST VIENNA ARBITRAL AWARD: THE HUNGARIAN MINORITY IN THE FIRST CZECHOSLOVAK REPUBLIC, 1918-1938, at 151-70 (1980). For a map showing the distribution of the ethnic Hungarian population before the breakup of the Austro-Hungarian Empire, see ISTVAN I. MOCSY, THE EFFECTS OF WORLD WAR I: THE UPROOTED 254 (1983); for a map showing the effect of the First Vienna Arbitral Award, see THE TIMES ATLAS OF WORLD HISTORY, *supra* note 4, at 269. Hungary also annexed Ruthenia, in Eastern Slovakia, which was in turn annexed by the U.S.S.R. after World War II and is now part of the Ukraine. *Id.* at 269, 274-75.

92. The problem arising from the presence of the Hungarian minority in Slovakia is essential to the Gabčíkovo-Nagymaros dispute, but does not directly involve questions of international freshwater law. The reasons for the conflict go back to the end of World War I.

The Czech Republic is land-locked, without navigable river access to the sea. (For a description of the sovereignty and development problems that can arise from this situation, see Kishor Uprety, *Landlocked States and Access to the Sea: An Evolutionary Study of a Contested Right*, 12 DICK. J. INT'L L. 401 (1994)). When the Austro-Hungarian Empire was carved up at Versailles and Trianon, Czech nationalists successfully argued for the creation of a Czechoslovakian state with access to the Danube, and thus to the sea. This incorporation of Magyar and Slovak territory into a Czech-dominated state created resentment among Slovaks and Hungarians.

Both banks of the Danube, however, were inhabited by Hungarians; giving the north bank to the new nation of Czechoslovakia inevitably resulted in the inclusion of a large number of ethnic Hungarians in the new state. After World War II, a one-to-one exchange of population took place between the two states. However, there were far more Hungarians in Slovakia than Slovaks in Hungary, so a large Hungarian minority remains in Slovakia. For a full (though scarcely impartial) discussion, see WOJATSEK, *supra* note 91; for a discussion of the impact of the minority issue on the Gabčíkovo-Nagymaros dispute, see Galambos, *supra* note 12; Paul R. Williams, *International Environmental Dispute Resolution: The Dispute Between Slovakia and Hungary Concerning Construction of the Gabčíkovo and Nagymaros Dams*, 19 COLUM. J. ENVTL. L. 1, 5-6, especially footnotes 5, 8-10 and accompanying text (1994).

The importance of the minority issue to the Gabčíkovo-Nagymaros dispute illustrates the impossibility of treating international freshwater law as though it exists in a vacuum, unaffected by other concerns. Conflicts, after all, are caused not by the water itself, but by the people who use it.

ing that the location of the Gabčíkovo project is unrelated to the ethnicity of the people who will be adversely affected, Slovakia has also repeatedly characterized internal opposition to the project as entirely the work of the Hungarian minority.⁹³ A letter to the European Parliament signed by 44 Slovakian academics and scientists accuses Hungary of "carrying on a global campaign" to alert the world to "the alleged suppression of the Hungarian minority[.]"⁹⁴ The immediately preceding paragraph of the letter, however, condemns "Mps for ethnic Hungarian parties in the Slovak parliament" for sending an indictment bill to the European Parliament "attempt[ing] for the umpteenth time and without providing any evidence whatsoever to attribute a variety of disastrous effects to the Gabčíkovo Project, including the destruction of the Danube's inland delta, its flora and fauna, of the underground [sic] drinking water reservoir, and the drying up of 50,000 ha of arable land etc."⁹⁵ Both sides have freely invoked the ethnic Hungarian minority in their arguments, heightening ethnic tensions in the region.⁹⁶ Slovakia has even used the environmental damage already done as an argument for continuing the project: "The territory occupied by the GNP [Gabčíkovo-Nagymaros Project] can no more be returned to its original productive state."⁹⁷

III.

OTHER MAJOR DIVERSION PROJECTS ON THE DANUBE

Since World War II, four major engineering projects have endeavored to change the course of the Danube: the Iron Gate dams, the Danube-Black Sea Canal, the Rhine-Main-Danube Waterway, and the Gabčíkovo-Nagymaros barrage system. In addition, numerous other flood control and hydroelectric projects, especially in Austria, have altered and restricted the river's flow.

A. *The Iron Gate*

The Danube has not always been navigable along its entire length. At one time, perhaps the most spectacular section of the Danube was a gorge along the border between Serbia and Romania, known in Serbia as the Djerdap and in Romania as the Portile de Fier (Iron Gate). Along this stretch, the Danube had carved a channel (Europe's deepest gorge) through the Carpathian Mountains, narrowing to 433 feet in width as it passed through a series of five cataracts. In

93. Repercussions of the Power Station, *supra* note 10, at 3.

94. Letter from Peter Danisovic, designer of the Gabčíkovo project, et al., to Egon Klepsch, President of the European Parliament, et al. (Apr. 1993) (copy on file with author) [hereinafter Danisovic Letter].

95. *Id.*

96. See generally George Jahn, *Slovak-Hungarian Tensions Burn Economic Bridges*, L.A. TIMES, Jan. 17, 1993, at A17. ("Into this relatively peaceful atmosphere, Slovak and Hungarian state television pour invective.")

97. Liska, *supra* note 8, at 11-12.

the 1890s, the two countries built a canal 1.5 miles in length, bypassing the Gate. Even so, boats had to be winched up the rapids.⁹⁸

After World War II, Romania and Yugoslavia began to take interest in the area's hydroelectric potential. In 1960, a Yugoslav-Romanian Mixed Commission issued a memorandum on the use of the waters of the Iron Gate region.⁹⁹ In 1964, the two countries agreed to a project similar in scope to the Gabcikovo-Nagyvaros project.¹⁰⁰ A number of structures were to be built in the three-

98. See Chelminski, *supra* note 20, at 32, 37-40. The legal regime of the Iron Gates region during the nineteenth and early twentieth centuries is described in the Treaty of Peace between Austria-Hungary, Bulgaria, Germany, Turkey, and Romania, May 7, 1918, art. 24(D), 223 Parry's T.S. 256, 264 [hereinafter Treaty of Bucharest].

Many of the other engineering projects along the Danube are also enormous in scope. For example, the Danube-Tisza-Becej-Tamis irrigation project, the result of more than three decades of work since 1947, drained 700,000 hectares of land, irrigated 80,000 hectares, contains 664 kilometers of navigable canals, and employs 10,000 people. The land reclamation is the largest undertaken in Europe since the end of World War II. 130,000,000 cubic meters of earth were moved during its construction, and 30 dams, 17 locks, and 84 bridges were built. See *Yugoslavia: Danube-Tisza-Danube Canal System*, BBC SUMMARY OF WORLD BROADCASTS, Feb. 28, 1980, Part 2: Eastern Europe. (Tisa is the Serbian spelling of Tisza.)

99. Final Act, *infra* note 100, art. I, 512 U.N.T.S. 12. Note that the page numbers given in this section for specific articles of the various Iron Gates treaties refer to the pages on which the English-language text is found. The English text is not official, however. The official text of the treaties is in Romanian and in the language formerly known as Serbo-Croatian.

100. The agreements concerning the Iron Gates project were contained in twelve separate documents, all signed at Belgrade on November 30, 1963:

- (1) Agreement Between the Socialist Federal Republic of Yugoslavia and the Romanian People's Republic Concerning the Construction and Operation of the Iron Gates Water Power and Navigation System on the River Danube, Nov. 30, 1963, Rom.-Yugo., 512 U.N.T.S. 18 [hereinafter Iron Gates Construction and Operation Treaty] (English text begins at 512 U.N.T.S. 42).
- (2) Convention Between the Government of the Socialist Federal Republic of Yugoslavia and the Government of the Romanian People's Republic Concerning the Preparation of Designs for the Iron Gates Water Power and Navigation System on the River Danube, Nov. 30, 1963, Rom.-Yugo., 512 U.N.T.S. 68 [hereinafter Iron Gates Design Treaty] (English text begins at 512 U.N.T.S. 94).
- (3) Convention Between the Government of the Socialist Federal Republic of Yugoslavia and the Government of the Romanian People's Republic Concerning the Execution of Works for the Iron Gates Water Power and Navigation System on the River Danube, Nov. 30, 1963, Rom.-Yugo., 512 U.N.T.S. 124 [hereinafter Iron Gates Works Treaty] (English text begins at 512 U.N.T.S. 152).
- (4) Convention Between the Government of the Socialist Federal Republic of Yugoslavia and the Government of the Romanian People's Republic Concerning Compensation for Damage Caused by the Construction of the Iron Gates Water Power and Navigation System on the River Danube, Nov. 30, 1963, Rom.-Yugo., 512 U.N.T.S. 184 [hereinafter Iron Gates Compensation Treaty] (English text begins at 512 U.N.T.S. 208).
- (5) Convention Between the Government of the Socialist Federal Republic of Yugoslavia and the Government of the Romanian People's Republic Concerning The Determination of the Value of Investments And Mutual Accounting In Connection with the Construction of the Iron Gates Water Power and Navigation System on the River Danube, Nov. 30, 1963, Rom.-Yugo., 513 U.N.T.S. 6 [hereinafter Iron Gates Investment Treaty] (English text begins at 513 U.N.T.S. 56).
- (6) Convention Between the Government of the Socialist Federal Republic of Yugoslavia and the Government of the Romanian People's Republic Concerning The Operation of the Iron Gates Water Power and Navigation System on the

kilometer stretch between Sip, Yugoslavia, and Gura Vaih, Romania, creating a long, narrow lake and flooding the Iron Gate.¹⁰¹ The waters of the Danube were to be impounded behind an overflow-spillway dam, with two locks to raise and lower ships.¹⁰² Power plants of equal size and capacity were to be installed on each side of the river with a combined generating capacity of 2 million kilowatts.¹⁰³ Up to 8,500 cubic meters of water per second would be discharged through the turbines of the hydroelectric plants.¹⁰⁴

The Gabcikovo-Nagyymaros and Iron Gates projects, both Cold War era undertakings between socialist nations, were similar in many respects. Both reflected the contemporary philosophy that domination of the environment was equivalent to "progress" and was an unalloyed blessing. As with the Gabcikovo-Nagyymaros project, the Iron Gates plan called for some work to be

River Danube, Nov. 30, 1963, Rom.-Yugo., 513 U.N.T.S. 110 [hereinafter Iron Gates Operation Treaty] (English text begins at 513 U.N.T.S. 126).

- (7) The Statute of the Mixed Yugoslav-Romanian Commission for the Iron Gates, Nov. 30, 1963, Rom.-Yugo., 513 U.N.T.S. 144 [hereinafter Statute of the Mixed Commission] (English text begins at 513 U.N.T.S. 154).
- (8) Protocol Concerning Crossing of the Yugoslav-Romanian State Frontier in Connexion With the Construction of the Iron Gates Water Power and Navigation System on the River Danube, Nov. 30, 1963, Rom.-Yugo., 513 U.N.T.S. 166 [hereinafter Protocol on Crossing the Frontier] (English text begins at 513 U.N.T.S. 184).
- (9) Protocol Concerning the Settlement of Certain Questions in Connexion with the Construction and Operation of the Iron Gates System, Nov. 30, 1963, Rom.-Yugo., 513 U.N.T.S. 208 [hereinafter Construction and Operation Protocol] (English text begins at 513 U.N.T.S. 220).
- (10) Exchange of Letters Constituting an Agreement Concerning Credit, Nov. 30, 1963, Rom.-Yugo., 513 U.N.T.S. 232 [hereinafter Letters Concerning Credit] (English text begins at 513 U.N.T.S. 238).
- (11) Exchange of Letters Constituting an Agreement Concerning the Adjustment of the Frontier on the Danube, Nov. 30, 1963, Rom.-Yugo., 513 U.N.T.S. 244 [hereinafter Letters on Adjustment of the Frontier] (English text begins at 513 U.N.T.S. 248).
- (12) Final Act, Agreement and other Acts Relating to the Establishment and Operation of the Iron Gates Water Power and Navigation System on the River Danube, Nov. 30, 1963, Rom.-Yugo., 512 U.N.T.S. 6 [hereinafter Final Act] (English text begins at 512 U.N.T.S. 12).

101. Iron Gates Construction and Operation Treaty, *supra* note 100, art. 2(A), 512 U.N.T.S. at 42; Iron Gates Design Treaty, *supra* note 100, Annex § 2.2, 512 U.N.T.S. at 110.

102. Annex to the Iron Gates Works Treaty, *supra* note 100, 512 U.N.T.S. at 180-82; Iron Gates Construction and Operation Treaty, *supra* note 100, art. 2, 512 U.N.T.S. at 42-44.

103. Iron Gates Construction and Operation Treaty, *supra* note 100, art. 2-3, 512 U.N.T.S. at 44. There are 8,760 hours in a 365-day year.

104. *Id.*, art. 3.

The duplication of locks and power stations may not have been optimally efficient, but was dictated by the fact that the Danube forms the border between Yugoslavia and Romania. The mutual reluctance to place all of the facilities in the territories of one partner was perhaps exacerbated by Cold War mistrust between Warsaw Pact and non-Warsaw Pact nations, even where both were ostensibly socialist. (Somewhat ironically, the Treaty provides that "[a]ll values . . . shall be expressed in United States dollars[.]" Iron Gates Construction and Operation Treaty, *supra* note 100, art. 16, 512 U.N.T.S. at 58.) Thus, for example, "[t]he two power plants [were to] be provided with an equal number of units for the production of electric energy." Iron Gates Design Treaty, *supra* note 100, Annex § 4.5, 512 U.N.T.S. at 112.

performed by one sovereign in the territory of the other.¹⁰⁵ Also, as with the Gabcikovo-Nagymaros project, the construction of the Iron Gates project altered the border between the two contracting states, although less dramatically.¹⁰⁶

The Iron Gates treaties contain some environmental provisions. The treaties provide for the construction of fishways to allow fish to travel around the dams and locks.¹⁰⁷ The parties made provisions to preserve the riparian lands,¹⁰⁸ to protect the storage lake from silting,¹⁰⁹ and to clean the bottom of the storage lake.¹¹⁰ The parties also made detailed provisions for compensation for damages caused by the project, including damage to agricultural and forest land¹¹¹ and harm to water supplies.¹¹² The treaties even included provisions for the protection of historic monuments.¹¹³

Although these various quasi-environmental concerns were included in the agreement, failure to comply would not delay the operation of the system.¹¹⁴ Unlike Gabcikovo-Nagymaros, however, the Iron Gates project was completed

105. Romania undertook to perform a certain amount of construction work on the dam, the river diversion works, and the regulation of the bed of the Danube downstream from the dam. Iron Gates Execution Treaty, *supra* note 100, art. 1(2), 1(3), 512 U.N.T.S. at 152. See also generally Protocol on Crossing the Frontier, *supra* note 100, 513 U.N.T.S. at 184.

106. See Letters on Adjustment of the Frontier, *supra* note 100, 513 U.N.T.S. at 248; Iron Gates Construction and Operation Treaty, *supra* note 100, art. 9, 512 U.N.T.S. at 48-50; see also Final Act, *supra* note 100, art. IV, 512 U.N.T.S. at 16.

107. Iron Gates Design Treaty, *supra* note 100, art. 3(1)(a), art. 4(1)(a), and Annex § 7, 512 U.N.T.S. at 96, 98, 114. The Annex states only that "[t]he design shall provide for fishways or other installations enabling fish to pass from the tail-bay to the head-bay and vice versa." *Id.* Much more detailed descriptions of the other structures are given, emphasizing their relative importance to the contracting parties. See also Iron Gates Investment Treaty, *supra* note 100, arts. 5.1, 6, 7.1, 14, 513 U.N.T.S. at 60, 62, 72; Iron Gates Operation Treaty, *supra* note 100, arts. 2.2, 4.1(g), 513 U.N.T.S. at 128, 132 (assigning the Joint Coordination Authority the task of "draw[ing] up a plan for joint action by [the Iron Gates Special River Administration and the Yugoslav and Romanian power authorities] to safeguard the interests of the fishing industry.")

