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THE NORTH DAKOTA GARRISON DIVERSION PROJECT AND INTERNATIONAL ENVIRONMENTAL LAW

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I. INTRODUCTION

Since construction began on North Dakota's massive water project, the Garrison Diversion Unit (GDU), opposition to it has been vociferous. Based primarily on environmental considerations, criticism has come from individual citizens,[1] organizations,[2] and the governments of Canada[3] and Manitoba.[4]

International environmental law has been rarely referred to in the GDU debate, with the exception of repeated invocations, particularly by the project's Canadian antagonists, of the United States-Canada 1909 Boundary Waters Treaty.[5] On the whole, international law has been neglected even though its environmental concepts are relevant to the development of North Dakota's water project.

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1. *See* G. SHERWOOD, NEW WOUNDS FOR OLD PRAIRIES (1972).

2. Some of these organizations include the National Audubon Society and the Sierra Club at the national level, the Committee to Save North Dakota at the state level, and the Committee to Save Stutsman County at the local level.

3. Nossal, *The Unmaking of Garrison: United States Politics and the Management of Canadian-American Boundary Waters*, 37 BEHIND THE HEADLINES 1, 4 (1978).

4. *Id.* at 6.

5. Boundary Waters Treaty, Jan. 11, 1909, United States-Canada, 36 Stat. 2448, T.S. No. 548.

A short review of Garrison Diversion's history and the Canadian environmental objections to it comprise the first part of this Article. Thereafter, an overview is presented of two aspects of international law. First, substantive international environmental law is inspected. Second, a survey is made of international procedural law relevant to an activity having possible harmful effects for an international drainage basin.[6] The Article concludes with a few remarks about the United States' conformity with this substantive and procedural law.

II. THE GARRISON DIVERSION PROJECT

A. A SYNOPSIS OF THE GARRISON DIVERSION PROJECT'S HISTORY AND FUNCTIONING

The idea of diverting water from the Missouri River to benefit North Dakota was considered in 1889 by the state Constitutional Convention[7] and calls for a state water project were stimulated by the drought and depression of the 1930s.[8] The first step toward this goal was passage of the 1944 Flood Control Act by the United States Congress,[9] which called for a comprehensive development program for the Missouri River Basin.[10] A primary purpose of the Act was elimination of downstream flooding on the Missouri River, to be partially achieved by damming the river in North Dakota near the town of Garrison.[11]

In return for its consent to construction of Garrison Dam, North Dakota demanded and received assurances from Congress that it would receive a multi-purpose water project as compensation for the 550,000 acres of North Dakota land that would be inundated by Garrison Dam.[12]

In 1957, the year after Garrison Dam was completed,[13] the

6. "International drainage basin" has been defined 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." INT'L LAW ASS'N, REPORT OF THE FIFTY-SECOND CONFERENCE HELD AT HELSINKI 484-85 (1967).

7. Statement of Major General C. Emerson Murry for the State of North Dakota and the Garrison Diversion Conservancy District, SPECIAL REPORT ON NORTH DAKOTA'S PLAN FOR PHASE DEVELOPMENT OF THE GARRISON DIVERSION UNIT 1, 7 (U.S. Dep't of the Interior Water and Power Resources Service Upper Missouri Region (1981)) [hereinafter cited as Murry].

8. *See* Nossal, *supra* note 3, at 1.

9. Murry, *supra* note 7, at 7. For a review of the studies, politics, and negotiations that preceded approval of the 1944 Flood Control Act, see M. LAWSON, DAMMED INDIANS: THE PICK-SLOAN PLAN AND THE MISSOURI RIVER SIOUX, 1944-1980, at 9-26 (1982).

10. *See* G. SHERWOOD, *supra* note 1, at 15. The Flood Control Act called for the construction of 137 dams, production of hydroelectric power, and irrigation of more than 10 million acres. *Id.*

11. Murry, *supra* note 7, at 7.

12. GARRISON DIVERSION CONSERVANCY DIST., RECLAMATION FROM 1902, at 6 (pamphlet distributed by the Garrison Diversion Conservancy District).

13. GARRISON DIVERSION CONSERVANCY DIST., GARRISON DIVERSION MEANS. . . WATER (pamphlet distributed by the Garrison Diversion Conservancy District).

Bureau of Reclamation completed a plan for the North Dakota GDU that would give the state a water project.[14] Although this plan went through several revisions it served as the basis for the 1965 congressional authorization of the GDU.[15]

The GDU will divert water from the lake formed by Garrison Dam and Lake Sakakawea to central and southeastern North Dakota. The project is primarily intended to provide supplementary water supplies to fourteen communities and four industrial areas and to provide for fish and wildlife conservation, recreation, and flood control. Furthermore, 250,000 acres are to be irrigated by the diverted waters.

The process of diversion begins at the Snake Creek Pumping Plant, which will lift water from Lake Sakakawea and deposit it into Lake Audubon. The water will then flow seventy-three miles through the McClusky Canal to the Lonetree Reservoir, the principal storage and regulatory facility of the project. An extensive system of rivers and man-made canals will carry the water in three directions to various irrigation areas and communities. The Velva Canal will extend northward from Lonetree Reservoir and move water to the Souris River area. The New Rockford Canal and its extension, the Warwick Canal, will transport water eastward for use in the New Rockford and Warwick-McVille areas. In addition, the New Rockford Canal will feed the James River, which in turn conveys GDU waters to the Oakes-LaMoure area, the southern section of the project.

B. CANADIAN OBJECTIONS TO THE GARRISON DIVERSION PROJECT

Construction of the GDU began in 1967,[16] and soon questions and complaints about the project were voiced.[17] Protests by

14. G. SHERWOOD, *supra* note 1, at 16.

15. INT'L JOINT COMM'N, TRANSBOUNDARY IMPLICATIONS OF THE GARRISON DIVERSION UNIT 1 (1977). For a general description of the project, see *id.* at 11-15; G. SHERWOOD, *supra* note 1, at 15-16; and GARRISON DIVERSION CONSERVANCY DIST., *supra* note 13. These works are the source of the information in the following two paragraphs of the text.

16. 1 DEP'T OF INTERIOR, GARRISON DIVERSION UNIT FINAL COMPREHENSIVE SUPPLEMENTARY ENVIRONMENTAL STATEMENT, I-2 (1979). To date about 20% of the 1965 authorized project is complete. Fargo Forum, Aug. 19, 1984, at D5, col. 1. Completed aspects of the GDU include the Snake Creek Pumping Plant, McClusky Canal, and Wintering Dam, one of the two dams that will form Lonetree Reservoir. Work is presently progressing on Lonetree Dam. Letter from H. Englehorn, Manager, Garrison Diversion Conservancy District, to the author (Sept. 9, 1983) (on file with the author).

17. Other than Canadian concerns, which are the focal point of this article, some aspects of the project questioned by its American opponents include its cost/benefit ratio, its damage to and destruction of wildlife habitats and refuges, its appropriation of farmland for waterways and for mitigation of damage caused to wildlife areas, and the manner in which such acquisition has been conducted. H. HUGHES, WATER RESOURCES PROJECTS: GARRISON DIVERSION UNIT, NORTH DAKOTA 3

America's northern neighbor began as early as 1969.[18] Canada fears that the project will detrimentally alter the quality and quantity of the fish life in Canadian waters.[19] The GDU crosses the Continental Divide and, because most of the project is located in the Hudson Bay Drainage Basin,[20] the greater part of its return flows[21] will enter transboundary streams.[22] The remaining return flows will flow into the Missouri River Drainage Basin of the United States.

The most important United States response to Canadian concerns was its 1975 agreement with Canada to refer the issue to the International Joint Commission (IJC), a United States-Canada body established by the 1909 Boundary Waters Treaty to study and settle boundary disputes between the two countries.[23] The reference to the IJC requested it to "examine into and to report upon the transboundary implications of the proposed completion and operation of the Garrison Diversion Unit in the State of North Dakota. . . ."[24] A technical body, the International Garrison Diversion Study Board (Study Board), was set up by the IJC[25] to examine the project. Based on the Study Board's findings[26] the IJC

(Apr. 6, 1983) (paper of the Library of Congress Congressional Research Service, Environment and Natural Resources Policy Division, Brief No. MB82249); NAT'L AUDUBON SOC'Y, FACT SHEET ON GARRISON DIVERSION UNIT: NORTH DAKOTA 1 (May 1981).

18. INT'L JOINT COMM'N, INTERNATIONAL GARRISON DIVERSION STUDY BOARD REPORT 2 (1976).

19. INT'L. JOINT COMM'N, *supra* note 15, at 1-2.

20. "[N]early 87 percent of the irrigation acreage of the 250,000 authorized Garrison Diversion Unit and over 70 percent of the 'potential municipal water users' are located within the Hudson Bay Basin." Letter from G. Peterson, North Dakota Chapter of the Wildlife Soc'y, *reprinted in* Final Supplemental Environmental Statement on Features of the Garrison Diversion Unit for Initial Development of 85,000 Acres V-174, V-178 (Bureau of Reclamation, 1983) [hereinafter cited as Wildlife Soc'y Letter].

21. Return flows are "flows which accrue to streams from irrigation, conveyance system seepage, operational waste, municipal and industrial users, and fish and wildlife areas as a result of operating of the GDU." INT'L JOINT COMM'N, *supra* note 18, at 198. The Garrison Diversion Conservancy District, the body managing the GDU, has issued a pamphlet which also defines return flows and discusses the return flow issue from the perspective of GDU proponents. *See* GARRISON DIVERSION CONSERVANCY DIST., GARRISON DIVERSION UNIT RETURN FLOWS: THE SOURIS RIVER AND CANADA (undated).

22. INT'L JOINT COMM'N, *supra* note 15, at 11-13. A more specific explanation of how GDU waters would enter Canada is:

> Waters used by Garrison would flow into three rivers in the Hudson Bay drainage basin. Waters from the Middle Souris area would flow into the Souris River; those from the New Rockford and Warwick-McVille areas into the Sheyenne River; and those from the East Oakes area into the Wild Rice River. Both the Wild Rice and the Sheyenne empty into the Red River, which flows north into Manitoba. The Souris enters Canada north of Westhope, N.D., and flows into the Assiniboine River, which also empties into the Red at Winnipeg. Red and Assiniboine waters are connected to both Lake Manitoba and Lake Winnipeg.

Nossal, *supra* note 3, at 2-3.

23. Boundary Waters Treaty, *supra* note 5.

24. INT'L JOINT COMM'N, *supra* note 15, at 131.

25. *Id.* at 134-36.

26. INT'L JOINT COMM'N, *supra* note 18. This Report was supplemented with five lengthy technical appendices: App. A, "Water Quality Report"; App. B, "Water Quantity Report"; App. C, "Biology Report"; App. D, "Uses Report"; and App. E, "Engineering Report." *See id.*

issued a report in 1977[27] which substantiated many of the Canadian complaints. The IJC concluded that "the construction and operation of the Garrison Diversion Unit as envisaged would cause significant injury to health and property in Canada as a result of adverse impacts on the water quality and on some of the more important biological resources in Manitoba."[28]

Some of the findings upon which this conclusion was based include:

1. Water quality: The return flows would degrade municipal water supplies of six Canadian communities and require an annual expenditure of $59,000 (Can.) to $2,000,000 (Can.) for water treatment.[29] Furthermore, the return flows "would have adverse impacts on rural domestic, industrial, and agricultural water use in Manitoba."[30]

2. Biota transfer: The GDU presents the possibility of transferring to the Hudson Bay Drainage Basin fish species, diseases and parasites indigenous to the Missouri River Drainage Basin, but foreign to the Hudson Bay Drainage Basin.[31] The impact of this biota on Canadian waters is "potentially severe"[32] and "would be irreversible."[33] The foreign biota could cause major reductions of highly valuable fish species, which would "threaten the existence of the commercial fishery of Lakes Manitoba and Winnipeg."[34] The IJC recommended that biota transfer "be prevented at all costs."[35]

3. Waterfowl: "It is estimated that GDU as envisaged would result in an average annual loss of 177,500 ducks in North Dakota due to changes in wetland habitat. . . . [T]his loss. . . would mean an average annual loss of approximately 35,000 ducks to Manitoba."[36]

4. Water quality: "Souris River flows would be increased by the addition of return flows. . . ."[37] This increase would cause flooding in Canada of about 200 acres annually.[38]

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27. INT'L JOINT COMM'N, *supra* note 15.
28. *Id.* at 105.
29. *Id.*
30. *Id.* at 59.
31. *Id.* at 54.
32. *Id.* at 103.
33. *Id.*
34. *Id.* at 56. The IJC estimated that Manitoba's commercial freshwater fishing industry would lose $6 million a year, and that the loss to recreational fishing would be $130,000 annually. Nossal, *supra* note 3, at 24.
35. INT'L JOINT COMM'N, *supra* note 15, at 102.
36. *Id.* at 57.
37. *Id.* at 45.
38. *Id.* at 46.