108. *Id.* Annex § 10, 512 U.N.T.S. at 11. See also Iron Gates Investment Treaty, *supra* note 100, arts. 9, 10, 14, and Annex I.1 & 1.III, 513 U.N.T.S. at 66-72, 86, 90; Iron Gates Operation Treaty, *supra* note 100, art. 2, 513 U.N.T.S. at 128; Construction and Operation Protocol, *supra* note 100, 513 U.N.T.S. at 220.

109. *Id.* Annex § 11, 512 U.N.T.S. at 116-18. See also Iron Gates Investment Treaty, *supra* note 100, art. 9, and Annex 1.III.2, 513 U.N.T.S. at 66-70, 90; Iron Gates Operation Treaty, *supra* note 100, art. 2, 513 U.N.T.S. at 128; Construction and Operation Protocol, *supra* note 100, art. 1, 513 U.N.T.S. at 220.

110. *Id.* Annex § 13, 512 U.N.T.S. at 118; Iron Gates Investment Treaty, *supra* note 100, art. 9 and Annex 1.III.4, 513 U.N.T.S. at 66-68, 90; see also Preamble to Construction and Operation Protocol, *supra* note 100, 513 U.N.T.S. at 220. Such provisions, while they might have the incidental impact of protecting the environment in the region of the storage lake, were undoubtedly motivated by a desire to ensure a steady flow of water through the turbines and prolong the useful life of the dam rather than by any nascent environmental concerns.

111. See Iron Gates Compensation Treaty, *supra* note 100, 512 U.N.T.S. at 208.

112. *Id.* Annex § F(34), 512 U.N.T.S. at 230. See also Iron Gates Investment Treaty, *supra* note 100, arts. 9, Annex 1.III.1.4, 513 U.N.T.S. at 66-70, 90.

113. *Id.* Annex § G (36-38), 512 U.N.T.S. at 232; Final Act, *supra* note 100, art. V, 512 U.N.T.S. at 16; Iron Gates Design Treaty, *supra* note 100, art. 4(1)(b), 512 U.N.T.S. at 98; Iron Gates Investment Treaty, *supra* note 100, arts. 9, 14, and Annex 1.II.5.7, 513 U.N.T.S. at 66, 70, 72, 92.

114. *Id.* art. 41, 512 U.N.T.S. at 178.

and put into operation in 1972, only slightly behind schedule.¹¹⁵ The project was later augmented by a second dam (Iron Gate II) downstream from the original.

Another similarity between the two projects is that in each case one of the contracting states no longer exists. Yugoslavia has broken up into a number of independent states, none of which is a clear successor to the treaty rights and obligations of the former Yugoslavia. The Iron Gates project now lies entirely along the border between Romania and Serbia. Furthermore, the plenipotentiary who signed the Iron Gates treaties for Yugoslavia was Bogoljub Stojanovic, then a member of the Executive Council of Serbia.¹¹⁶ Thus, it seems logical that the successor to Yugoslavia's rights and obligations under the Iron Gates treaties would be the rump state variously known as Serbia, Serbia-Montenegro, and the Federal Republic of Yugoslavia.¹¹⁷

The emerging "Law of the River" remains subject to modification and control by at least one external body, however. In 1991 and 1992, the United Nations Security Council imposed a series of sanctions upon Serbia-Montenegro. Security Council Resolution 757 imposed sanctions on Serbian-Montenegrin shipping.¹¹⁸ When the riparian states of the Danube argued that the Belgrade Convention¹¹⁹ guaranteed freedom of navigation on the Danube, the U.N. Yugoslavia Sanctions Committee responded that the U.N. Charter required the states to implement the sanctions "notwithstanding the existence of any rights or obligations under any other international agreement."¹²⁰ Following this declaration, the lower riparian states of the Danube began enforcing sanctions against Serbian-Montenegrin shipping on the Danube.

The Sanctions Committee also called upon Romania to prohibit the passage of Serbian-Montenegrin ships through the Iron Gates.¹²¹ Romania refused to do so, on the grounds that the Serbian-Montenegrin ship traffic did not constitute the provision of services under Resolution 757, since Serbia-Montenegro was charged no tolls for use of the locks.¹²² The Construction and Operation

115. Chelminski, *supra* note 20, at 38. The treaty called for the first units of the power plants to come into operation in 1970 and for the entire system to come on-line in 1971. Iron Gates Construction and Operation Treaty, *supra* note 100, art. 17, 512 U.N.T.S. at 60.

116. Final Act, *supra* note 100, art. I, 512 U.N.T.S. at 12.

117. Note that both the United Nations and the United States not only refuse to recognize this state, but explicitly reject its claim to be the continuation of the former Yugoslavia. See Williams, *supra* note 82, at 29.

118. S.C. Res. 757, U.N. SCOR, 3082nd mtg., U.N. Doc. S/Res/757 (1992).

119. Convention Regarding the Regime of Navigation on the Danube, Aug. 18, 1948, 33 U.N.T.S. 201. See *infra* notes 202-06 and accompanying text.

120. Michael P. Scharf and Joshua L. Dorosin, *Interpreting U.N. Sanctions: The Rulings and Role of the Yugoslavia Sanctions Committee*, 19 BROOK. J. INT'L L. 771, 804 (1993) (citing U.N. Charter, arts. 28, 48, 103, quoting Letter from Jose Ayala Lasso, Chairman of the U.N. Yugoslavia Sanctions Committee, to M. George Chirila, Permanent Mission of Romania to the United Nations (Aug. 26, 1992)(U.N. Doc. S/AC.27/1992/OC.592)).

121. *Id.* at 805.

122. *Id.* at 807. Romania's refusal was not based on abstract legalities, however, but on the vulnerability of its own shipping and its portion of the Iron Gates works to Serbian retaliation. See *id.* at 806-07. Serbia-Montenegro had retaliated against Romania's detention of Serbian-Montenegrin vessels by seizing Romania's vessels, blockading the Romanian lock at Iron Gate II,

Treaty provides that “[e]ach Contracting Party [shall] refrain from any action which might hinder the use of structures and works of the Iron Gates System belonging to the other Party.”¹²³ Even if Serbia-Montenegro has succeeded to the rights and obligations of the former Yugoslavia under the Iron Gates treaties, Romania is still obligated to comply with the sanctions by closing the locks to Serbian traffic under Resolution 757 and Article 103 of the Charter of the United Nations.¹²⁴

B. *The Danube-Black Sea Canal*

The other two great engineering projects on the Danube, the Danube-Black Sea canal and the Rhine-Danube canal, are less international in character. While they may affect the other riparians, the works of each project lie entirely within the boundaries of a single country. In the case of the Danube-Black Sea canal, that country is Romania. At Cernavoda, the Danube curves to within 40 miles of the Black Sea coast, then meanders another 200 miles or more to the mouth of its multi-channeled delta along the Ukrainian border. The canal, which connects Cernavoda directly to the sea, can thus shorten shipping times significantly.

In a market economy, the canal probably would not have made economic sense. Economic concerns were irrelevant, however, to Nicolai Ceausescu, Eastern Europe's most eccentric and egomaniacal dictator. The canal, built by political prisoners and military conscripts, was completed in 1984. A publicity brochure described it as “the most representative of the great constructions of our country's period of powerful expansion — the Ceausescu Epoch.”¹²⁵ Ceausescu planned to connect Bucharest to the sea with a second canal. Before it could be built, however, Ceausescu was overthrown and executed.¹²⁶

C. *The Rhine-Danube Canal*

The Rhine-Danube Canal lies entirely within the borders of Germany. The dream of linking Europe's two great rivers, providing a navigable inland waterway from the North Sea to the Black Sea, dates back at least twelve centuries. In 793 A.D., Charlemagne attempted to connect tributaries of the two river systems with a three-mile canal, the Fossa Carolina. The project was abandoned after only two months; because of the difference in elevation between the two

and threatening to blow up the levee at Prahovo, changing the course of the Danube to Romania's detriment. *Id.*

Front-line states, of course, are always in a peculiarly difficult situation with regard to the enforcement of internationally imposed sanctions. Such states stand to suffer the most from lost trade, and also bear the brunt of any retaliatory measures taken by the sanctioned state.

123. Iron Gates Construction and Operation Treaty, *supra* note 100, art. 10(7), 512 U.N.T.S. at 52.

124. The Sanctions Committee, while not specifically mentioning the Iron Gates treaties, continued to take the stance that the obligation of member states to comply with Security Council resolutions took precedence over any prior treaty obligations. Scharf & Dorosin, *supra* note 120, at 807 (citing S.C. Res. 820, U.N. SCOR, 3200th mtg. at 3, U.N. Doc. S/Res/820 (1993)).

125. Chelminski, *supra* note 20, at 39.

126. *Id.*

tributaries, Charlemagne was unable to make the canal navigable. The remains of the Fossa Carolina, however, can still be seen today.¹²⁷

Charlemagne's ambition was realized in the nineteenth century. In 1837, Bavaria's King Ludwig I ordered the construction of a canal from Bamberg to Kelheim. It was completed in 1845. With 101 narrow (only 16 feet wide) locks, the Ludwigskanal was unable to compete effectively with the railroads being built at the same time. It continued to function, however, until World War II.¹²⁸

In 1921, the German national and Bavarian governments formed a company to build a canal to replace the Ludwigskanal. The company, Rhein-Main-Donau AG, spent the next 70 years improving and replacing the existing waterway. Even more ambitious in scope than the Gabčíkovo-Nagymaros project, the Rhine-Main-Danube canal system covers 420 miles. It includes a 103-mile canal with 16 locks linking the Main (a tributary of the Rhine) near Bamberg to the Danube at Kelheim, as well as canalization of portions of the Main, Danube, and Altmühl rivers, and several hydroelectric plants.¹²⁹

The Rhine-Main-Danube canal has been opposed and criticized by German environmentalists. The canal has caused meadows in the region to dry up, threatening many species of plants and animals. Most outrageously, the canal runs through the Altmühl *Naturpark*, Germany's largest. While Rhein-Main-Danube AG has apparently been conscientious in taking environmental concerns into account and in landscaping the canal to match its surroundings, the fact remains that a canal is not a river.¹³⁰ It may be in better taste than its counterparts in Eastern Europe, but, however much the canal may blend aesthetically with its surroundings, a project of this scope cannot help but have deleterious effects on nature. These effects are long-lasting, as the remains of the Fossa Carolina prove.¹³¹ The canal's proponents also point out that the canal can alleviate pollution of the Main by bringing in cleaner water from the Danube. Opponents respond that the same goal could be accomplished with a small pipeline rather than a large canal, and that a more constructive solution might be to dump less pollution into the Main.¹³²

127. Bill Bryson, *Main-Danube Canal Linking Europe's Waterways*, 182 NAT'L GEOG. 3, 9 (1992).

128. Chelminski, *supra* note 20, at 38.

129. Bryson, *supra* note 127, at 10-11 (map); Chelminski, *supra* note 20, at 40.

130. Professor Klaus Giessner, of the Catholic University of Eichstatt, dismisses the company's efforts as "mere landscape cosmetics," saying "[s]uperficially it may look attractive, but the natural dynamism is being destroyed and that cannot be replaced." Bryson, *supra* note 127, at 27.

131. Note, however, that Chelminski, *supra* note 20, and Bryson, *supra* note 127, are both lavish in their praise of the canal. Chelminski, and to a lesser extent Bryson, dismiss the concerns of the Greens and other German environmentalists as alarmist. Chelminski expresses enthusiasm over "the tourist prospects made possible by the canal." Chelminski, *supra* note 20, at 42. If the purpose of the canal is to provide a pleasant, subsidized ride for a handful of wealthy tourists, the German public's money has been poorly spent indeed.

132. Bryson, *supra* note 127, at 27-30. The Danube has also been used as a dumping-ground for polluted water from other rivers. For example, Vojvodina (Serbia) has diverted polluted water flowing from Romania down the Tamis (a tributary of the Danube) directly into the Danube in order to protect the lower reaches of the Tamis. *Yugoslav Measures to Curb River Pollution from Romania*, BBC SUMMARY OF WORLD BROADCASTS, Aug. 10, 1989, Part 2: Eastern Europe.

As with the Danube-Black Sea Canal, the Rhine-Main-Danube Canal probably does not make economic sense. For seventy years, various German governments have provided interest-free loans to Rhein-Main-Donau AG, at incalculable cost.¹³³ The building of the canal has been financed by profits from the power stations — in other words, by Germany's ratepayers.¹³⁴

Nor does the canal seem likely to turn a profit now that it has been built. It takes 23 to 30 days to travel from the North Sea to the Black Sea through the Rhine-Main-Danube waterway, and some of that travel is through unstable or war-torn countries.¹³⁵ In contrast, it takes only six days to travel between the same points through the Straits of Gibraltar, the Dardanelles, and the Bosphorus.¹³⁶ In order to show a profit, the canal will have to carry a minimum of 22 million tons of freight per year.¹³⁷ In the mid-1980s, before the destabilization of Eastern Europe, even the company's most optimistic estimates were that the canal would carry 11 million tons.¹³⁸ The days when canal-building was profitable were already passing when King Ludwig I began building his canal. The operators of the Ludwigskanal made more money from fishing rights and from renting out land along the canal's banks than they ever made from the canal itself.¹³⁹

IV.

THE PARTIES AGREE TO SUBMIT THE DISPUTE TO THE ICJ

The Gabčíkovo-Nagymaros project surpassed the other three in the amount of domestic and international tension it created. On October 28, 1992, Hungary and Czechoslovakia finally agreed to set up a trilateral fact-finding commission, composed of experts from Slovakia, Hungary, and the EC Commission.¹⁴⁰ Czechoslovakia agreed to stop work on the provisional solution, refrain from operating the Gabčíkovo power plant, and maintain at least 95 percent of the traditional flow of the Danube throughout its old riverbed. The fact-finding commission was to deliver a report no later than October 31. The parties also

133. See Bryson, *supra* note 127, at 25. In fact, given the vicissitudes to which Germany's currency has been subject over the last seventy years, it is probably impossible to calculate the total cost of the project. See *id.*

134. *Id.* at 16. Although the company refers to the canal as "self-financing," this use of surplus profits amounts to a subsidy of fifty-five million marks per year from the electricity users of the region. *Id.* (In May, 1995, one Deutschmark was worth \$0.72 U.S. 1996 WORLD ALMANAC, *supra* note 16, at 766.)

135. Bryson, *supra* note 127, at 27.

136. *Id.* Chelminski puts the time for the Atlantic-Mediterranean voyage at two weeks. Chelminski, *supra* note 20, at 42.

137. Bryson, *supra* note 127, at 27 (quoting Professor Eugen Wirth, University of Erlangen-Nurnberg).

138. *Id.* Professor Wirth thinks that a reasonable estimate would have been three million tons per year, even before the collapse of communism in Eastern Europe. *Id.*

139. *Id.* at 13 (quoting Dieter Hackl, director of Regensburg harbor).