C. THE UNITED STATES RESPONSE TO THE INTERNATIONAL JOINT COMMISSION REPORT AND CANADIAN CONCERNS

The conclusions of the IJC were a blow to GDU advocates. Construction of the project was brought to a halt in 1977 because of the IJC Report, domestic legal actions,[39] and questions about the project within the federal government.[40]

A number of alternatives to the 1965 authorized version were proposed[41] before an agreement was made to proceed with construction in two phases.[42] Phase I will reduce the number of irrigated acres from 250,000 to about 85,000 and contains safeguards ensuring that transboundary water pollution does not occur.[43] The safeguards implement what is known as the closed system concept: "closed" because protective measures are to prevent any diverted water from entering the Hudson Bay Drainage Basin. Phase II would, along with Phase I, complete the GDU as envisaged by its 1965 authorization. Phase II, however, will be developed only if it can be done without environmentally harmful interbasin water transfer.[44]

Congress accepted the idea of phased development, and after it appropriated money for the project, construction recommenced in 1983.[45] Congressional funding was, however, conditioned upon the requirement that Phase I not affect Canadian waters.[46] In addition, the United States Government has repeatedly assured Canada that no part of Garrison Diversion with the potential of damaging Canadian waters will be built.[47]

Despite these assurances and the fact that the 1975 authorized project has been diluted to phased development with a closed system concept, Canadian concerns persist. In a 1982 Diplomatic Note to the United States, Canada stated:

> [F]eatures of Phase One could pose a significant threat of damage to Manitoba waters and resources through the

39. H. HUGHES, *supra* note 17, at 2.

40. *See* Nossal, *supra* note 3, at 12-26. Nossal makes references to criticisms of Garrison Diversion by the President's Council on Environmental Quality, the Environmental Protection Agency, and the Carter Administration. *Id.*

41. DEP'T OF INTERIOR, *supra* note 16, at II-1-65 (details the various proposals).

42. Murry, *supra* note 7, at 4.

43. WATER AND POWER RESOURCES SERVICE UPPER MO. REGION, U.S. DEPT. OF THE INTERIOR, SPECIAL REPORT ON NORTH DAKOTA'S PLAN FOR PHASE DEVELOPMENT OF THE GARRISON DIVERSION UNIT 12 (1981). Besides irrigation, Phase One includes construction of project supply works, lake restoration, augmentation of certain municipal and industrial water supplies as well as fish, wildlife, and recreation development. *Id.*

44. Murry, *supra* note 7, at 1.

45. Minneapolis Tribune, July 17, 1983, at 5A, col. 1.

46. *Id.* at 5A, col. 2.

47. *See id;* H. HUGHES, *supra* note 17, at 2, 5; Murry, *supra* note 7, at 2-3.

> inter-basin transfers envisaged in this phase. . . .
>
> Furthermore, Canadian authorities are concerned that Phase One does not appear to constitute a viable project. If such is the case, and the first phase of Garrison were to be built without appropriate authorization of adjoining sections elsewhere in the Missouri Drainage Basin which together added up to viable acreage, there would be great pressure to complete the second phase of the project in North Dakota despite the apparent impact on Manitoba waters from the effects of consequent, substantial inter-basin transfers.[48]

A 1983 Canadian Diplomatic Note states that "continued construction of the Garrison project as currently authorized is a matter of considerable public and governmental concern in Canada and particularly in Manitoba."[49]

Canadian fears have support. The United States Environmental Protection Agency has stated that it is "skeptical that a closed system can be successfully designed and operated in areas which do not drain naturally to the James/Missouri River Basins."[50] Significantly, "[m]ore than 61 percent of the irrigation acreage of the Phase I development is located within the Hudson Bay Basin."[51] Were a smaller percentage of acres in this basin, fears of an ineffective closed system would be less pronounced.

The latest development in the GDU chronicle was the United States Senate's formation, in the summer of 1984, of the Garrison Diversion Unit Commission (GDUC) to review the Garrison Diversion project and propose modifications to it.[52] The GDUC represented a compromise between the project's proponents and opponents, without which the project would likely have received no further funds from Congress. Composed of twelve United States citizens, the GDUC submitted a report that proposed significant

48. Canada Diplomatic Note No. 641 (Nov. 24, 1982) (a copy of this note is on file with the author). *See also* Minneapolis Tribune, Oct. 29, 1983, at 4A, col. 1.

49. Canada Diplomatic Note No. 79 (Feb. 10, 1983) (a copy of this note is on file with the author). According to one commentator, "Little faith is put [by Canadians] in the assurances by the United States Senators that the money [appropriated for the GDU] will not be spent on construction that would damage Manitoba." *See* Goldberg, *The Garrison Diversion Project: New Solutions for Transboundary Pollution Disputes*, 11 MAN. L.J. 177, 181 (1981).

50. Letter from S. Durham, United States Environmental Protection Agency, *reprinted in* FINAL SUPPLEMENTAL ENVIRONMENTAL STATEMENT ON FEATURES OF THE GARRISON DIVERSION UNIT FOR INITIAL DEVELOPMENT OF 85,000 ACRES V-114, V-114 (Bureau of Reclamation 1983). The North Dakota Chapter of the Wildlife Society has also expressed doubts about the ability of Phase One to eliminate inter-basin transfer. Wildlife Soc'y Letter, *supra* note 20, at V-169, V-178, V-190.

51. Wildlife Soc'y Letter, *supra* note 20, at V-169.

52. *See* Act of July 16, 1984, Pub. L. No. 98-360, § 207, 98 Stat. 403, 411-13.

changes in the 1965 authorized version.[53]

The GDUC recommended a dramatic reduction in the number of acres to be irrigated and much greater emphasis on municipal, rural, and industrial water development. Important proposals concerning international environmental law were that irrigation be restricted to land that drains naturally into the Missouri River basin; that all municipal, rural, and industrial water delivery into the Hudson Bay Drainage Basin be treated to avoid biota transfer; and that Lonetree Reservior not be built because its location at the headwaters of rivers in the Hudson Bay area might result in the transfer of biota to Canadian waters. The GDUC recommended that Lonetree Reservoir be replaced by a canal to link the western and eastern sections of the venture. Importantly, however, the reservoir and irrigation in the Hudson Bay region have not been precluded by the GDUC report;[54] these are only deferred pending a determination of need for the reservoir by the federal government and satisfactory conclusion of consultations with Canada regarding the irrigation issue. Consequently, return flows of GDU waters from municipal, rural, and industrial uses will take place and those from irrigation may occur.[55]

Therefore, notwithstanding revision to the GDU in response to the IJC report and likely changes by Congress in conformance with the GDUC report,[56] there persists the possibility of harm to Canadian interests if the United States does not take environmentally protective measures in its continuing development of Garrison Diversion.

III. THE SOURCES OF INTERNATIONAL ENVIRONMENTAL LAW

A foremost difficulty in international law is determining the rights and duties created by it on a particular issue at a particular time. One has neither the luxury of turning to a set of international

53. GARRISON DIVERSION UNIT COMM'N, FINAL REPORT (Dec. 20, 1984).

Pages i - iii and 1 - 3 of the Report are the source of the information in the following paragraph.

54. Regarding the future of Lonetree Reservoir, North Dakota Senator Mark Andrews has said that he intends to request the Senate to reinstate this feature. Whalen, *Odds Tough for Lonetree Revival*, Bismarck Tribune, Dec. 17, 1984, at 1B, col. 1. North Dakota's other senator, Quentin Burdick, appears prepared to support such an attempt by his colleague. *Id.* at 5B, col. 1.

55. In addition, Dr. Gary Pearson contends that the Robinson Coulee area, a project feature retained by the GDUC, still poses a risk of biota transfer into Canadian waters. Bradbury, *Garrison Opponents Happy, but Proposal Isn't Victory*, Fargo Forum, Nov. 30, 1984, at 1B, col. 2.

56. The law establishing the GDUC directs the Secretary of Interior to implement the Commission's recommendations. Act of July 16, 1984, Pub. L. No. 98-360, § 207(d), 98 Stat. 403, 413.

statutes to answer legal problems nor voluminous case law offering sophisticated analysis. The problem of defining the scope of international law is exacerbated in those fields in which states have not been concerned until recently, such as the environment. Just as the development of most national environmental law has been recent, so has been the formation of the international law of the environment.[57]

Despite the relative novelty of environmental concerns within the international community, international environmental law has gained a foothold and "it would be naive to suggest that there is a complete juridical vacuum."[58] It is also true that environmental rules have not developed at a similar pace in all areas. Whereas international law is primitive in matters of air pollution, pesticide use, and the export of hazardous substances, the international law of water resources contains a number of reasonably well established principles governing state conduct.

The guide to determining international environmental law, and all international law, is Article 38(1) of the Statute of the International Court of Justice. Article 38(1) states that the court, in deciding cases before it, is to apply: "(a) international conventions. . .; (b) international custom as evidence of a general practice accepted as law; (c) general principles of law recognized by civilized nations; (d) judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law."[59]

Therefore, international conventions, the practice of states, general principles of law, judicial decisions, and authoritative writings are the sources one must look to in studying the law of international drainage basins.[60] Furthermore, a new source of international law, particularly relevant for the environment and not fully foreseen when Article 38(1) was drafted,[61] has developed with the rapid growth of intergovernmental organizations and the widespread use of international conferences. From these sources emanate declarations, final acts, resolutions, and statements of

57. *See* Johnston, *International Environmental Law: Recent Developments and Canadian Contributions*, in CANADIAN PERSPECTIVES ON INTERNATIONAL LAW AND ORGANISATION 555, 560 (R. MacDonald, G. Morris & D. Johnston eds. 1974). The author states, "[I]t was only after World War II that there was a beginning of organized concern for the 'human environment' as a whole and of global effects to treat specific aspects of it." *Id.*

58. J. BARROS & D. JOHNSTON, THE INTERNATIONAL LAW OF POLLUTION 69 (1974).

59. BASIC DOCUMENTS IN INTERNATIONAL LAW 397 (I. Brownlie 3d ed. 1983).

60. The subject of the sources of international law has received abundant analysis and all general textbooks on international law include a chapter or two on the topic. *See generally* Virally, *The Sources of International Law*, in MANUAL OF INTERNATIONAL LAW 116-74 (M. Sorenson ed. 1968); C. PARRY, THE SOURCES AND EVIDENCES OF INTERNATIONAL LAW (1965).

61. D. CAPONERA, THE LAW OF INTERNATIONAL WATER RESOURCES 4 (1980).

principles that have become known as quasi-legislative or "soft" (hortatory) law. Whether such pronouncements reach a quasi-legislative status depends upon many factors, such as the wording used and the number of states voting for the formulation or otherwise expressing willingness to accept it. There is a keen debate about the legal effect of these actions, but it is probably true that they "play an important role in international environmental law."[62] Of this role it has been stated:

> Above all, it seems necessary to dispel the old idea that international law is created only through solemn, formal acts of consent couched in the form of hard promises of dispositive clarity, in the manner of a commercial contract. More normally, the principles of international — not least in areas of wide-ranging environmental significance — will be developed in the tradition of constitutional, rather than contractual drafting. . . .[63]

It is to all of the above-mentioned sources that one must turn to determine the substantive and procedural international legal duties that the United States is bound to respect in the development and eventual operation of North Dakota's Garrison Diversion project.

IV. SUBSTANTIVE INTERNATIONAL LAW

A. A STATE'S GENERAL OBLIGATION NOT TO CAUSE ANOTHER STATE HARM

General principles of international law have an environmental significance. Every state is bound by a general rule not to allow its territory to be used for acts that are detrimental to the rights of other states.[64] If this obligation is breached the rule supports the idea that the offending state may be required to compensate the

62. A. KISS, SURVEY OF CURRENT DEVELOPMENTS IN INTERNATIONAL ENVIRONMENTAL LAW 25 (1976). *See also* J. BARROS & D. JOHNSTON, *supra* Note 58, at 74; J. SCHNEIDER, WORLD PUBLIC ORDER OF THE ENVIRONMENT: TOWARDS AN INTERNATIONAL ECOLOGICAL LAW AND ORGANIZATION 83-84 (1979). Caponera states that the resolutions of organizations "have had a notable influence in the processes of the formation of the general rules of international law. . . and they have had the function of crystallizing opinion and state practice whence international customary rules take their origin and develop." D. CAPONERA, *supra* note 61, at 17.