140. London Agreement on the Gabčíkovo-Nagymaros Project, Oct. 28, 1992, Czechoslovakia - Eur. Comm'n - Hung., 32 I.L.M. 1291 (1993) [hereinafter London Agreement].

expressed their commitment to submit the Gabčíkovo-Nagymaros dispute to binding international arbitration or to the International Court of Justice (ICJ).¹⁴¹

Czechoslovakia, and after January 1, 1993, Slovakia, continued to divert the waters of the Danube.¹⁴² On April 7, 1993, Hungary and the newly-independent Slovak Republic entered into an agreement to submit the dispute to the ICJ. The agreement entered into force on June 28.¹⁴³ The parties agreed to accept the judgment of the ICJ as final and binding.¹⁴⁴ They also agreed to "establish and implement a temporary water management regime for the Danube," pending the outcome of the case.¹⁴⁵

On July 14, 1993, the ICJ ordered each of the parties to submit a Memorial by May 2, 1994, a Counter-Memorial by December 5, 1994, and a Reply within a time limit to be set.¹⁴⁶ The Memorials and Counter-Memorials were duly filed, and on December 20, 1994, the ICJ set June 20, 1995, as the deadline for filing the Replies.¹⁴⁷ The parties duly filed the Replies on that date.¹⁴⁸

Hearings on the dispute began on March 3, 1997.¹⁴⁹ In the meantime, the papers filed by the parties are unavailable for examination, and the parties have agreed not to discuss their arguments publicly.¹⁵⁰ The parties also continued negotiations in an attempt to reach an out-of-court settlement.¹⁵¹

The International Court of Justice will make its decision in the Gabčíkovo-Nagymaros dispute in a relative vacuum of authority. Its ruling will thus have a profound impact on the customary international law of transboundary watercourses.

In order to understand the importance and impact of the Court's decision, it is necessary to examine the historical development and current state of the Law

141. *Id.* para. 5.

142. *Dispute Over Danube Dam*, *supra* note 88.

143. Special Agreement for Submission to the International Court of Justice of the Differences Between Them Concerning the Gabčíkovo-Nagymaros Project, Apr. 7, 1993, Hung.-Slovakia, 32 I.L.M. 1293 (1993) [hereinafter Special Agreement].

144. *Id.* art. 5.

145. *Id.* art. 4.

146. Gabčíkovo-Nagymaros Project (Hung. v. Slov.) 1993 I.C.J. 319 (July). The time limits were to be calculated from the date of notification of the Special Agreement to the Registrar of the Court.

147. Gabčíkovo-Nagymaros Project (Hung. v. Slov.) 1994 I.C.J. 151 (December).

148. Peter H.F. Bekker, *The 1995 Judicial Activity of the International Court of Justice*, 90 AM. J. INT'L L. 328, 329 (1996).

149. *Hungary, Slovakia before International Court of Justice over Dam*, AGENCE FRANCE-PRESSE, Mar. 3, 1997, available in 1997 WL 2069687.

150. Letter from Jan Orlovsky, Political Officer at the Embassy of the Slovak Republic to the United States, to author (Apr. 15, 1996)(on file with author). The Slovak suit alone runs to 12,000 pages. *Id.*

151. *Visegrad States Should Join European Union Simultaneously: Horn*, AGENCE FRANCE-PRESSE, June 12, 1996, available in 1996 WL 3870214. While a settlement would doubtless be simpler for the parties involved, and is thus desirable, it would deprive international jurisprudence of the benefit of the I.C.J.'s opinion in the matter.

The four Visegrad states (the Czech Republic, Hungary, Poland, and Slovakia) are the four member states of the Central European Free Trade Agreement, Dec. 21, 1992, I.E.L. V-0011, 34 I.L.M. 3 (1995). The historic castle at Visegrad, where the representatives of the four states first met to discuss the CEFTA, sits across the Danube from Nagymaros.

of the River and of international freshwater law. Unless the Court decides the case *ex aequo et bono*,¹⁵² it will base its decision on the existing treaty regime governing the Danube¹⁵³ as well as the existing body of customary international law governing the non-navigational uses of transboundary rivers.¹⁵⁴

Three questions are before the Court. The first question is whether Hungary was entitled to suspend and subsequently abandon work on the Gabčíkovo-Nagymaros project, after it had committed itself by treaty to perform such work.¹⁵⁵ The second question is whether Czechoslovakia (and, by extension, Slovakia) was entitled to implement its provisional solution.¹⁵⁶ The third question concerns the legal effect of Hungary's unilateral termination of the treaty.¹⁵⁷ The parties also asked the Court to determine the legal consequences arising from its judgment on these three questions.¹⁵⁸ The third question does not touch directly on the law of international watercourses. Instead it involves the termination of treaties under international law and the doctrine of *rebus sic stantibus*.¹⁵⁹

V.

TREATIES AND INTERNATIONAL AGREEMENTS GOVERNING THE USE OF THE WATERS OF THE DANUBE

There is a considerable body of treaty law governing the uses of the waters of the Danube. While these treaties are concerned primarily with navigation, the defining of borders, and undertakings such as the Iron Gates and Gabčíkovo-Nagymaros projects, they also contain a few environmental provisions.¹⁶⁰

152. See *supra* note 1.

153. See *infra* notes 161-239 and accompanying text.

154. See *infra* notes 242-354 and accompanying text.

155. Special Agreement, *supra* note 139, art. 2(1)(a), 32 I.L.M. at 1295.

156. *Id.* art. 2(1)(b), 32 I.L.M. at 1295. For a description of the provisional solution, see *supra* notes 61-82 and accompanying text.

157. *Id.* art. 2(1)(c), 32 I.L.M. at 1295.

158. *Id.* art. 2(2), 32 I.L.M. at 1295. Presumably, this includes an award of damages by the court.

There is the possibility of procedural changes as well. Dinah Shelton, for example, argues that the Gabčíkovo-Nagymaros case "exemplifies the need for amicus procedures and is the landmark case in which the Court should either accept amicus briefs or use nongovernmental organizations as independent experts to assess the facts, pursuant to Article 50 of the Statute of the International Court of Justice. Dinah Shelton, *The Participation of Nongovernmental Organizations in International Judicial Proceedings*, 88 AM. J. INT'L L. 611, 625 (1994). Also, for the first time in its history, the Court will be conducting an on-site investigation. *Updates with Hungary Launching its Case*, AGENCE FRANCE-PRESSE, Mar. 3, 1997, available in 1996 WL 2069885.

159. For a detailed discussion of this specific issue, see Williams, *supra* note 82, at 21-35. For an in-depth treatment of the doctrine of *rebus sic stantibus*, see ATHANASSIOS VAMVOUKOS, *TERMINATION OF TREATIES IN INTERNATIONAL LAW: THE DOCTRINES OF REBUS SIC STANTIBUS AND DESUETUDE* (1985).

160. For a detailed chronology of the Danube treaty regime, see Ludwik A. Teclaff, *Fiat or Custom: The Checkered Development of International Water Law*, 31 NAT. RESOURCES J. 45, 51-56 (1991). See also Costa, *supra* note 5.

The decision of the Permanent Court of International Justice in the European Danube Commission case contains an even more detailed history of the international law governing navigation on the Danube through 1927. P.C.I.J. Danube Commission Case, *supra* note 2, at 143-52, 188-90

A. *Before World War I*

In nineteenth-century Europe, environmental preservation for its own sake was rarely a goal of government policy. The quasi-environmental provisions which appear in the Danube treaties from that period were primarily intended to preserve the river's navigability and to prevent the introduction of diseases from Turkey to Europe. For example, vessels were forbidden to discharge ballast into the Sulina channel (at the lower end of the river) or onto the road alongside the channel; in the Black Sea near Sulina, ballast could only be dumped where the depth of the sea exceeded 10 fathoms (60 feet).¹⁶¹ Upstream from Sulina, ballast could only be discharged at designated points on the river bank.¹⁶² These prohibitions were enforced by a rule requiring vessels carrying ballast upriver to maintain a certificate showing the amount of ballast on board when departing from Sulina and documents recording any lawful discharges of ballast.¹⁶³ Every prohibited discharge of ballast was punishable by a fine.¹⁶⁴ Double fines could be imposed for repeat offenses, and the offender could be held liable for damages caused by the violation, independent of any fine paid.¹⁶⁵ Captains of vessels were held personally responsible for all offenses committed by their crews.¹⁶⁶

A similar concern with the protection of navigation, rather than water quality, can be seen in the restrictions applied to discharges of ash and cinders from steam-powered vessels.¹⁶⁷ While these substances, in comparison to inert ballast, were likely to have more noticeable effects on the environment in the area where they were dumped, no special provisions were made to account for these effects. Nor is there any requirement in the Public Act of 1865 or in the European Commission Regulations of 1881 to ensure that discharged cinders and ash

(Nyholm, J., concurring), 193, 195 (Moore, J., concurring), 196-219, 220-21 (Negulesco, J., dissenting).

The P.C.I.J. decision also contains a comprehensive bibliography of legal and diplomatic documents concerning the regime of navigation on the Danube, useful to researchers in this area. *Id.* Annexes I-IV, at 227-35.

161. Public Act of the European Commission of the Danube Relative to the Navigation of the Mouths of the Danube, Nov. 2, 1865, Annex A, art. LXIV, 131 Parry's T.S. 399, 422-23 [hereinafter Public Act of 1865]; Regulations of Navigation and Police Applicable to the Danube Between Galatz and the Mouths, Drawn up by the European Commission of the Danube, May 19, 1881, arts. 26, 73, 158 Parry's T.S. 245, 250-51, 259 [hereinafter European Commission Regulations of 1881].

162. Public Act of 1865, *supra* note 161, Annex A, art. LXIV; European Commission Regulations of 1881, *supra* note 161, art. 73. Heaps of discharged ballast had to be located at least 20 feet from the edge of the river, and could be no more than four feet in height. European Commission Regulations of 1881, *supra* note 161, art. 73; Public Act of 1865, *supra* note 161, Annex A, art. LXIV.

163. European Commission Regulations of 1881, *supra* note 161, art. 74.

164. Under the Public Act of 1865 the fine ranged from 10 to 50 ducats. Public Act of 1865, *supra* note 161, Annex A, art. XCIX. Under the 1881 Regulations, the fine ranged from 100 to 500 francs. European Commission Regulations of 1881, *supra* note 161, art. 131. The Regulations imposed an additional penalty of 30 to 100 francs for violations of the paperwork requirement contained in article 74. *Id.* art. 129.

165. European Commission Regulations of 1881, *supra* note 161, art. 148-49.

166. Public Act of 1865, *supra* note 161, Annex A, art. CVII.

167. *Id.*, Annex A, art. LXIV; European Commission Regulations of 1881, *supra* note 161, art. 73.

contained no live coals; either forest fire was not a concern, or (more probably) the designated sites were deemed sufficiently fireproof. Under the Public Act of 1865, a distinction was made between fines imposed for unlawfully discharging ballast and for unlawfully discharging cinders or ashes, with the fine for the latter being set at only 5 ducats.¹⁶⁸

The conflict between navigational and non-navigational uses of the river was already apparent in the nineteenth-century treaties. Although power generating projects on the scale of the Gabčíkovo-Nagymaros plant were unheard of along the nineteenth-century Danube, the river's energy was already being utilized to power land-based industry on a much smaller scale. Much of the river traffic was hauled by animal or even human power, necessitating the construction and maintenance of towing paths along the river's banks. The European Commission Regulations of 1881 reflected this early conflict between different uses of the river, forbidding "[t]he establishment in the river, and especially near the banks, of boat-mills, irrigating wheels, and other similar constructions" without authorization from the river police.¹⁶⁹

Wood, like animal power, was still an important source of energy, as well as a building material. The Danube treaties anticipated considerable logging along the river; the Public Act of 1865 provided that part of Turkey's payment for the dredging of the Sulina channel would be in the form of standing timber to be cut and used in the works.¹⁷⁰ The navigation treaties and regulations also contain numerous provisions regulating the draft of rafts and floats of logs, in order to prevent blockage of the navigable channel.¹⁷¹

The transport and use of hazardous substances was also regulated, although with more of an eye toward protecting other vessels than toward protecting the river from pollution. In the port of Sulina, vessels carrying petroleum were permitted to anchor only in the lower part of the port, below all other vessels. Vessels carrying explosive material were prudently located at the upper end of the port, as far away from the petroleum-carrying vessels as possible. Vessels

168. Public Act of 1865, *supra* note 161, Annex A, art. XCIX. While the environmental harm that might result was potentially greater, the potential harm to navigation was less, since the ashes and cinders would have been lighter, of smaller size, and less in total volume, and thus more easily borne away by the current.

169. European Commission Regulations of 1881, *supra* note 161, art. 48.

170. Public Act of 1865, *supra* note 161, Annex to the Final Protocol: "[T]he Sublime Porte has authorized the European Commission to cut, in the forest of Dobrudcha, a part of the wood necessary for the works[.]" See also *id.* art. I.b (setting the price of the wood).

171. *Id.*, Annex A, arts. XXV (providing a maximum draft of 12 feet, or, when in the Sulina branch, one foot less than the shallowest shoal in the branch, whichever was less), XCIX (imposing fines for violations); European Commission Regulations of 1881, *supra* note 161, arts. 30 (requiring persons in charge of floats of wood to take the same precautions prescribed for vessels), 60-63 (providing a maximum draft in the Sulina channel of 9 feet, or two feet less than the shallowest shoal in the branch, whichever was less; setting maximum length and width; prohibiting floats of wood from navigating at night; and providing for the destruction of grounded rafts), 122-23 (requiring persons in charge of floats of wood to take every possible precaution to avoid interfering with the dredging and other works below Galatz), 130 (imposing fines for violations), 148 (providing double penalties for repeat offenses by the same owner within the same calendar year). Cf. Helsinki Rules, *infra* note 281, arts. XXI-XXV (dealing with timber floating).

carrying explosives were also required to show a red flag.¹⁷² Upon arriving at the port, vessels carrying petroleum or explosives were required to make an immediate declaration to the pilot before anchoring.¹⁷³ The European Commission Regulations of 1881 also forbade the heating of tar or pitch on board vessels in the port of Sulina; fumigation was permitted only when authorized by the Captain of the Port.¹⁷⁴

Other quasi-environmental measures related to quarantine. In general, the treaty regime provided that vessels in international transit on the river were to be free from quarantine and sanitary inspections.¹⁷⁵ Traffic moving downstream was to be "free from all sanitary control[.]" In the event of "contagious pestilence prevailing in the East[.]" however, vessels could be quarantined and cargoes subjected to sanitary inspection.¹⁷⁶ A similar quasi-environmental provision appears in an 1881 treaty between the two most powerful upper riparians.¹⁷⁷ Austria-Hungary and Germany were apparently not deeply concerned about the possibility of an epidemic along the upper Danube; however, they were concerned about the introduction of agricultural pests. The treaty permitted living plants to be carried across the frontier without inspection or duty, "provided that the general Regulations for preventing the introduction of noxious insects are not lost sight of[.]"¹⁷⁸ The two countries went on to express concern about "the protection of agriculture against the importation and spread of pernicious insects (such as the Reblaus and Colorado beetle)."¹⁷⁹

One of the primary problems of modern environmentalism and of environmental law is to internalize the traditionally external costs of environmental harm.¹⁸⁰ The quasi-environmental quarantine measures in the nineteenth-cen-

172. European Commission Regulations of 1881, *supra* note 161, art. 22.

173. *Id.* art. 21.

174. *Id.* art. 20. A curious additional feature of the Public Act of 1865 and the European Commission Regulations of 1881 is that they prohibit abusive language. Public Act of 1865, *supra* note 161, art. CIII; European Commission Regulations of 1881, *supra* note 161, art. 146: "Every instance of the use of abusive language or threats to the agents in charge of the navigation police or entrusted with the collection of dues. . . [including] contempt of the authority from which the said agents derive their power, is punished by a fine of 10 fr. at least, and 50 fr. at most."

175. Act for the Navigation of the Danube between Austria, Bavaria, Turkey, and Wurtemberg, Nov. 7, 1857, [hereinafter Danube Navigation Act of 1857], art. XXIX, 117 Parry's T.S. 471, 482 (French text).

176. Public Act of 1865, *supra* note 161, Annex A, art. XIX; *see also* arts. XVIII, XX; Danube Navigation Act of 1857, *supra* note 161, arts. XXVIII-XXX. *See also generally* Articles Between Austria, Bavaria, Turkey, and Wurtemberg Additional to the Act for the Navigation of the Danube [of] Nov. 7, 1857, Mar. 1, 1859, art. III, 120 Parry's T.S. 275, 277 (French text) [hereinafter Additional Articles]; European Commission Regulations of 1881, *supra* note 161, art. 4.