63. Johnston, *The Environmental Law of the Sea: Historical Development*, in THE ENVIRONMENTAL LAW OF THE SEA 17, 48 (D. Johnston ed. 1981).

64. Brownlie, *A Survey of International Customary Rules of Environmental Protection*, 13 NAT RESOURCES J. 179, 180 (1973).

innocent state for the injury done.[65] "When a State causes, maintains, or fails to control a source of harm to other States, or to the nationals of other States, then existing principles of State responsibility provide bases of liability no less sophisticated than those of systems of municipal law."[66] Although this rule of state responsibility developed before a general concern for the environment was born and has been invoked with regard to issues other than pollution,[67] it has obvious ramifications for transboundary environmental damage.

The International Court of Justice (ICJ) issued an authoritive formulation of the rule that a state is responsible for extraterritorial harm in the 1949 *Corfu Channel* case.[68] The case concerned the question of Albania's liability for failure to notify British ships of the presence of mines in the straits of Corfu, a passageway within the territorial waters of Albania. British ships struck the mines and were damaged and British lives were lost. The ICJ reached "the conclusion that Albania is responsible under international law for the explosions which occurred. . . and for the damage and loss of human life which resulted from them, and that there is a duty upon Albania to pay compensation to the United Kingdom."[69] Significantly, the ICJ based this conclusion on "certain general and well-recognized principles"[70] including "every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States."[71]

Had the ICJ not announced a general rule prohibiting harm, there would still be international legal concepts to apply to circumstances where harm in one state is the consequence of acts in another. These concepts are "good neighborliness," the prohibition against "abuse of rights" and the old maxim *sic utere tu out alienum non laedas,* which means "one must use his own so as not to injure others."[72] "Good neighborliness" means that a state

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65. *Id.*

66. *Id. See also* J. BARROS & D. JOHNSTON, *supra* note 58, at 69.

67. The rule has often been applied as the obligation a state has to prevent its territory from being used to foment civil strife in another state. *See* 5 M. WHITEMAN, DIGEST OF INTERNATIONAL LAW 249-321 (1965); Brownlie, *International Law and the Activities of Armed Bands*, 7 INT'L & COMP. L.Q. 712 (1958); Lauterpacht, *Revolutionary Activities by Private Persons Against Foreign States*, 22 AM. J. INT'L L. 105 (1928). Neutrality is another area in which the rule of state responsibility has traditionally been applied. Ando, *The Law of Pollution Prevention in International Rivers and Lakes*, in THE LEGAL REGIME OF INTERNATIONAL RIVERS AND LAKES 331, 333 (R. Zacklin & L. Caflisch eds. 1981).

68. U.K. v. Alb., 1949 I.C.J. 4 (Judgment of Apr. 9).

69. Corfu Channel (U.K. v. Alb.), 1949 I.C.J. 4, 23 (Judgment of Apr. 9).

70. *Id.* at 22.

71. *Id.*

72. Blackstone illustrated the *sic utere tuo* concept with an example of river pollution by stating that one cannot "corrupt or poison a water course, by erecting a dyehouse or a lime-pit for the use of trade in the upper part of the stream." 3 W. BLACKSTONE, COMMENTARIES ON THE LAWS OF ENGLAND 218 (Chitty ed. 1827).

cannot do an act, such as develop a water diversion project, without considering how the interests of its neighbor might be affected; rather, it must consider such opposing interests and seek to reconcile them with the proposed action.[73] The "abuse of rights" theory basically requires that good faith govern international relations.[74] This theory is much like "good neighborliness" in that it recognizes the interdependence of rights and obligations of states and limits every right as necessary to render it compatible with obligations arising from general international law and treaties.[75] As each of these three concepts require a state to respect the rights and interests of other states, they are obviously related. It has been observed that "abuse of rights" is based on *sic utere tuo* and that "good neighborliness" is but another name for the "abuse of rights" doctrine.[76]

It is doubtful, however, that the concepts make a great contribution to international environmental law. Each suffers from vagueness. The maxims do little to clarify a state's responsibility, and each lacks elucidating criteria upon which a precise solution to a transfrontier pollution problem could be based. On the other hand, the concepts are important in that each acknowledges limits (although unclear) upon the sovereignty of a state to develop its resources. "Abuse of rights," "good neighborliness," and *sic utere tuo,* along with the *Corfu Channel* opinion, contribute to the affirmation that "state responsibility can be regarded as 'a general principle of international law. . . .' "[77]

An appropriate conclusion to this general review of a state's duty not to cause another state harm is reference to the International Law Commission's[78] study of state responsibility.

For a general discussion of the "good neighborliness," "abuse of rights," and *sic utere tuo* concepts, see Lester, *River Pollution in International Law*, 57 AM. J. INT'L L. 828, 832-36 (1963); Arbitblit, *The Plight of American Citizens Injured by Transboundary River Pollution*, 8 ECOLOGY L.Q. 339, 363-66 (1979).

73. Arbitblit, *supra* note 72, at 363.

74. *See* B. CHENG, GENERAL PRINCIPLES OF LAW AS APPLIED BY INTERNATIONAL COURTS AND TRIBUNALS 121 (1953). *See also* H. LAUTERPACHT, THE DEVELOPMENT OF INTERNATIONAL LAW BY THE INTERNATIONAL COURT 162-65 (1958); Schwarzenberger, *Uses and Abuses of the 'Abuse of Rights' in International Law*, 42 GROTIUS SOC'Y TRANSACTIONS FOR THE YEAR 1956, at 147 (1957); 5 M. WHITEMAN, *supra* note 67, at 224-30; Gutteridge, *Abuse of Rights*, 5 CAMBRIDGE L.J. 22 (1935).

The "abuse of rights" doctrine is, however, uncertain and controversial. E. BROWN, THE LEGAL REGIME OF HYDROSPACE 128 (1971). Also, the doctrine arguably has not yet reached that stage where it can be considered a principle of international law. I. BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW 432 (2d ed. 1973).

75. B. CHENG, *supra* note 74, at 130-31.

76. *See* Johnston, *supra* note 63, at 21.