177. Treaty of Commerce, May 23, 1881 (Austr./Hung.-Germ.) [hereinafter Treaty of Commerce].

178. *Id.* Annex A, art. 3.

179. *Id.* para. 1. Article I of the Treaty of Commerce also allowed the contracting parties to restrict the movement of goods when required by "sanitary police considerations," and permitted each state to impose restrictions on the transport of "tobacco, salt, gunpowder, and other explosive materials."

180. This is what Garrett Hardin called the tragedy of the commons: if costs are not internalized, there is no economic incentive to avoid doing environmental harm; in fact, there is an incentive to engage in environmentally destructive behavior. Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244 (1968). Hardin's famous example is "a pasture open to all. It is to be

tury treaties differ from the provisions against dumping ballast, placing water wheels along the banks, and so forth, in that they are not primarily concerned with preserving the river's navigability. Rather, they appear designed to protect public health, an intangible asset which only indirectly benefits the users of the waterway. By partially internalizing this cost, the drafters of the nineteenth-century Danube navigation treaties were exhibiting some of the first signs of modern environmental awareness.¹⁸¹

B. Between the Wars

World War I brought about the demise of the three major riparian empires of the Danube — the Ottoman Empire, the German Empire, and the Austro-Hungarian Empire.¹⁸² In their place appeared what, ten years ago, might still have been a recognizable political map of Eastern Europe. The treaties of Versailles and Trianon, which ended World War I, made extensive provisions for the regime of navigation on the Danube, but said little about non-navigational uses of the river.¹⁸³ By 1921, the new navigation regime had been codified in

expected that each herdsman will try to keep as many cattle as possible on the commons . . . [H]e asks, 'What is the utility to me of adding one more animal to my herd?' This utility has one negative and one positive component."

The positive component benefits the herdsman alone, while the negative component is shared equally by all of the herdsmen. Thus, as long as there is more than one herdsman, it will always be to his individual benefit to over-exploit the commons. *Id.*

See also Rio Declaration, *infra* note 297, Principle 16; U.N. Convention, *infra* note 220, art. 2.5(b); Agenda 21, *infra* note 348, §§ 18.15, 18.40(b)(i); (all incorporating the "polluter pays" principle). It was precisely the lack of such a cost-internalizing mechanism in Communist Eastern Europe that made projects like Gabčíkovo-Nagymaros possible. In pre-1989 Hungary, government agencies competed with each other for funds, and thus had an incentive to manufacture evidence to support costly, inefficient projects. The system actually rewarded the most successful money-wasters. See Galambos, *supra* note 12, at 76. A related problem is that a project the size of Gabčíkovo-Nagymaros creates careers for a large number of people; in an undemocratic society, there are fewer mechanisms to prevent these people from carrying out useless and destructive projects in their own self-interest.

181. Of course, another, less idealistic motive might have been to provide a loophole through which to discriminate against Turkish trade, since there were no similar provisions allowing for quarantine and sanitary inspections of *downstream* traffic in the event of an epidemic in the West.

182. It also brought about the demise of the Russian Empire, a territorially minor but politically significant lower riparian. The loss of Bessarabia (to Romania) rendered the U.S.S.R. a non-riparian; the U.S.S.R. regained the territory after World War II, becoming a riparian again. THE TIMES ATLAS OF WORLD HISTORY, *supra* note 4, at 265, 269.

183. Treaty of Peace with Germany, June 28, 1919, arts. 331-39 (dealing with navigable international rivers generally), 346-53 (dealing with the Danube specifically), 225 Parry's T.S. 189, 355-57, 360-61 [hereinafter Treaty of Versailles]; Treaty of Peace between the Allied and Associated Powers and Hungary, June 4, 1920, arts. 120 (surrendering the Danube Flotilla), 275-91 (dealing with navigation on the Danube), 314 (binding Hungary to adhere to treaties regarding international transport concluded by the Allied and Associated powers within the coming five years), United States Senate: Treaties, Conventions, International Acts, Protocols, & Agreements 3539, 3666-70, 3670-71, 3679 [hereinafter Treaty of Trianon]. See also Treaty of Peace Between Austria-Hungary, Bulgaria, Germany, Turkey, and Romania, May 7, 1918, arts. 24-26 (dealing with the regime of navigation on the Danube), 223 Parry's T.S. 256, 263-64.

As part of the terms of its surrender, Hungary also undertook to remove mines in Hungarian waters as well as those floating downstream from Austria, and to assist the allies in the removal of other Austro-Hungarian mines in the Danube and Black Sea by communicating their location to the Allied commander-in-chief. Military Convention Under Which the Armistice Signed Between the

the Definitive Statute of the Danube.¹⁸⁴ These treaties, while not dealing to any great extent with environmental matters, did anticipate the Rhine-Main-Danube Canal¹⁸⁵ and, to a lesser extent, the Iron Gates works.¹⁸⁶

In comparison with the earlier treaties, the post-war treaties reflected less concern with quarantine and sanitary regulations; no distinction was now made between upstream and downstream traffic.¹⁸⁷ New environmental concerns began to appear, however, some of which have a direct bearing on the Gabčíkovo-Nagymaros dispute.

For many of the new states formed by the breakup of the Central Powers, the midpoint of the navigable channel of the Danube formed part of the frontier of state territory.¹⁸⁸ This left some hydroelectric plants and waterworks divided between two states. Article 292 of the Treaty of Trianon provided that:

an agreement [sic] shall be made between the States concerned to safeguard the interests and rights acquired by each of them. Pending an agreement, central electric stations and waterworks shall be required to continue the supply up to an amount corresponding to the undertakings and contracts in force on November 3, 1918.¹⁸⁹

Article 293 of the Treaty of Trianon dealt with non-navigational uses:

In view of the application of Article 292 to the territories of the former Kingdom of Hungary forming the Basin of the Danube, excluding the Basin of the Olt, as well as for the exercise of the powers provided for below, there shall be set up, in the common interest of the States possessing sovereignty over the territories in question, a permanent technical Hydraulic System Commission

This Commission shall bring about the conclusion, and supervise and, in urgent cases, ensure the carrying out, of the agreements provided for in Article 292; it shall maintain and improve, particularly as regards deforestation and afforestation, the uniform character of the hydraulic system, as well as of the services connected therewith, such as the hydrometric service and the service of information as to the rising of the waters. It shall also . . . give special consideration to fishery interests¹⁹⁰

Allies and Austria-Hungary is to be Applied in Hungary, Nov. 13, 1918, art. XIII, United States Senate: Treaties, Conventions, International Acts, Protocols, & Agreements 3537, 3538; *see also* Armistice Convention with Austria-Hungary, Naval Conditions, Nov. 3, 1918, art. 4, United States Senate: Treaties, Conventions, International Acts, Protocols, & Agreements 3529, 3531 (granting the Allied Powers the authority to remove the mines).

184. Convention Instituting the Definitive Statute of the Danube, July 23, 1921, 25 L.N.T.S. 173 [hereinafter *Definitive Statute*].

185. Treaty of Versailles, *supra* note 183, arts. 331, 353 (internationalizing any future Rhine-Danube waterway).

186. *Id.* art. 350 (abrogating Hungary's mandates to carry out works at the Iron Gates); Treaty of Bucharest, *supra* note 98, art. 25(D); Treaty of Trianon, *supra* note 183, arts. 288-89; Definitive Statute, *supra* note 184, art. 32.

187. Treaty of Trianon, *supra* note 183, art. 274; Arrangement and Final Protocol Relative to the Exercise of the Powers of the European Commission of the Danube, Aug. 18, 1938, art. 12, 196 L.N.T.S. 113, 119 [hereinafter *Treaty of Sinaia*].

188. *See, e.g.*, Treaty of Trianon, *supra* note 183, art. 27.

189. *Id.* art. 292.

190. *Id.* art. 293.

Article 293 is a revolutionary document in that it attempts to create a single unified authority for the non-navigational uses of an entire (or almost entire) drainage basin.¹⁹¹

The postwar treaties also provided a mechanism for compliance through "appeal to the tribunal instituted for this purpose by the League of Nations."¹⁹² Article 292 of the Treaty of Trianon also provided for arbitration in the event of a dispute arising from hydroelectric and waterworks uses of the waters of the Danube, with the arbitrator to be "appointed by the Council of the League of Nations."¹⁹³ Article 293, setting up the Hydraulic System Commission, provides somewhat vaguely that "[a]ny disputes which may arise out of the matters dealt with in this article shall be settled as provided by the League of Nations."¹⁹⁴ Later, after one such dispute was submitted to¹⁹⁵ and decided by¹⁹⁶ the Permanent Court of International Justice, the Treaty of Sinaia provided for arbitration as well.¹⁹⁷

The treaties anticipated the need to resolve disputes arising from conflicting non-navigational uses or from conflicts between navigational and non-navigational uses. The Treaty of Trianon provided that the tribunal resolving such conflicts would make "due allowance in its decision for all rights in connection with irrigation, water-power, fisheries, and other national interests, which, with the consent of all the riparian States or of all the States represented on the International Commission, shall be given priority over the requirements of navigation."¹⁹⁸ Thus, while the drafters at Trianon were, for the moment, preserving the preeminence of navigational uses, they acknowledged that non-navigational uses were increasing in relative importance and prepared a mechanism to allow a transition into a world in which rivers were primarily valued for their non-navigational uses.

C. After World War II

The Treaty of Paris, by which the Allies made peace with Hungary, reflected significantly less concern with the uses of the Danube, navigational or

191. Text omitted above also gives the Hydraulic System Commission authority to "study questions relating to navigation, excepting those falling within the competence of the Commission for regulating . . . the Upper Danube[.]" *Id.* In practice, this would have included very little.

192. Treaty of Versailles, *supra* note 183, art. 336; Treaty of Trianon, *supra* note 178, arts. 281, 292, 311.

193. Treaty of Trianon, *supra* note 183, art. 292.

194. *Id.* art. 293.

195. Agreement Concerning the Competence of the European Commission of the Danube, Sept. 18, 1926, Fr.-U.K.-Italy-Rom., 59 L.N.T.S. 237.

196. P.C.I.J. Danube Commission Case, *supra* note 2.

197. Treaty of Sinaia, *supra* note 187, art. 21.

198. Treaty of Trianon, *supra* note 183, art. 282. Article 282 also provides that "[a]ppeal to the tribunal of the League of Nations does not require the suspension of the works." *Id.* In the Gabčíkovo-Nagymaros dispute, however, Slovakia has agreed to suspend the operation of the Gabčíkovo works pending the I.C.J.'s resolution of the dispute. London Agreement, *supra* note 140, art. 1 & n.1.

otherwise, than did the Treaty of Trianon.¹⁹⁹ Whereas the Treaty of Trianon devotes twenty articles to the Danube,²⁰⁰ the Treaty of Paris contains a single "Clause Relating to the Danube," which provides that international traffic on the Danube shall be free and open for all nationals.²⁰¹

The postwar regime of navigation on the river added little in the way of environmental provisions. The previous navigation regime, in which one commission had had jurisdiction over the lower Danube and another commission over the upper and central Danube, was replaced with a single-commission system.²⁰²

The war had also brought about an important shift in the balance of power on the Danube. Four riparians — Bulgaria, Czechoslovakia, Hungary, and Romania — fell under the control of a fifth, the Soviet Union. The old non-riparian participants in the navigation regime (Britain, France, and Italy) were completely excluded from participation.²⁰³ The old European Commission was replaced by a lower Danube Special River Administration;²⁰⁴ another such Special River Administration was established for the Iron Gates.²⁰⁵

The Belgrade Convention established no Special River Administration for the Gabčíkovo-Nagymaros sector, but an annex to the Convention discussed the possibility of a special administration for the area from Gabčíkovo to Gonyu, Hungary, thirty kilometers downstream.²⁰⁶ This Special River Administration was established in 1968.²⁰⁷ Its jurisdiction extended from Gonyu to Rajka, about 30 kilometers upstream from Gabčíkovo.²⁰⁸ The treaty was a precursor to the Gabčíkovo-Nagymaros treaty.²⁰⁹ In addition to setting up a Special River Administration to deal with navigational uses, the Rajka-Gonyu Agreement provided for a "Mixed Czechoslovak-Hungarian Technical Commission" with responsibility "for the regulation of all water-management questions affecting the sector other than those directly connected with the maintenance of the fairway and the improvement of navigation conditions."²¹⁰ In a manner typical of Soviet-era treaties between Eastern European states, however, the Agreement made only the sketchiest provision for dispute resolution: "Any disputes arising out of

199. Treaty of Peace with Hungary, Feb. 10, 1947, 41 U.N.T.S. 135 (English text begins on page 168)[hereinafter Treaty of Paris].

200. Treaty of Trianon, *supra* note 183, arts. 274-93. In addition, Articles 268-73 deal with transit through Hungarian territory (including transit on the Danube), and Articles 27, 30, and 31 deal with the Danube and its tributaries as frontiers. The Treaty of Versailles, *supra* note 183, contains an additional 17 clauses relating to the Danube. *Id.* arts. 331-39 (general clauses relating to the Elbe, the Oder, the Niemen, and the Danube), 346-53 (special clauses relating to the Danube).

201. Treaty of Paris, *supra* note 199, art. 38. The Treaty also uses the Danube to define part of the border between Hungary and Czechoslovakia. *Id.* art. 4.

202. Convention Regarding the Regime of Navigation on the Danube, Aug. 18, 1948, 32 U.N.T.S. 181 [hereinafter Belgrade Convention] (English text begins at 32 U.N.T.S. 197).

203. *See id.* (Britain, France, and Italy are not parties to the Convention).

204. *Id.* art. 20.

205. *Id.* art. 21.

206. *Id.* Annex II.

207. Rajka-Gonyu Agreement, *supra* note 15.

208. *Id.* art. 3.

209. Gabčíkovo-Nagymaros Treaty, *supra* note 18.

210. Rajka-Gonyu Agreement, *supra* note 15, art. 20(1).

the application of this Agreement which are not settled by the Council shall be referred to the Contracting Parties for a decision."²¹¹

Other Danube-specific treaties dealt with the Iron Gates and Gabčíkovo-Nagymaros projects. The Iron Gates treaties contained provisions for the construction of fishways, the protection of water supplies, and the preservation of historic monuments. The Gabčíkovo-Nagymaros Treaty provided that "[t]he Contracting Parties shall ensure . . . that the quality of the water in the Danube is not impaired as a result of the construction and operation of the System of Locks."²¹² The parties also undertook to maintain "the bed of the Danube, including the old bed of the Danube,"²¹³ and to "take appropriate measures for the protection of fishing interests[.]"²¹⁴

At the same time, the postwar era saw a dramatic increase in the number of treaties dealing with specific environmental concerns, and the riparian states of the Danube, including Czechoslovakia (and later Slovakia) and Hungary, became parties to many of these agreements. In 1958, the lower riparian states undertook to protect fisheries in the Danube.²¹⁵ Hungary and Slovakia are also parties to several bilateral agreements with some provisions related to protection of freshwater resources, including the Convention Relating to the Settlement of Questions Arising Out of the Delimitation of the Frontier,²¹⁶ Treaty Concerning the Regime of State Frontiers,²¹⁷ Agreement Concerning the Settlement of Technical & Economic Questions Relating to Frontier Watercourses,²¹⁸ and, of course, the Gabčíkovo-Nagymaros treaty itself.²¹⁹ Hungary (but not Slovakia) is a party to the United Nations Convention on the Protection and Use of Transboundary Watercourses and International Lakes.²²⁰

The treaty regime protecting the Danube is far less comprehensive, however, than that protecting Europe's other great international river, the Rhine.²²¹ The Rhine treaty regime includes, *inter alia*, a treaty creating a multinational

211. *Id.* art. 21. See also Belgrade Convention, *supra* note 202, art. 45; Gabčíkovo-Nagymaros Treaty, *supra* note 18, art. 27. The absence of well-constructed dispute resolution procedures in these treaties has meant that the treaty regimes are helpless to deal with the differences arising between states in post-Soviet Eastern Europe.

212. Gabčíkovo-Nagymaros Treaty, *supra* note 18, art. 15.

213. *Id.* art. 16.

214. *Id.* art. 20.

215. Convention Concerning Fishing in the Waters of the Danube, Jan. 29, 1958, Bulg.-Rom.-U.S.S.R.-Yugo., 339 U.N.T.S. 58 [hereinafter Danube Fisheries Agreement].

216. Nov. 11, 1928, Czechoslovakia-Hung., 110 U.N.T.S. 427.

217. Oct. 13, 1956, Czechoslovakia-Hung., 300 U.N.T.S. 125 (English text begins at 300 U.N.T.S. 150). Article 18(2) prohibits dumping bark stripped from floating timber in the beds of frontier watercourses, while Article 19 prohibits construction projects in frontier waters except by agreement between the parties.

218. Apr. 16, 1954, Czechoslovakia-Hung., 504 U.N.T.S. 254.

219. Gabčíkovo-Nagymaros Treaty, *supra* note 18.

220. 31 I.L.M. 1599 (1992) [hereinafter U.N. Convention]. Article 2 of this Convention is cited in the Hungarian Declaration of Termination, *supra* note 17.

221. See Aaron Schwabach, *The Sandoz Spill: The Failure of International Law to Protect the Rhine from Pollution*, 16 *ECOLOGY L.Q.* 443, 458-66 (1989).

Commission charged with the protection of the river against pollution,²²² a treaty seeking to protect the river from chemical pollution, with detailed lists of prohibited and restricted pollutants,²²³ and a convention dealing with the specific problem of chloride pollution from the French potassium mines in Alsace.²²⁴ There are also regional treaty commissions charged with protecting specific tributaries or regions of the Rhine, such as the Saar, the Moselle, and Lake Constance.²²⁵ In addition to the various general international agreements applicable to the Danube, the Rhine is also protected to a large extent by European Union law, since most of the riparian states of the Rhine are also members of the EU.

D. Environmental Impact Assessment Legislation

Hungary and Slovakia are both parties to the Espoo Convention on Environmental Impact Assessment in a Transboundary Context.²²⁶ The Convention requires its parties to prepare environmental impact assessment documentation for proposed activities which "are likely to cause significant adverse transboundary impact."²²⁷ Among the activities listed as likely to cause adverse impact are "[l]arge dams and reservoirs"²²⁸ as well as "inland waterways . . . which permit the passage of vessels of over 1,350 tonnes."²²⁹ Even if the Gabcikovo-Nagymaros project did not fall within these categories, it would require environmental impact assessment documentation because of its size,²³⁰ the threat to wetlands, and the disruptive effect on the local population.²³¹

Thus, under the Espoo Convention, Slovakia would have been obligated to refrain from implementing the Provisional Solution until it had produced detailed environmental impact assessment documentation.²³² As part of this process, Slovakia should have notified and invited the participation of Hungary.²³³ After the documentation was produced, Slovakia should have "without undue delay enter[ed] into consultations with the affected Party" concerning ways (including abandoning the Provisional Solution) in which the adverse impact might

222. Vereinbarung über die Internationale Kommission zum Schutze des Rheins gegen Verunreinigung, Apr. 29, 1963, 994 U.N.T.S. 3 (Convention Concerning the International Commission for the Protection of the Rhine Against Pollution).

223. Convention for the Protection of the Rhine Against Chemical Pollution, Dec. 3, 1976, 16 I.L.M. 242 (1977).

224. Convention Relative à la Protection du Rhin Contre la Pollution par les Chlorures, Dec. 3, 1976, 16 I.L.M. 226 (1977) (Convention Relating to the Protection of the Rhine Against Pollution by Chlorides).

225. See Schwabach, *supra* note 221, at 460.

226. Convention on Environmental Impact Assessment in a Transboundary Context, Feb. 25, 1991, 30 I.L.M. 800 [hereinafter Espoo Convention]. By its terms, the Espoo Convention will enter into force ninety days after the sixteenth instrument of ratification is deposited. *Id.* art. 18.

227. *Id.* art. 2.

228. *Id.* App. I(11).

229. *Id.* App. I(9).

230. *Id.* App. III(1)(a).

231. *Id.* App. III(1)(b).

232. For a detailed description of the required documentation, see *id.* arts. 1(vi), 2(7), 4, & App. II.

233. *Id.* art. 3.

be reduced or eliminated.²³⁴ The Espoo Convention also provides for dispute resolution by arbitration, negotiation, or submission to the ICJ.²³⁵ In the Gabčíkovo-Nagymaros case, the parties have taken the latter route.

Despite being a signatory to the Espoo Convention, Slovakia had no domestic environmental impact assessment laws at the time of implementation of the Provisional Solution.²³⁶ Other than the environmental assessment required for the original siting permit, the builders were not required to prepare any environmental impact assessment for the Gabčíkovo-Nagymaros project.²³⁷ The builders were, however, required to protect water quality.²³⁸ Curiously, the builders of a large dam at Zilina, in the northwestern part of Slovakia, voluntarily conducted an environmental impact assessment.²³⁹

VI.

CUSTOMARY INTERNATIONAL LAW GOVERNING THE USE OF THE WATERS OF TRANSBOUNDARY RIVERS

*It would be no crime in me to divert the Nile or the Danube from its course, were I able to effect such purposes.*²⁴⁰

Even in the eighteenth century, when Hume made this rather extraordinary statement, he was almost certainly incorrect.²⁴¹ Customary international law has long recognized limits on the use and diversion of a river's waters. The exact nature and extent of those limits, however, are still somewhat unclear.

A. Sources of Customary International Law

Customary international law, in contrast to treaty law, is derived from the practice of states as international actors. Customary international law is perhaps best described as a set of normative expectations developed through observation of the reactions of states to international incidents²⁴² such as the Gabčíkovo-Nagymaros dispute.²⁴³

234. *Id.* art. 5.

235. *Id.* art. 15, & App. VII.

236. See EUROPEAN BANK FOR RECONSTRUCTION & DEVELOPMENT, ENVIRONMENTAL IMPACT ASSESSMENT LEGISLATION: CZECH REPUBLIC, ESTONIA, HUNGARY, LATVIA, LITHUANIA, POLAND, SLOVAK REPUBLIC, SLOVENIA 207 (1994) [hereinafter EIA LEGISLATION]. Environmental impact assessment legislation was scheduled for consideration by the Slovak parliament in 1994. *Id.*

237. See generally *id.*

238. *Id.* (summarizing provisions of Czechoslovakia's *Water Act*, No. 138/1973, and the regional Slovak government's *Act on the State Administration of Water Management*, No. 135/1974 and *Order Establishing Indices of Admissible Degrees of Water Pollution*, No. 30/1975).

239. *Id.*

240. DAVID HUME, *ESSAYS: MORAL, POLITICAL, AND LITERARY* 583 (Eugene F. Miller ed. 1985).

241. He was, of course, talking about something else (the ethics of suicide) at the time.

242. See generally W. Michael Reisman, *International Incidents: Introduction to a New Genre in the Study of International Law*, 10 *YALE J. INT'L L.* 1 (1984); *RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS LAW OF THE UNITED STATES* § 102 (1987).

243. One positive aspect of the Gabčíkovo-Nagymaros dispute is the parties' decision to submit the dispute to the I.C.J. for decision, in the spirit of art. XXXIV of the Helsinki Rules, *infra* note 281, and Principle 26 of the Rio Declaration, *infra* note 297.

The most widely used definition of the sources of international law, and the definition that the ICJ will apply to the Gabčíkovo-Nagymaros dispute, is that contained in Article 38(1) of the Statute of the International Court of Justice. Article 38(1) provides that the Court shall apply "international conventions . . . international custom, as evidence of a general practice accepted as law, . . . the general principles of law recognized by civilized nations . . . judicial decisions, and the teachings of the most highly qualified publicists of the various nations[.]"²⁴⁴ Leaving aside international conventions, then, the rest of the sources of law listed in the Statute can be grouped together under the heading of "customary international law."

1. *State Practice: The Riparian States of the Danube*

The past decade has seen drastic changes in all of the riparian states of the Danube, with the exception of Austria. Germany has reunited, becoming, at least potentially, the dominant economic and political force in Central Europe. Hungary and Bulgaria have changed from one-party Communist states to pluralist democratic states, while Romania has undergone a similar transformation from Ceausescu's personal, nominally Communist dictatorship to a somewhat pluralist, nominally democratic form of government. The other three riparian states which existed at the inception of the Gabčíkovo-Nagymaros project — Czechoslovakia, Yugoslavia, and the Soviet Union — no longer exist. Their places along the Danube have been taken by three new, smaller states — the Ukraine, Slovakia, and Serbia-Montenegro.

Given these radical transformations, it is difficult to make any specific predictions about the conduct of the riparian states based on their past conduct. In a broader sense, however, the practice of the world's states in similar situations may provide a normative framework within which to evaluate the actions of Slovakia and Hungary.²⁴⁵

2. *Other Sources of Customary International Law*

In contrast to the considerable body of treaty law on the subject, there is a distinct paucity of decisions of international judicial and quasi-judicial bodies regarding the uses of the waters of transboundary rivers. Of the handful of such decisions, only one deals with the Danube.²⁴⁶ These decisions, along with the relevant teachings of publicists and general principles of law, are discussed *infra*.

244. Statute of the International Court of Justice, art. 38(1), 59 Stat. 1055, 1060 (1945), T.S. No. 993, 3 Bevans 1153, 1976 Y.B.U.N. 1052. The statute is silent as to which nations are considered "civilized."

245. The uniqueness of international rivers, however, endows this approach with certain shortcomings.

246. Jurisdiction of the European Commission of the Danube Between Galatz and Braila, Advisory Opinion, 1927 P.C.I.J. (ser. B) No. 14.

B. Customary International Law Approaches to Transboundary Watercourses

Despite recent attempts to codify the law regarding non-navigational uses of transboundary watercourses, continuing state practice shows a marked lack of consensus. There are four traditional legal theories regarding the non-navigational uses of transboundary watercourses: (1) absolute territorial sovereignty, (2) absolute territorial integrity, (3) limited territorial sovereignty, and (4) the community theory.²⁴⁷

C. Absolute Territorial Sovereignty: The Harmon Doctrine

Absolute territorial sovereignty, as the name implies, is the theory that a riparian state has complete control over all waters lying within its territory, and may utilize those waters without regard for the effects on the downstream or co-riparian states. Grotius expressed the theory of absolute territorial sovereignty three and a half centuries ago when he said "a river, viewed as a stream, is the property of the people through whose territory it flows, or the ruler under whose sway that people is . . . to them all things produced in the river belong."²⁴⁸

Absolute territorial sovereignty is also known as the Harmon Doctrine, after a nineteenth-century American proponent of the theory. In 1895, in response to Mexico's protest of the United States' diversion of water from the Rio Grande, then Attorney General Judson Harmon stated that "the rules, principles, and precedents of international law impose no liability or obligation upon the United States."²⁴⁹

The absolute territorial sovereignty theory is naturally more appealing to upstream states than to downstream states. The appeal of the theory is somewhat diminished, however, by the fact that most countries are both upper and lower riparians. Hungary and Slovakia, for example, are both upper and lower riparians of the Danube; the Danube forms part of the border between the two

247. See A.P. Lester, *River Pollution in International Law*, 57 AM. J. INT'L L. 828 (1963), reprinted in INTERNATIONAL ENVIRONMENTAL LAW ANTHOLOGY 129, 130-33 (Anthony D'Amato & Kirsten Engel eds. 1996); Albert E. Utton, *International Water Quality Law*, in INTERNATIONAL ENVIRONMENTAL LAW 154, 155 (1974); Schwabach, *supra* note 221, at 454-58; Donald J. Chenevert, Jr., *Application of the Draft Watercourses on the Non-navigational Uses of International Watercourses to the Water Disputes Involving the Nile River and the Jordan River*, 6 EMORY INT'L L. REV. 495, 502-04 (1992); Xue Hanqin, *Relativity in International Water Law*, 3 COLO. J. INT'L ENVTL. L. & POL'Y 45, 48 (1992); David J. Lazervitz, *The Flow of International Water Law: The International Law Commission's Law of the Non-navigational Uses of International Watercourses*, 1 IND. J. GLOBAL LEGAL STUD. 247, 250-52 (1993); Joseph W. Dellapenna, *Treaties as Instruments for Managing Internationally-Shared Water Resources: Restricted Sovereignty v. Community of Property*, 26 CASE WES. RES. J. INT'L L. 27, 35-42 (1994).

The doctrine of prior appropriation, so familiar to practitioners and students of the water law of the Western United States, has little place in international water law. See LAMMERS, POLLUTION OF INTERNATIONAL WATERCOURSES 366 (1984).

248. HUGO GROTIUS, DE JURE BELLI AC PACIS, vol. 2, ch. 2, § 12 (Kelsey trans., 7th ed. 1646). On the other hand, Grotius also pointed out that "the same river, viewed as running water, has remained common property, so that one may drink or draw water from it." *Id.*

249. Treaty of Guadalupe Hidalgo—International Law, 21 Op. Att'y Gen. 274, 283 (1895).

countries. Similarly, the Rio Grande constitutes the border between Mexico and the United States for much of its length.²⁵⁰

Scholars have denounced the Harmon Doctrine.²⁵¹ Although no state formally adheres to the theory of absolute territorial sovereignty with regard to transboundary rivers, many states continue to base their practice on such a theory, using a river's waters without regard for the welfare of downstream states.²⁵² For example, in response to Mexico's recent protest against a U.S. plan to line a canal running along the border (and thus deprive Mexico of more than 100,000 acre-feet per year of seepage used for irrigation) the U.S. stated that "nothing in international law prohibits a country from rehabilitating public works even if that action may harm another country."²⁵³

In a world ruled by the Harmon Doctrine, environmental problems flow downstream. In the events giving rise to the Gabčíkovo-Nagymaros dispute, Austria, having imposed the maximum tolerable environmental burden on the Danube within its own territory, attempted to generate yet more power from the river while shifting the burden to the lower riparians.²⁵⁴ Slovakia, having already received a burden of environmental problems from Austria, then attempted to resolve those problems at Hungary's expense. Hungary might have been able to adopt a Harmon Doctrine approach. Instead, it commendably chose to seek resolution of the dispute under the still-emerging rule of public international fresh water law. The rule applicable to the dispute is probably one of limited, rather than absolute, territorial sovereignty.

D. Absolute Territorial Integrity

Absolute territorial integrity is the downstream states' logical counterpart to absolute territorial sovereignty. The theory is that a downstream riparian state may demand the continuation of the full flow of the river from an upper riparian state, free from any diminution in quantity or quality.²⁵⁵ Absolute territorial integrity naturally appeals to lower riparians. As with absolute territorial sovereignty, though, the appeal is somewhat diminished by the fact that most states are both upstream and downstream states.

250. Mexico actually contributes a greater portion of the river's waters, so Attorney General Harmon's opinion, if consistently applied, might have been harmful to the interests of the United States. See generally Utton, *supra* note 247. In fact, eight months earlier the United States had requested that Great Britain take measures "to ensure that waters within Canadian territory were not diverted so as to damage the United States." Lester, *supra* note 247, at 130.

251. See generally Lester, *supra* note 247; Sharon Williams, *Public International Law Governing Transboundary Pollution*, 13 U. QUEENSLAND L.J. 112 (1984); LAMMERS, *supra* note 247.

252. For a detailed argument to this effect, see Ludwik A. Teclaff & Eileen Teclaff, *Transboundary Toxic Pollution and the Drainage Basin Concept*, 25 NAT. RESOURCES J. 589 (1985).