77. J. SCHNEIDER, *supra* note 62, at 142.

78. The International Law Commission is a body of the United Nations composed of international law authorities. Upon the request of the General Assembly the Commission will study an aspect of international law with the goal of drafting a code on that topic. For the Commission's Draft Articles on State Responsibility, see [1980] 2 Y.B. INT'L L. COMM'N 30, U.N. DOC. A/CN .4/SER.A/1980/Add. 1 (Part 2).

The Commission's proceedings on state responsibility reveal its recognition that transfrontier environmental damage is a wrongful act according to principles of international law.

B. A STATE'S GENERAL OBLIGATION TO PREVENT TRANSBOUNDARY ENVIRONMENTAL DAMAGE

Beyond the broad duty upon a state not to allow its territory to be used to harm another state, there is a specific obligation in international law to avoid environmental damage. "[C]ustomary international environmental law has evolved to the point of clearly outlawing state conduct which results in transfrontier pollution that entails extra-territorial damage."[79]

A number of sources support this statement. One of the most important is the Stockholm Declaration on the Human Environment issued in 1972 at the conclusion of the United Nations Conference on the Human Environment.[80] The purpose of the conference was to set forth the environmental obligations of the state and to develop institutions to promote these obligations. Although environmental duties were enunciated in the Preamble and Principles of the Stockholm Declaration, they are not technically binding as the Declaration is not a convention. Even so, the Declaration is significant as the view of 113 governments on environmental obligations and has been labeled "the world community's most authoritative charter on environmental rights and duties."[81]

The Preamble sets forth the basic obligation that "protection and improvement of the human environment is. . . the duty of all governments."[82] The more specific Principles follow, and although their legal status is controversial,[83] several seem to be founded on accepted international law.[84] Principles 21 and 22[85] have been

79. Handl, *The Principle of 'Equitable Use' as Applied to Internationally Shared Natural Resources: Its Role in Resolving Potential International Disputes Over Transfrontier Pollution*, 14 REVUE BELGE DE DROIT 40, 44 (1979). Caponera states "that there is a clear affirmation of the general rule whereby the rights of . . . States are limited in relation to any shared resources." D. CAPONERA, *supra* note 61, at 12.

80. Report of the United Nations Conference on the Human Environment, U.N. DOC.A/CONF.48/14 Rev. 1 (1973).

81. Johnston, *supra* note 57, at 574.

82. Report, *supra* note 80, at 3.

83. Remond-Gouilland, *Prevention and Control of Marine Pollution*, in THE ENVIRONMENTAL LAW OF THE SEA 193, 201 (D. Johnston ed. 1981).

84. *See* Baxter, *International Law in 'Her Infinite Variety,'* 29 INT'L & COMP. L.Q. 549, 559 (1980).

85. Report, *supra* note 80, Principles 21, 22. Those principles state as follows:

> Principle 21: 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 policies, and the responsibility to ensure that

referred to as "[t]he most significant consensus that has been reached in the field of international co-operation among States respecting environmental preservation. . . ."[86]

Principle 21 refers to the United Nations Charter and principles of international law and affirms the state obligation to prevent transboundary pollution. On the other hand, the Principle gives a state the sovereign right to develop its resources. Despite this fundamental tension in its formulation, the Principle is an important element of international law.[87]

Principle 22, the compensatory requirement for transboundary pollution, is weaker than Principle 21 as it merely recognizes the duty of states "to co-operate to develop further the international law regarding liability and compensation." Nonetheless, the implication of the Principle is that liability and the duty to compensate are already a part of international law, although in rudimentary form.

The adoption of Principles 21 and 22 by the community of states represents approval of aspects of the arbitration award in the *Trail Smelter* case[88] between Canada and the United States. The *Trail Smelter* case arose out of the operation of a smelting plant at Trail, British Columbia. Fumes from the plant drifted across the United States-Canadian border and damaged crops, trees, and other property in the state of Washington. The United States and

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> activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.
>
> Principle 22: States shall co-operate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction.

Id.

86. Olmstead, *Prospects for Regulation of Environmental Conservation under International Law*, in THE PRESENT STATE OF INTERNATIONAL LAW AND OTHER ESSAYS 245, 252 (M. Bos ed. 1973).

87. *See* Dupuy & Smets, *Compensation for Damage Due to Transfrontier Pollution*, in COMPENSATION FOR POLLUTION DAMAGE 181, 182 (Org. for Econ. Co-operation & Dev. ed. 1981). The authors state:

> [Principle 21] formulated a primary obligation in law, the violation of which would amount to an unlawful act giving rise to liability on the part of the State. . . . As for the content of the obligation, it in effect embodies, adapting it to the new environmental context, the principle today regarded as custom-based by virtually all legal writers, namely that of the harmless use of territory. . . .

Id. It has also been said of Principle 21 that it "is a crystallization of international practice." Utton, *International Water Quality Law*, 13 NAT. RESOURCES J. 282, 293 (1973).

88. Trail Smelter (U.S. v. Can.), 3 R. Int'l Arb. Awards 1905 (1941), *reprinted in* 35 AM. J. INT'L L. 684 (1941). Though the case primarily concerned air pollution,the United States claimed that the smelter disposed of wastes into the Columbia River and thereby damaged parts of the river that flowed through the United States. *Id.*

For accounts of the dispute, see Hoffman, *State Responsibility in International Law and Transboundary Pollution Injuries*, 25 INT'L & COMP. L.Q. 509, 513-20 (1976); Read, *The Trail Smelter Dispute*, 1 CAN. Y.B. INT'L. L. 213 (1963); Rubin, *Pollution by Analogy: The Trail Smelter Arbitration*, 50 OR. L. REV. 259 (1971).

Canada signed a *compromis* in 1935 that submitted the matter to arbitration.[89] Under the *compromis* Canada assumed international responsibility for the damage, but the arbitration tribunal had to decide the extent of the damage, the proper compensation for this damage, and what form the future operation of the smelter ought to take.