253. Douglas L. Hayes, *The All-American Canal Lining Project: A Catalyst for Rational and Comprehensive Groundwater Management on the United States-Mexico Border*, 31 NAT. RESOURCES J. 803, 808, 824 (1991).

254. One of the reasons that Slovakia felt the provisional solution was necessary was to compensate for environmental damage done to the Bratislava region by Austria's uses of the Danube. See Liska, *supra* note 8, at 10.

255. Utton, *supra* note 247 at 155.

E. Limited Territorial Sovereignty

The limited territorial sovereignty theory holds that a state may make use of the waters flowing through its territory to the extent that such use does not interfere with the reasonable use of waters by the downstream states.²⁵⁶ Limited territorial sovereignty is analogous to the Roman law maxim *sic utere tuo ut alienum non laedas*²⁵⁷ applied in *Rylands v. Fletcher*²⁵⁸ and its progeny. State practice, as well as decisions of international and domestic tribunals and pronouncements of private and public international bodies, indicates that this is the approach most often applied to transboundary watercourse problems.

1. Decisions of International Tribunals

a. The Trail Smelter Arbitration

Almost all discussions of international environmental law and liability take as their foundation the Trail Smelter Arbitration, which first expressed the principle that a state has responsibility for environmental damage extending beyond its territorial limits.²⁵⁹ The Trail Smelter arbitral tribunal stated that, under principles of international law,

no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or person therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.²⁶⁰

The decision of the International Court of Justice in the Corfu Channel Case incorporated this general principle of limited territorial sovereignty,²⁶¹ stating that it is "every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States."²⁶²

b. The Lac Lanoux Arbitration

The Trail Smelter addressed transboundary air pollution, and the Corfu Channel case adopted a limited territorial sovereignty rule in a holding dealing with military, rather than environmental, dangers. It was not until the Lac La-

256. *Id.* Limited territorial sovereignty and limited territorial integrity are two sides of the same coin, rather than two separate approaches. The exercise of even a limited sovereignty over the waters within the territory of an upper riparian necessarily limits the territorial integrity of the lower riparian; the converse is also true. Upper riparians will naturally emphasize the element of sovereignty, while lower riparians will wish to emphasize integrity. The entire concept, however, is generally known as "limited territorial sovereignty."

257. "[O]ne should use his own property in such a manner as not to injure that of another." BLACK'S LAW DICTIONARY 1380 (6th ed. 1991).

258. 1 L.R.-Ex. 265, *aff'd*, 3 L.R.-E. & I. App. 330 (1868).

259. Trail Smelter (U.S. v. Can.), 3 R.I.A.A. 1905 (1941), *reprinted in* 35 AM. J. INT'L L. 684 (1941). For a dissenting view, criticizing the widespread reliance on the Trail Smelter, see Alfred P. Rubin, *Pollution By Analogy: The Trail Smelter Arbitration*, 50 OR. L. REV. 259 (1971). It has also been noted that the passage cited is dicta. ZYGMUNT J.B. PLATER ET AL., ENVIRONMENTAL LAW AND POLICY: NATURE, LAW, AND SOCIETY 1001 n.8 (1992); *see also International Law and Protection of the Atmosphere*, 83 AM. SOC. INT'L L. PROC. 62, 77 (1989) (remarks by Sharon Williams).

260. Trail Smelter (U.S. v. Can.), 3 R.I.A.A. at 1965, *reprinted in* 35 AM. J. INT'L L. at 716.

261. Corfu Channel (U.K. v. Alb.), 1949 I.C.J. 4, 21 (Apr. 9) (determination on the merits).

262. *Id.* at 22.

noux Arbitration,²⁶³ however, that the principle was applied to the non-navigational uses of a transboundary watercourse in a major decision of an international tribunal.²⁶⁴ The Lac Lanoux Arbitration involved a situation somewhat similar to the Gabčíkovo-Nagymaros dispute: France proposed to divert the waters of the Carol, which flows across the border into Spain, in order to generate electricity. Water equal in quantity and quality would be returned to the Carol before it entered Spain. The arbitral tribunal stated:

according to the rules of good faith, the upstream state is under the obligation to take into consideration the various interests involved, to seek to give them every satisfaction compatible with the pursuit of its own interests, and to show that in this regard it is genuinely concerned to reconcile the interests of the other riparian State with its own.²⁶⁵

Along with this statement of limited territorial sovereignty came a complementary limit on territorial integrity:

On her side, Spain cannot invoke a right to insist on a development of Lake Lanoux based on the needs of Spanish agriculture. . . . Spain . . . can only urge her interests in order to obtain, within the framework of the scheme decided upon by France, terms which reasonably safeguard them.²⁶⁶

The Lac Lanoux arbitral tribunal went on to deny the Spanish claim because there was no diminution in either the quantity or the quality of the water delivered to Spain.²⁶⁷ In the Gabčíkovo-Nagymaros dispute, Slovakia can be expected to make a similar argument; it is returning all of the diverted water to Hungary, without polluting it. One issue for the Court to determine will be whether rate and regularity of flow are part of "water quality."²⁶⁸

263. *Affaire du Lac Lanoux (Spain v. Fr.)*, 12 R.I.A.A. (1957), *digested in* 53 AM. J. INT'L L. 156 (1959) [hereinafter *Lac Lanoux Arbitration*].

264. The Case Concerning the Diversion of Water from the Meuse (Neth. v. Belg.), 1937 P.C.I.J. (ser. A/B) No. 70 (June 28), involved navigational and non-navigational uses of the river's waters, and might have some bearing on the outcome of the Gabčíkovo-Nagymaros dispute. The P.C.I.J., however, held itself limited to interpretation of an 1863 treaty between the parties. *Id.* at 16. The "general principles of international law governing the utilization of international rivers by the riparian States . . . [were] . . . left on one side[.]" *Id.* at 53 (Separate opinion of Jonkheer Van Eysinga).

265. *Lac Lanoux Arbitration*, *supra* note 263, at 315.

266. *Id.*, at 316. The arbitral tribunal also observed that France had no duty to notify Spain of its schemes or to involve Spain in the planning. *See generally id.* While no such duty exists under customary international law, the implementation of the Espoo Convention would impose such a duty. (France and Spain are signatories to the Espoo Convention). *See Espoo Convention, supra* note 226. France might also have such a duty under customary international law, as expressed in Principle 19 of the Rio Declaration. *See generally Rio Declaration, infra* note 297. Article 12 of the ILC Draft Articles would also impose such a duty. *See also ILC Draft Articles, infra* note 306; Involvement of the downstream state is also recommended by Article XXIX of the Helsinki Rules. Helsinki Rules, *infra* note 281.

267. *Lac Lanoux Arbitration, supra* note 263, at 315-17.

268. This question was addressed by the Permanent Court of International Justice in the Case Concerning the Diversion of Water from the Meuse, *supra* note 264:

[E]ach of the two States is at liberty, in its own territory, to modify [canals], to enlarge them, to transform them, to fill them in and even to increase the volume of water in them from new sources, *provided that the diversion of water at the treaty feeder and the volume of water to be discharged therefrom to maintain the normal level and flow in the Zuid-Willemsvaart is not affected.*

Id. at 26 (emphasis added).

2. Decisions of Municipal Courts

Municipal courts have also applied the concept of limited territorial sovereignty.²⁶⁹ These decisions, while in most cases not creating a binding precedent even in the jurisdictions in which they are reached,²⁷⁰ nonetheless may serve as sources of international law under Article 38(1) of the Statute of the International Court of Justice. Decisions of municipal courts are "judicial decisions" within the meaning of the statute and are also evidence of state practice.

a. *The Donauversinkung Case (Baden v. Wurttemberg)*

The case with the greatest relevance to the Gabcikovo-Nagymaros dispute is the Donauversinkung decision.²⁷¹ Within the German state of Baden, water seeps from the Danube, flows through subterranean passages, and emerges (still in Baden) as the source of the Aach. After the level of the Danube had fallen drastically in the state of Wurttemberg as a result of this seepage, Wurttemberg brought suit to prevent Baden from maintaining or constructing waterworks designed to increase the natural percolation of water from the Danube to the Aach. The Weimar Republic's Staatsgerichtshof stated:

When utilizing an international watercourse in its territory every State is bound by the principle springing from the idea of the community of nations based on international law: that it may not injure another member of the international community. Due consideration must be given to one another by the various States which have a watercourse in common. No State may substantially impair the use of a watercourse, made possible by nature, by another state.²⁷²

In a Solomonic decision, the Staatsgerichtshof held that Baden was prohibited from using waterworks or artificial means to increase the rate of percolation from the Danube to the Aach, while Wurttemberg was simultaneously prohibited from using waterworks or other artificial means to *decrease* the rate of percolation. Thus, limited territorial sovereignty was matched with limited territorial integrity: "Every State must accept the natural water conditions and their development. In the absence of special legal titles, no State is obliged to . . . counteract, in the interest of another State, the effects of natural changes of the watercourse."²⁷³

The Staatsgerichtshof also provided for equitable use, stating that "the justifiable interests of the states concerned must be weighed in an equitable manner against one another. One must not merely take into account the absolute mea-

269. A discussion of cases involving disputes between sovereigns within the United States is beyond the scope of this article, *but see* *Missouri v. Illinois*, 200 U.S. 496 (1906); *New York v. New Jersey*, 256 U.S. 296 (1921); *Wyoming v. Colorado*, 259 U.S. 419 (1922); *North Dakota v. Minnesota*, 263 U.S. 365 (1923); *Connecticut v. Massachusetts*, 282 U.S. 660 (1931); *New Jersey v. New York*, 283 U.S. 336 (1931); *Nebraska v. Wyoming*, 325 U.S. 589 (1945). *See also* LAMMERS, *supra* note 247, at 397-423.

270. This is because most of the world's nations do not belong to the common law tradition.

271. *See generally* 116 Entscheidungen des Reichsgerichts in Zivilsachen, Suppl. Entscheidungen des Staatsgerichtshofs 18; *see also* Ann. Digest & Rep. of Pub. Int'l L. Cases 128 (RGZ. 1927) [hereinafter *Donauversinkung Decision*]. *See* LAMMERS, *supra* note 247, at 433-36.

272. LAMMERS, *supra* note 247, at 434 (citing *Donauversinkung Decision*, *supra* note 271).

273. *Id.* at 435 (citing *Donauversinkung Decision*, *supra* note 271).

sure of injury caused by one State to the other, but also the amount of benefit gained by one to the injury caused to the other."²⁷⁴

b. Societe Energie Electrique

Societe Energie Electrique du Littoral Mediterranee v. Compagnie Impresse Ellettriche Liguri involved a dispute between two power companies, one in France and one in Italy, over the Italian company's uses of the waters of the Roya. In refusing to execute a judgment of a French court in favor of the French company, the Italian Corte de Cassazione stated in dicta:

international law recognizes the right of every riparian state to enjoy, as a participant of a kind of partnership created by the river, all the advantages deriving from it. A State cannot disregard the international duty not to impede or to destroy the opportunity of the other States to avail themselves of the flow of water for their own national needs.²⁷⁵

The Italian court thus not only expressed and applied a rule of limited territorial sovereignty, but went half a step further. The reference to "a kind of partnership created by the river" contains inklings of a community theory, as well.

3. Aspirational Documents and Pronouncements of International Bodies

Public and private international organizations have also embraced the limited territorial sovereignty approach. While the aspirational documents thus produced create no legally binding obligations, they may serve to show "the general principles of law recognized by civilized nations[.]"²⁷⁶ To the extent that they are promulgated or (especially in the case of General Assembly resolutions) voted for by certain states and not by others, they may also provide insight into the practice or expectations of those states.

a. The Stockholm Declaration

Principle 21 of the United Nations' Stockholm Declaration on the Human Environment²⁷⁷ provides that states have the "sovereign right to exploit their own resources pursuant to their own environmental policies."²⁷⁸ Along with

274. *Id.* at 31-32 (citing *Donauversinkung Decision*, *supra* note 271).

275. Judgment of Feb. 13, 1939, Corte cass., Italy, 64 Foro It. I 1036, 1046, *digested in* 3 DIG. OF INT'L L. 1050-51 (1938-39). While this passage states the principle of limited territorial sovereignty quite clearly, it should be noted that the French party was not granted any relief by the court. Despite the importance of this decision to international water law, there is something disturbing about relying on a decision issued by a court in Mussolini's Italy, finding against a French party only fifteen months before the Axis invasion of France.

276. Statute of the International Court of Justice, art. 38(1), 59 Stat. 1055, 1060 (1945), T.S. No. 993, 3 Bevens 1153, 1976 Y.B.U.N. 1052.

277. Report of the United Nations Conference on the Human Environment, U.N. Doc. A/CONF.48/14/Rev.1 (1972)[hereinafter *Stockholm Declaration*].

278. *Id.*, Principle 21. The idea of permanent sovereignty over natural resources was endorsed by the General Assembly in 1962, and again, in very different terms, in 1973. Resolution on Permanent Sovereignty Over Natural Resources, G.A. Res. 1803, U.N.GAOR, 17th Sess., Supp. No. 17, at 15, U.N. Doc. A/5217 (1963), 2 I.L.M. 223, and Resolution on Permanent Sovereignty Over Natural Resources, G.A. Res. 3171, U.N.GAOR, 28th Sess., Supp. No. 30, at 52, U.N. Doc. A/9030 (1974), 13 I.L.M. 238. Czechoslovakia and Hungary abstained from voting on the 1963 Resolution, as did

this right comes the "responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or areas beyond the limits of national jurisdiction."²⁷⁹ The Stockholm Declaration thus incorporates the *Corfu Channel* standard that no state may allow its territory to be used so as to harm another state with the additional, and probably purely aspirational, provision that no state may allow its territory to be used so as to damage the global commons — those parts of the oceans, the seabed, and the atmosphere lying beyond national jurisdiction, and Antarctica.²⁸⁰

b. The Helsinki Rules

The Helsinki Rules²⁸¹ promulgated by the International Law Association also assume limited territorial sovereignty. Article IV of the Helsinki Rules states that "[e]ach basin State is entitled, within its territory, to a reasonable and equitable share in the beneficial uses of the waters of an international drainage basin."²⁸² Article V then provides a list of factors to be used in determining what is "reasonable and equitable," including the climate, geography and hydrology of the basin,²⁸³ past and existing uses of the waters,²⁸⁴ the economic and social needs of each state,²⁸⁵ the population dependent on the waters of the basin,²⁸⁶ the availability and cost of alternatives,²⁸⁷ the practicability of resolving the conflict through compensation,²⁸⁸ and the degree to which waste and unnecessary injury can be avoided.²⁸⁹

Most of these factors seem to weigh on the side of Hungary in the Gabčíkovo-Nagymaros dispute. Slovakia's diversion of 95 percent of the river's

all of the Warsaw Pact U.N. member states. All of these states (as well as East Germany, which had become a U.N. member in the interim) voted in favor of the 1973 Resolution.

The Stockholm Declaration itself was adopted by a vote of 103 for to zero against, with 12 abstentions; no roll call vote was recorded. See generally Stockholm Declaration, *supra* note 277.

279. *Id.*

280. These areas are, however, protected to some extent by treaties. See Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, Dec. 29, 1972, 26 U.S.T. 2403, 1046 U.N.T.S. 120; Convention for the Prevention of Marine Pollution from Land-Based Sources, June 4, 1974, 13 I.L.M. 352 (1974); United Nations Convention on the Law of the Sea, Dec. 10, 1982, U.N. Doc. A/CONF.62/122, 21 I.L.M. 1261 (1982)(especially arts. 61-68, 145-47, 150-55, 192-237, 304); Antarctic Treaty, Dec. 1, 1959, 12 U.S.T. 794, 402 U.N.T.S. 71 (especially art. V); Convention for the Conservation of Antarctic Seals, Feb. 11, 1972, 29 U.S.T. 441, 11 I.L.M. 251 (1972); Convention on the Conservation of Antarctic Marine Living Resources, May 20, 1980, T.I.A.S. No. 10240, 19 I.L.M. 841 (1980); Protocol on Environmental Protection to the Antarctic Treaty, Oct. 4, 1991, 30 I.L.M. 1461 (1991)(not in force); Convention on Long-Range Transboundary Air Pollution, Nov. 13, 1979, 1302 T.I.A.S. No. 10541, U.N.T.S. 217, 18 I.L.M. 1442 (1979); Montreal Protocol on Substances that Deplete the Ozone Layer, Sept. 16, 1987, 26 I.L.M. 1550 (1987); Convention on the Continental Shelf, June 10, 1964, 15 U.S.T. 471, 499 U.N.T.S. 311.

281. Helsinki Rules on the Uses of the Waters of International Rivers, 52 I.L.A. 484 (1967) [hereinafter Helsinki Rules].

282. *Id.* art. IV.

283. *Id.* art. V(2)(a-c).

284. *Id.* art. V(2)(d); see also arts. VII-VIII.

285. *Id.* art. V(2)(e).

286. *Id.* art. V(2)(f).

287. *Id.* art. V(2)(g-h).

288. *Id.* art. V(2)(j).

289. *Id.* art. V(2)(i,k).

flow into its own territory probably goes beyond what is "reasonable and equitable," by depriving Hungary of its own reasonable and equitable use of those waters in the Szigetkoz region. The Helsinki Rules use a "substantial injury" standard to determine whether a state's use of water is reasonable and equitable.²⁹⁰ The drying up of the Szigetkoz and the contamination of the Szigetkoz aquifer alone would surely constitute a substantial injury to Hungary.

To the extent that the Gabcikovo-Nagyymaros project increases the pollution of the Danube or of the Szigetkoz aquifer, it may be prohibited by the Helsinki Rules. Articles IX through XI specifically address transboundary pollution. Article X prohibits "any new form of water pollution or any increase in the degree of existing water pollution in an international drainage basin which would cause substantial injury in the territory of a co-basin State."²⁹¹ Article XI provides that a polluting state must cease the polluting activity and compensate the injured state.²⁹²

c. *The World Charter for Nature*

A fairly radical document in many ways, the World Charter for Nature²⁹³ retains a conventional limited territorial sovereignty approach to transboundary environmental harm. The Charter (really just a General Assembly resolution) provides that: "States . . . shall . . . [e]nsure that activities within their jurisdictions or control do not cause damage to the natural systems located within other States or in the areas beyond the limits of national jurisdiction[.]"²⁹⁴ This duty to other states, expressed in language identical to that of the earlier Stockholm Declaration and the later Rio Declaration, is then countered by a recognition of "the sovereignty of States over their natural resources[.]"²⁹⁵ On balance, though, the tenor of the World Charter for Nature is a bit closer to absolute territorial integrity than is the Stockholm Declaration. Application of this approach to the Gabcikovo-Nagyymaros dispute would favor Hungary, as the lower riparian.

d. *The Rio Declaration*

Despite the extraordinary degree of media attention, the 1992 Rio de Janeiro Conference on Environment and Development added relatively little to the present understanding of state liability for transboundary environmental

290. *Id.* art. V(2)(k).

291. *Id.* art. X. The International Law Association also addressed transboundary pollution generally in the ILA Rules on International Law Applicable to Transfrontier Pollution, Sept. 4, 1982, 60 I.L.A. 158 (1983).

292. Helsinki Rules, *supra* note 281, art. XI.

293. World Charter for Nature, G.A. Res. 37/7 (Annex), U.N. GAOR, 37th Sess., Supp. No. 51, at 17, U.N. Doc. A/37/51 (1983), reprinted in 22 I.L.M. 455. The World Charter for Nature was adopted by a vote of 111 countries four to one (the United States) against, with 18 abstentions (mostly Latin American countries, plus Algeria and Lebanon).

294. *Id.* art. 21(d).

295. *Id.* art. 22.

harm.²⁹⁶ Principle 2 of the Rio Declaration²⁹⁷ is identical, with the exception of two added words, to Principle 21 of the Stockholm declaration:

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental *and developmental* policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or areas beyond the limits of national jurisdiction.²⁹⁸

In order to balance environmental and development concerns, the Rio Declaration further provides that “[t]he right to development must be fulfilled so as to equitably meet developmental and environmental needs of future generations”²⁹⁹ and that “environmental protection shall constitute an integral part of the development process[.]”³⁰⁰

In contrast to the “no notice” rule applied by the Lac Lanoux arbitral tribunal, however, the Rio Declaration does require environmental impact assessment³⁰¹ and “prior and timely notification . . . to affected states[.]”³⁰² It also urges states to “cooperate . . . to develop further international law regarding liability and compensation” for transboundary environmental damage.³⁰³ Perhaps the most encouraging, even if purely aspirational, provision in the Rio Declaration is that “[n]ational authorities should endeavor to promote the internalization of environmental costs . . . the polluter should, in principle, bear the cost of pollution[.]”³⁰⁴

Overall, the Rio Declaration seems to be a small step in the direction of the Harmon Doctrine, allowing states to give development concerns equal status with environmental concerns. More than any of its predecessors, the Rio Declaration takes into account and expresses the needs of developing nations. Since the development of a river basin often begins near the mouth of a river and proceeds upstream, many upper riparians are less developed than their downstream neighbors;³⁰⁵ their development depends, to a large extent, on their abil-

296. For articles describing expectations of the Rio Conference, see William A. Nitze, *The Road Starts at Rio*, THE ENVTL. FORUM, May/June 1992, at 10; David R. Downes, *Don't Blame It On Rio*, THE ENVTL. FORUM, May/June 1992, at 17. See also Williams, *supra* note 82, at 49; Michael D. Hodges, *The Rights and Responsibilities of Using an International Waterway*, 4 J. INT'L L. & PRAC. 375, 384 (1995).

297. Rio Declaration on Environment and Development, U.N. Conference on Environment and Development, U.N. Doc. A/CONF.151/26 (vol. 1) (1992), reprinted in 31 I.L.M. 874 [hereinafter Rio Declaration].

298. *Id.* Principle 2 (emphasis added to show difference in text). The added words reflect the major concern of the Rio Conference: balancing developing nations' needs against the environmental concerns of the developed countries. While the added words would seem to indicate that Slovakia can place a high priority on development if it wishes, Slovakia still has an obligation to ensure that the activity causes no harm to Hungary.

299. *Id.* Principle 3.

300. *Id.* Principle 4.

301. *Id.* Principle 17.

302. *Id.* Principle 19.

303. *Id.* Principle 13.

304. *Id.* Principle 16. Cf. U.N. Convention, *supra* note 220, art. 2.5(b).

305. This is especially true where the upper riparian is also a landlocked state, as in the case of Nepal, Bolivia, Rwanda, Paraguay, or Ethiopia. There are numerous exceptions to this rule, how-

ity to use the water resources originating in their territory. Thus, they may tend to favor a Harmon Doctrine approach. The Rio Declaration, however, still preserves the territorial integrity principle.

e. The ILC Draft Articles

After many years of effort, the United Nations International Law Commission adopted the Draft Articles on the Law of the Non-navigational Uses of International Watercourses in 1991.³⁰⁶ The ILC Draft Articles plainly state an equitable use/limited territorial sovereignty approach: "watercourse states shall in their respective territories utilize an international watercourse in an equitable and reasonable manner."³⁰⁷ What constitutes "equitable and reasonable" use is to be determined by a list of factors similar to those in the Helsinki Rules, including geographic, hydrographic, hydrologic, climatic, and ecological factors,³⁰⁸ social and economic needs,³⁰⁹ effects on other riparians,³¹⁰ existing and

ever, and in Europe, which as a whole is highly developed, the rule is completely inapplicable. For instance, while it is true that Hungary is more developed than Slovakia, both are less developed than Austria. These three states, along with Europe's other landlocked upper riparians (with the exception of those formerly part of Yugoslavia or the Soviet Union) are among the world's most developed nations. (The others are Switzerland, Liechtenstein, Andorra, San Marino, the Vatican City, Luxembourg, and the Czech Republic; landlocked states formerly part of Yugoslavia include Macedonia and, for all practical purposes, Bosnia; those European states formerly part of the Soviet Union include Belarus, Moldova, Armenia, and Azerbaijan (which is actually a lower riparian, on the shores of the Caspian Sea)).

306. Draft Articles on the Law of the Non-navigational Uses of International Watercourses, July 19, 1991, Report of the International Law Commission on the Work of Its Forty-third Session, U.N. GAOR, 46th Sess., Supp. No. 10, at 161, U.N. Doc. A/46/10 (1991) [hereinafter ILC Draft Articles]. For a description of the history of the ILC deliberations on the draft articles, see, *inter alia*, Stephen Schwebel, First Report on the Law of the Non-navigational Uses of International Watercourses, 2(1) Y.B. INT'L L. COMM'N 143 (1979), U.N. Doc. A/CN.4/SER.A.1979/Add.1; Stephen Schwebel, Second Report on the Law of the Non-navigational Uses of International Watercourses, 2(1) Y.B. INT'L L. COMM'N 159 (1980), U.N. Doc. A/CN.4/SER.A.1980/Add.1; Stephen C. McCaffrey, *An Update on the Contributions of the International Law Commission to International Environmental Law*, 15 ENVTL. L. 667 (1985); Peter Fischer & Gerhard Hafner, *Aktuelle österreichische Praxis zum Volkerrecht/Recent Austrian Practice in International Law*, 36 OSTERR. Z. OFFENTL. RECHT UND VOLKERRECHT 365, 417-22 (1986); Stephen C. McCaffrey, *International Organizations and the Holistic Approach to Water Problems*, 31 NAT. RESOURCES J. 139 (1991); *Doman Colloquium on the Law of International Watercourses: Review of the International Law Commission's Draft Rules on the Non-navigational Uses of International Watercourses*, 3 COLO. J. INT'L ENVTL. L. & POL'Y 1 (1992); Stephen C. McCaffrey, *The International Law Commission Adopts Draft Articles on International Watercourses*, 89 AM. J. INT'L L. 395 (1995) (final adoption of the Draft Articles was completed at the ILC's 1994 session); Ludwik A. Teclaff, *Fiat or Custom: The Checkered Development of International Water Law*, 31 NAT. RESOURCES J. 45, 71-73 (1991).

307. ILC Draft Articles, *supra* note 306, art. 5.1. Cf. U.N. Convention, *supra* note 220, art. 2, 2(c). ("The Parties shall, in particular, take all appropriate measures . . . [t]o ensure that transboundary waters are used in a reasonable and equitable way[.]")

308. ILC Draft Articles, *supra* note 306, art. 7.1(a).

309. *Id.* art. 7.1(b).

310. *Id.* art. 7.1(c).

potential uses,³¹¹ conservation, protection, development, and economic concerns,³¹² and availability of alternatives.³¹³

The territorial integrity of the downstream states is protected by a provision that "[w]atercourse states shall utilize an international watercourse in such a way as not to cause appreciable harm to other watercourse states."³¹⁴ The protection of interests is spelled out: "[w]atercourse states shall cooperate on the basis of sovereign equality, territorial integrity and mutual benefit to attain optimal utilization and adequate protection of an international watercourse."³¹⁵ There is also a requirement to notify downstream states of any planned project with an "appreciable adverse effect."³¹⁶

The greatest difference in content between the Helsinki Rules and the ILC Draft Articles is in what is governed: the Helsinki Rules refer to "the waters of an international drainage basin"³¹⁷ while the ILC Draft Articles refer to "watercourses."³¹⁸ Many theorists had seen the ILA's adoption of the drainage basin concept as a step toward a community theory of drainage basin management and had hoped that the ILC draft rules would represent a further step in the same direction.³¹⁹

The ILC's Draft Articles are seen by many as a step backward.³²⁰ "Watercourse" is defined in the ILC Draft Articles as "a system of surface and underground waters constituting by virtue of their physical relationship a unitary whole and flowing into a common terminus[.]"³²¹ "International drainage basin," on the other hand, is defined in the Helsinki Rules as "a geographical area extending over two or more States determined by the watershed limits of the system of waters, including surface and underground waters, flowing into a common terminus."³²²

311. *Id.* art. 7.1(d). Note that, in contrast, the Helsinki Rules discount potential uses: past and existing uses are protected, while a "basin State may not be denied the present reasonable use of the waters of an international drainage basin to reserve for a co-basin state a future use of such waters." Helsinki Rules, *supra* note 281, arts. V(2)(d), VII.

312. ILC Draft Articles, *supra* note 306, art. 7.1(e).

313. *Id.* art. 7.1(f).

314. *Id.* art. 8.

315. *Id.* art. 9. Note the balancing of "sovereign equality" with "territorial integrity."

316. *Id.* art. 12; *see also* arts. 11-19, 26.

317. Helsinki Rules, *supra* note 281.

318. ILC Draft Articles, *supra* note 306.

319. *See, e.g.*, Robert D. Hayton, *Observations on the International Law Commission's Draft Rules on the Non-navigational Uses of International Watercourses: Articles 1-4*, 3 COLO. J. INT'L ENVTL. L. & POL'Y 31 (1992); James L. Wescoat, Jr., *Beyond the River Basin: The Changing Geography of International Water Problems and International Watercourse Law*, 3 COLO. J. INT'L ENVTL. L. & POL'Y 301 (1992); *cf.* Xue, *supra* note 247; McCaffrey, *International Organizations and the Holistic Approach to Water Problems*, *supra* note 306.

320. *See, e.g.*, Hayton, *supra* note 319; David Caron, *The Frog That Wouldn't Leap: The International Law Commission and Its Work on International Watercourses*, 3 COLO. J. INT'L ENVTL. L. & POL'Y 269 (1992); Wescoat, *supra* note 319; *cf.* Gunther Handl, *The International Law Commission's Draft Articles on the Law of International Watercourses (General Principles and Planned Measures): Progressive or Retrogressive Development of International Law?*, 3 COLO. J. INT'L ENVTL. L. & POL'Y 132 (1992).

321. ILC Draft Articles, *supra* note 306, art. 2(b).

322. Helsinki Rules, *supra* note 281, art. II.

While these two definitions are superficially similar, the difference in legal effect is enormous.³²³ The "watercourse" definition excludes waters within a drainage basin which do not flow into the common terminus. Many aquifers either do not flow, or discharge their waters elsewhere than at the common terminus.³²⁴

F. The Community Theory

Under the community theory, the waters of an international drainage basin would be managed as a unit, without regard to national territorial boundaries. The various co-riparians should manage and develop the drainage basin jointly and share the benefits derived therefrom.³²⁵ Because this involves a considerable sacrifice of sovereignty by all of the basin states, it appeals to very few, although the European Union seems to be moving in that direction with regard to the rivers which lie within its boundaries. For example, the Economic Commission for Europe's Declaration of Policy on the Rational Use of Water uses "drainage basin" terminology and refers to the integrated management of river basins.³²⁶

1. Historical Overview

Teclaff points out that the great civilizations of antiquity were, or aspired to be, coexistent with drainage basins.³²⁷ Today, these civilizations are known by the river basins they occupied (or, in many cases, still occupy): the Indus River Valley civilization, Mesopotamia (the "land between the rivers"), Egypt, and the Huanghe and Yangtze civilizations. For the most part, these rivers flow through relatively dry land with little rainfall. The economies, and indeed the survival, of these early empires were entirely dependent on irrigation. Teclaff also suggests that the difficulty in obtaining cooperation in drainage basin management led to the establishment, or attempted establishment, of empires occupying entire river basins.³²⁸ The growth of the relatively water-rich Roman Empire, however, led to the replacement of the drainage basin concept with a "prior appropriation" concept. The state confined itself to protecting navigation.³²⁹

The rise of Roman law occluded the drainage basin concept in the West while the exportation of European systems of law during the colonial era replaced what remained of traditional water-law concepts in many arid and semi-

323. For a detailed discussion of the differences between the drainage basin concept and the watercourse concept, see Wescoat, *supra* note 319.