In its decision the tribunal stated:

> The Tribunal. . . finds that. . . under the principles of international law, as well as the law of the United States 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 persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.
>
> . . . .
>
> Considering the circumstances of the case, the Tribunal holds that. . . Canada is responsible in international law for the conduct of the Trail Smelter. Apart from the undertaking in the [*compromis*] it is, therefore, the duty of the Government of the Dominion of Canada to see to it that this conduct should be in conformity with the obligation of the Dominion under international law as herein determined.[90]

The *Trail Smelter* case is one of the most important developments in international environmental law in that "it establishes the principle of international liability for damages caused to the environment of another State. As a consequence of this principle compensation has to be paid for such damage."[91] Some scholars disagree with this assessment. For example, it has been said that because the *compromis* required the tribunal to apply both law of the United States and international law, it is unclear upon which legal basis the case was decided.[92] The tribunal did not

89. Convention for Settlement of Difficulties Arising from Operation of Smelter at Trail, B.C., Apr. 15, 1935, Canada-United States, T.S. No. 893, *reprinted in* 30 AM. J. INT'L L. 163 (Supp. 1936); 3 R. Int'l Arb. Awards 1907 (1941). Prior to the *compromis* the United States and Canada, in 1927, referred the problem to the International Joint Commission under Article IX of the 1909 Boundary Waters Treaty. Read, *supra* note 88, at 213-14. After a three year study the Commission recommended a solution that was unsatisfactory to the United States. *Id.* at 214. After more negotiation the United States and Canada entered into the *compromis* in 1935. *Id.*

90. 3 R. Int'l. Arb. Awards 1905, 1965-66 (1941), *reprinted in* 35 AM. J. INT'L L. 684, 716-17 (1941).

91. A. KISS, *supra* note 62, at 46.

92. Handl, *Balancing of Interests and International Liability for the Pollution of International Watercourses: Customary Principles of Law Revisited*, 13 CAN. Y.B. INT'L L. 156, 168 (1975).

wholly rely on the *compromis* in declaring Canada's duty and remarked, as quoted above, that this duty arose "under principles of international law" and "[a]part from the undertaking in the [*compromis*]." It is also claimed that the tribunal's conclusion is weakened because it is an arbitral award and not a judicial decision.[93] This criticism is somewhat superficial. Rather than find fault with the nature of the tribunal, one should assess its decision by considering the stature of its membership and the cogency of its reasoning. Despite these arguments (and in recognition that the language of the award quoted above is dicta) the *Trail Smelter* case is the foremost precedent[94] on responsibility for transboundary pollution and is some proof that this obligation is a part of international law.

Another case involving an environmental dispute between Canada and the United States was the *Gut Dam* arbitration.[95] This case arose out of flooding and erosion damage done in 1952 to the United States side of the St. Lawrence River. United States property owners argued that the damage was due, at least in part, to Canada's construction of Gut Dam in 1902. The dam extended across the international boundary between Adams Island in Canada and Los Galops Island in the United States. Canada sought United States approval for construction of the dam and received it upon condition that Canada pay compensation to United States citizens should the dam cause them any damage.

After the failure of negotiations over liability and compensation the issue was submitted, in 1966, to an arbitration tribunal[96] to determine three issues: one, which United States claimants were entitled to compensation under the indemnification of the original agreement; two, whether a time limit existed on Canada's obligation to compensate under this agreement; and three, causation and the amount of damages. After the first two issues were answered in favor of the United States the two countries reached an accord in 1968 whereby Canada paid $350,000 in full settlement.[97] This case, however, is of little value in assessing

93. *See* J. BARROS & D. JOHNSTON, *supra* note 58, at 75.

94. Kirgis, *Technological Challenge to the Shared Environment: United States Practice*, 66 AM. J. INT'L L. 290, 294 (1972).

95. Report of the Agent of the United States Before the Lake Ontario Claims Tribunal, *reprinted in* 8 INT'L LEGAL MATERIALS 118 (1969).

For accounts of the Gut Dam dispute, see Lillich, *The Gut Dam Claims Agreement with Canada*, 59 AM. J. INT'L L. 892 (1965); 3 M. WHITEMAN, DIGEST OF INTERNATIONAL LAW 768-70 (1964).

96. Agreement between the Government of the United States of America and the Government of Canada Concerning the Establishment of an International Arbitral Tribunal to Dispose of United States Claims relating to Gut Dam, March 25, 1965, Canada-United States, 52 Dep't of State Bull. 643 (Apr. 26, 1965), *reprinted in* 4 INT'L LEGAL MATERIALS 468 (1965).

97. Report, *supra* note 95, at 142. The report states, "The negotiated settlement has met with

whether or not international law imposes a general obligation not to pollute. Although Gut Dam caused environmental damage and Canada paid for much of the property loss (which is itself significant), it did so because of its promise under the 1902 agreement. Canada assumed no liability, nor did the arbitral tribunal impose it, under a general principle of international environmental law.

Besides the *Trail Smelter* case, national courts have invoked international law in deciding disputes between federated states. These decisions reinforce international law's proscription against transboundary pollution.[98] As three of these cases specifically concern rivers they will be discussed below in the section on a state's duty not to pollute an international drainage basin.[99] One other national case, *Solothurn v. Aargau,*[100] involved a dispute between two Swiss cantons. The Swiss court, citing international law, stated the following about the limits of state sovereignty:

> [T]he Canton of Solothurn appears in fact to have been injured in its territorial majesty and in its sovereignty by the attitude of the Canton of Aargau. If objection should be made thereto, to the effect that the Canton of Aargau for its part may use its territory or cause it to be used as it pleases, the reply must be that in international law, especially in relations within federal states, the principle of law of vicinage holds. . . that the exercise of one's own rights should not prejudice the rights of one's neighbors. . . .[101]

Pronouncements of the United Nations General Assembly, the United Nations Environment Programme, and the Organization for Economic Co-operation and Development are representative of the recognition intergovernmental organizations have given the proscription against transboundary environmental damage.

In its session following the Stockholm Conference on the Human Environment, the United Nations General Assembly adopted Resolution 2995, which reiterated the essence of Stockholm Principle 21 and advocated implementation of it and

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approval of both governments and has generally been greeted favorably by the individuals damaged." *Id.* at 143.

98. *See infra* notes 154-55 and accompanying text.

99. *See infra* notes 156-161 and accompanying text.

100. ___ BG II ___, ___ ATF II ___ (1878). *See* Schindler, *The Administration of Justice in the Swiss Federal Court in Intercantonal Disputes*, 15 AM. J. INT'L L. 149, 172-74 (1921).