324. See Hayton, *supra* note 319, at 38-39 (The "common terminus" concept, apparently taken from the Helsinki Rules, fails to take account of advances in scientific understanding of aquifers since 1966.).

325. Utton, *supra* note 247, at 155.

326. U.N. ESCOR, 13th Sess., Supp. No. 13, at 77, U.N. Doc. E/1984/23 - E/ECE/1083 (1984).

327. Ludwik A. Teclaff, *Fiat or Custom: The Checkered Development of International Water Law*, 31 NAT. RESOURCES J. 45, 59-60 (1991).

328. *Id.* at 60.

329. *Id.* "'Tis impious, says the old Roman superstition, to divert rivers from their course, or invade the prerogatives of nature." HUME, *supra* note 240, at 584-85.

arid lands.³³⁰ Other systems, however, such as the Islamic legal system, developed in areas of moderate to extreme water scarcity and retained significant differences.³³¹ Under Islamic law, the waters of lakes, springs, and large rivers are common property, while the right to irrigate using the waters of smaller rivers belongs to the riparian landowners.³³² These provisions were incorporated into the Medjelle, the Ottoman code of law which, for a time, governed the lower reaches of the Danube.³³³

The body of international river law evolved during the nineteenth and early twentieth centuries. During this time, political power was concentrated, for the most part, in the relatively well-watered lands of Europe and eastern North America. These states were primarily concerned with transboundary rivers as a means of transportation and unaware of the proportion of groundwater to surface water. As a result, the treaties and decisions of that period embody the water-course concept rather than the drainage basin concept. Had the main influence over the emerging regime of transboundary rivers and lakes come from Afghanistan, Algeria, Arabia, and Arizona, a very different set of rules might now obtain.

After World War I, the growing demands of industry and agriculture and the decline of river shipping as a means of transport brought about a change in the priorities of the Western nations. It was no longer as vital to the British Crown that rivers two thousand miles from England be free to British navigation. In the United States, the westward shift of population helped bring about a change in ways of thinking about water.

While surface fresh water has significant uses that groundwater does not, such as shipping, fishing, and recreation, groundwater is ultimately more important for essential human welfare needs such as drinking and food production. Indeed, most people, including most lawyers and politicians, are not fully aware of the relative importance of groundwater. Consequently, rules governing freshwater use are being made on the basis of incorrect assumptions.

Most (97.3%) of the Earth's water is in the oceans.³³⁴ Of the remaining 2.7%, 77.2% is locked in the polar ice caps and glaciers.³³⁵ Most of the remainder (22.4% of the total fresh water, out of 22.8% not locked in the ice caps) is groundwater.³³⁶ Surface water makes up only 0.36% of the world's fresh water

330. China is in a somewhat unusual situation, in that it has managed to incorporate the Yangtze and Huanghe drainage basins into its national territory. China is also in the enviable position, especially for a large state, of being almost entirely an upper riparian. (The significant exception is the Amur, along which China is both an upper and lower riparian.)

331. See LAMMERS, *supra* note 247, at 475-78, 485-86.

332. *Id.* at 477. The system naturally favors upper riparians, but includes a limitation that each landowner may not irrigate his lands beyond ankle-depth. *Id.*

333. *Id.* at 485. While the Medjelle was eventually replaced in Turkey, systems derived from it remain in other Muslim states. *Id.*

334. Julio Barberis, *The Development of International Law of Transboundary Groundwater*, 31 NAT. RESOURCES J. 167, reprinted in INTERNATIONAL ENVIRONMENTAL LAW ANTHOLOGY, *supra* note 247, at 135.

335. *Id.*

336. *Id.*

(or less than one part in ten thousand of the world's total amount of water), with the remaining fresh water in the form of clouds and water vapor.³³⁷ This relatively insignificant portion of the Earth's water, though, is all the fresh water that most people ever see. In particular, people in Europe and eastern North America are familiar with the sight of vast, apparently inexhaustible quantities of fresh water lying on the earth in lakes or flowing across the land in huge rivers. In contrast, people in Southern California, for example, generally see fresh water only in a controlled form, after human beings have gone to considerable effort to gather and confine it in reservoirs, irrigation canals, and swimming pools.

2. *Contemporary Approaches*

Although the community theory is a favorite of legal theorists, it does not yet enjoy widespread acceptance in the practice of states.³³⁸ The community theory is perhaps better thought of as aspirational, or as a basis for future treaty regimes, rather than as a rule of customary international law.

a. *The River Oder Case*

In its judgment with respect to the territorial jurisdiction of the International Commission of the River Oder,³³⁹ the Permanent Court of International Justice went beyond the limited territorial sovereignty theory and expressed some elements of the community theory, stating that the

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[sic] of the whole course of the river and the exclusion of any preferential privilege of any one riparian State in relation to the others.³⁴⁰

The Lac Lanoux tribunal, on the other hand, specifically rejected the community theory.³⁴¹

The Tribunal does not overlook the reality, from the point of view of physical geography, of each river basin, which constitutes, as the Spanish Memorial (at p. 53) maintains, 'a unity'. But this observation does not authorize the absolute consequences that the Spanish argument would draw from it. The unity of a basin is sanctioned at the juridical level only to the extent that it corresponds to human realities.³⁴²

b. *The Bellagio Draft Treaty*

The Bellagio Draft Treaty Concerning the Use of Transboundary Groundwaters³⁴³ also embodies some elements of the community theory, stating in its

337. *Id.*

338. Utton, *supra* note 247, at 157, 175.

339. 1929 P.C.I.J. (ser.A) No. 23 (Sept. 10).

340. *Id.* at 27.

341. Lac Lanoux Arbitration, *supra* note 263.

342. *Id.* at 304.

343. Bellagio Draft Treaty Concerning the Use of Transboundary Groundwaters, 1989, in *BASIC DOCUMENTS OF INTERNATIONAL ENVIRONMENTAL LAW* 42 (Harald Hohmann ed. 1992)[hereinafter Bellagio Draft Treaty]. For a full discussion of the Draft Treaty by two of its drafters, with

preamble: "[T]he best means to achieve the rational management of . . . transboundary water resources and the protection of the underground environment is to adopt, in principle, an integrated approach[.]" The Draft Treaty envisions that countries adopting it will create a bilateral or multilateral commission with authority over the transboundary groundwater;³⁴⁴ enforcement authority, however, would remain vested in the states.³⁴⁵

c. The United Nations Approach: The Mar del Plata Report

For the most part, the United Nations has been an enthusiastic promoter of community management of freshwater resources. The United Nations approach is perhaps best summed up in the final report of the Mar del Plata Conference: "[i]t is necessary for States to cooperate in the case of shared water resources in recognition of the growing economic, environmental, and physical interdependencies across international frontiers."³⁴⁶ At the same time, the United Nations approach has been to try to please all, with the inevitable result that it ends up pleasing none. The next sentence in the Mar del Plata report provides that cooperation "must be exercised on the basis of the equality, sovereignty and territorial integrity of all States,"³⁴⁷ thus muddying the waters by reference to the other competing approaches to transboundary freshwater problems.

d. Agenda 21

The Rio Conference also adopted a more detailed, though still somewhat unclear, environmental programme: Agenda 21.³⁴⁸ Chapter 18 deals with the protection of freshwater resources, taking an integrated drainage-basin management approach: "Freshwater is a unitary resource. Long term development of global freshwater requires holistic management of resources and a recognition of the interconnectedness of the elements related to freshwater and freshwater quality."³⁴⁹ Chapter 18 then states that "[t]he complex interconnectedness of freshwater systems demands that freshwater management be holistic (taking a catchment management approach) and based on a balanced consideration of the needs of people and the environment."³⁵⁰ Chapter 18 also points out that integrated water resource management must not only involve surface waters, but

annotated text, see Robert D. Hayton & Albert E. Utton, *Transboundary Groundwaters: The Bellagio Draft Treaty*, 29 NAT. RESOURCES J. 663 (1989). The Draft Treaty is not, of course, "law," but can be considered as evidence of customary international law under the "teachings of the most highly qualified publicists" category.

344. Bellagio Draft Treaty, *supra* note 343, art. III.

345. *Id.* art. IV.

346. Report of the United Nations Water Conference, Mar del Plata, Argentina, U.N. Doc. E/CONF.70/29, at 53 (1977).

347. *Id.*

348. Agenda 21, June 13, 1992, U.N. Doc. A/CONF.151/26 (vols. I-III) (1992) [hereinafter Agenda 21].

349. *Id.* § 18.35. See also *id.* § 18.16 (noting that water resources development and management should be planned in an integrated manner); § 18.38(g).

350. *Id.* § 18.36. See also *id.* § 18.9 (Integrated water resources management, including the integration of land-and water-related aspects, should be carried out at the level of the catchment basin or sub-basin.)

"must cover all types of interrelated freshwater bodies, including both surface water and groundwater[.]"³⁵¹

For an aspirational document, however, Agenda 21 is strangely hesitant to suggest that any state is actually *required* to do anything. While it makes considerable use of "community" language, Chapter 18 nonetheless appears to anticipate considerable independence in decision-making by the riparian states: "[a]ll States . . . could . . . cooperate in the assessment of transboundary water resources, subject to the prior agreement of each riparian State concerned[.]"³⁵² While noting that "[t]ransboundary water resources and their use are of great importance to riparian States,"³⁵³ Chapter 18 seems to be written with the expectation that most freshwater resource problems will be confronted entirely within the borders of individual states. States sharing a freshwater resource are called upon to do nothing more specific than "to formulate water resources strategies, prepare water resources action programmes and consider, where appropriate, the harmonization of those strategies and action programmes."³⁵⁴

VII.

SHOULD THERE BE DIFFERENT RULES FOR DIFFERENT RIVERS?

The Danube is one of the world's great international rivers; few rivers in the world can match the diversity of peoples and nations within its basin. This distinguishes it from Europe's other great international river, the Rhine, which flows only within the developed West and, with the historically intermittent exception of France, only within the Germanic world. Other great rivers, such as the Amazon, the Nile, the Mekong, and the Ganges/Brahmaputra system, are much less developed; the waters of these rivers are put to different uses than the waters of the Danube. They also differ geographically. The Nile, especially, crosses borders rather than forming them, and is virtually without tributaries in its lower reaches.

Each international river is unique. This uniqueness renders it difficult and perhaps undesirable to create a single body of international law governing all of them. As Gilbert White pointed out four decades ago, no two rivers are the same.³⁵⁵ The problem of protecting fresh water is thus fundamentally different from that of protecting other global environmental resources such as the oceans or the atmosphere, which are global rather than local in nature. General rules of customary international law are ultimately less satisfactory than carefully designed treaty regimes which take into account the geographical peculiarities of

351. *Id.* § 18.3. See also *id.* § 18.12(k).

352. *Id.* § 18.27(iv). Chapter 18 also provides for involvement of "local communities in water management policy-making and decision-making," which would seem to require increased exercise of territorial sovereignty. *Id.* § 18.9(c).

353. *Id.* § 18.4.

354. *Id.* § 18.10. See also *id.* § 18.40(h), calling upon states to consider the "[d]evelopment of national and international legal instruments . . . to protect the quality of water resources[.]"

355. See Gilbert F. White, *A Perspective of River Basin Development*, 22 J.L. & CONTEMP. PROBS. 157 (1956).

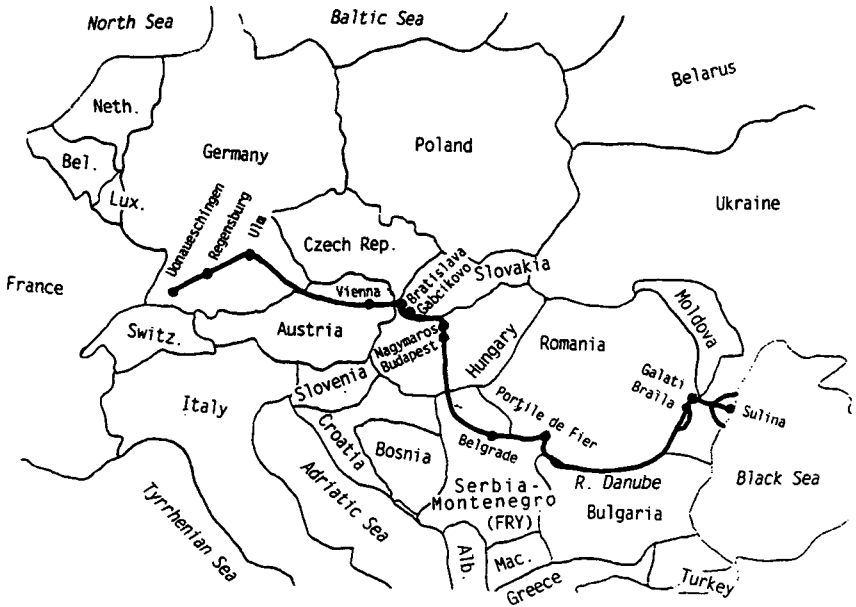
each river system, the uses to which the waters of that system are put, and the needs of the people living within that river's drainage basin.

This does not mean that treaty regimes are always better than customary international law. In many cases, the bargaining power of the parties may be grossly unequal. The treaty regime will then reflect this inequality, rather than the most rational allocation of resources. In other cases, the treaty regime may be founded on an incorrect understanding of the extent or relative importance of resources such as subsurface water.

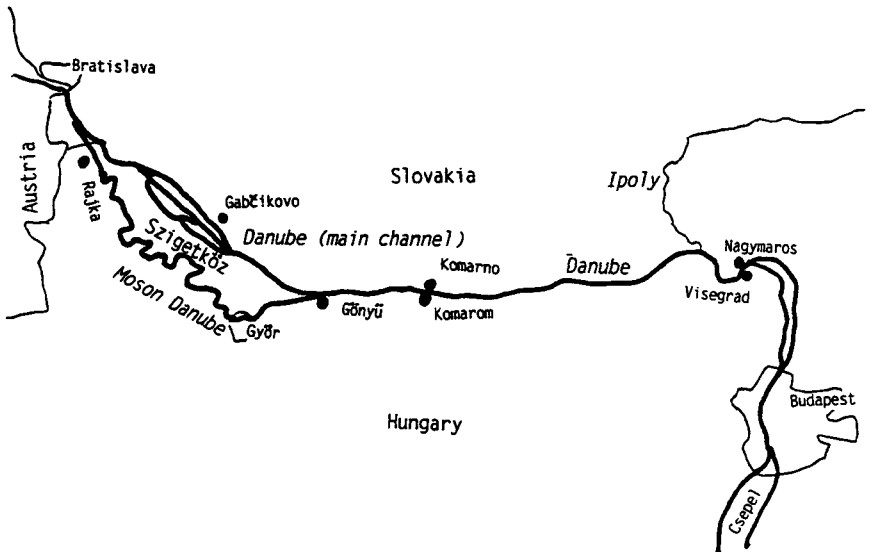
A clear statement of the customary international law on the non-navigational uses of transboundary watercourses is also necessary as a starting point from which the riparian states of a river basin can negotiate specifically-tailored treaty regimes. At present, it is very difficult for the parties in such a process to determine where this starting point lies. For the foreseeable future, however, customary international law is likely to continue to be important to an understanding of the rights and responsibilities of states with regard to the uses of transboundary freshwater resources. The customary international law on this subject is currently inchoate at best and chaotic at worst; the decision of the ICJ in the Gabcikovo-Nagymaros dispute should provide a much-needed and long-awaited clarification.

While the Court's decision in the Gabcikovo-Nagymaros case will be important to the world as a whole, it will be doubly important to the riparians of the Danube. Not only will it provide a restatement and development of the law governing non-navigational uses of the Danube's waters, but it will help restore order to the legal regime governing the river, thus reducing or eliminating one source of friction between nations in this extremely volatile region of the world.

Map 1: The Danube Region



Map 2: The Danube from Bratislava to Budapest



Map 3: The Mouths of the Danube