101. Solothurn v. Aargau, ___ BG II ___, ___ ATF II ___ (1878).

Principle 22.[102] Resolution 2996 followed, and it reaffirmed those same two principles.[103] A 1973 resolution also reaffirmed these principles and the "duty of the international community to adopt measures to protect and improve the environment. . . ."[104]

The Charter of Economic Rights and Duties of States was adopted by the 1974 session of the General Assembly;[105] its Article 30 states:

> The protection, preservation and enhancement of the environment for the present and future generations is the responsibility of all States. . . . All States have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction. All States should cooperate in evolving international norms and regulations in the field of the environment.[106]

Although the formal legal status of General Assembly resolutions (as well as resolutions of other intergovernmental bodies) is questionable,[107] they arguably evidence the attitudes and practice of states and thus manifest customary international law.[108]

Recent enunciations of the General Assembly on state responsibility for transboundary pollution include its adoption of the World Charter for Nature[109] in 1982 and its 1980 resolution on the Historical Responsibility of States for the Preservation of Nature for Present and Future Generations.[110]

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102. G.A. Res. 2995, 27 U.N. GAOR Supp. (No. 30) at 42, U.N. Doc. A/8730 (1973). This resolution is entitled Co-operation Between States in the Field of the Environment and was approved by a vote of 115 in favor with ten abstentions. Johnston, *supra* note 57, at 578.

103. G.A. Res. 2996, 27 U.N. GAOR Supp. (No. 30) at 42, U.N. Doc. A/8730 (1973). This resolution is entitled International Responsibility of States in Regard to the Environment and was adopted with 112 votes in favor and ten abstentions. Johnston, *supra* note 57, at 578.

104. G.A. Res. 3129, 28 U.N. GAOR Supp. (No. 30) at 48-49, U.N. Doc. A/9030 (1974), *reprinted in* 13 INT'L LEGAL MATERIALS 232 (1974). The resolution is entitled Co-operation in the Field of the Environment Concerning Natural Resources Shared by Two or More States. *Id.* at 48.

105. G.A. Res. 3281, 29 U.N. GAOR Supp. (No. 31) at 50, U.N. Doc. A/9631, at 50 (1975), *reprinted in* 14 INT'L LEGAL MATERIALS 251 (1975). The resolution was adopted by a vote of 120 for, six against, and ten abstentions. 14 INT'L LEGAL MATERIALS 251 (1975).

106. G.A. Res. 3281, *supra* note 105, at 55, *reprinted in* 14 INT'L LEGAL MATERIALS 260-61 (1975). Article 30 of the resolution was adopted with a vote of 126 in favor and three abstentions. 14 INT'L LEGAL MATERIALS 265 (1975).

107. For analyses of the legal effect of United Nations resolutions, see J. CASTANEDA, THE LEGAL EFFECT OF UNITED NATIONS RESOLUTION (1969); O. ASAMOAH, THE LEGAL SIGNIFICANCE OF THE DECLARATION OF THE GENERAL ASSEMBLY OF THE UNITED NATIONS (1966); Falk, *On the Quasi-Legislative Competence of the General Assembly*, 60 AM. J. INT'L L. 782 (1966); Johnson, *The Effects of Resolutions of the General Assembly of the United Nations*, 32 BRIT. Y.B. INT'L L. 97 (1957).

108. Handl, *supra* note 79, at 59.

109. World Charter for Nature, *reprinted in* 10 ENVTL. POL'Y & L. 30 (1983).

110. G.A. Res. 35/8, 35 U.N. GAOR Supp. (No. 48) at 15, U.N. Doc. A/35/48/Add. 1 (1981).

The United Nations Environment Programme (UNEP) has studied the measures being adopted by states to promote co-operation in the development of natural resources shared by states. The resulting report[111] was followed by UNEP's formation of a working group, which drafted a comprehensive code concerning shared natural resources.[112] The code advocates the elimination of adverse transboundary environmental effects and international cooperation in the management and use of shared natural resources.[113]

The Organisation for Economic Co-operation and Development (OECD), of which the United States and Canada are members, has also been involved in developing state responsibility for transfrontier environmental damage. Examples of the Organisation's work include its Council Recommendation For the Implementation of a Regime of Equal Right of Access and Non-Discrimination in Relation to Transfrontier Pollution[114] and On Principles Concerning Transfrontier Pollution.[115] The latter recommendation reaffirms Stockholm Principle 21 and advocates that states cooperate in developing environmental policies and in settling transfrontier problems. It also advises OECD member states to "take all appropriate measures to prevent and control transfrontier pollution"[116] and to "endeavour to prevent any increase in transfrontier pollution, including that stemming from new or additional substances and activities. . . ."[117] The GDU is a new activity, and if Missouri River biota enter Canadian waters via the project, they would constitute new substances.

As the Statute of the International Court of Justice makes the teachings of publicists a means of ascertaining international law, it is to this source one can look for further evidence substantiating the

111. Report of the Executive Director, Cooperation in the Field of the Environment Concerning Natural Resources Shared by Two or More States, U.N. Doc. UNEP/GC/44/Corr. 1 and 2/Add.1 (1975).

112. The Intergovernmental Working Group of Experts on Natural Resources Shared by Two or More States met five times. *See* U.N. Docs. UNEP/GC/74 (1976), UNEP/IG.3/3 (1976), UNEP/IG.7/3 (1977), UNEP/IG.10/2 (1977), UNEP/IG.12/2 (1978). This last report contains the draft code which is entitled Draft Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States." *See* 17 INT'L LEGAL MATERIALS 1097 (1978) (text of the code)).

113. For a discussion of the historical development of the Draft Principles and a short commentary on each, see Adede, *United Nations Efforts Toward the Development of an Environmental Code of Conduct for States Concerning Harmonious Utilization of Shared Natural Resources*, 43 ALB. L. REV. 488 (1979).

114. OECD Doc. C(74) 224 (Nov. 21, 1974), *reprinted in* 14 INT'L LEGAL MATERIALS 242 (1975).

115. OECD Doc. C(77) 28 (FINAL) (May 23, 1977), *reprinted in* 16 INT'L LEGAL MATERIALS 977 (1977).

116. Recommendation for the Implementation of a Regime of Equal Right of Access and Non-Discrimination in Relation to Transfrontier Pollution, *reprinted in* 14 INT'L LEGAL MATERIALS 244 (1975).

117. *Id.*

legal obligation to prevent transboundary pollution. Rather than discuss the views of individual authorities,[118] two groups of experts may be referred to, the International Law Commission (ILC) and the International Law Association (ILA).

The ILC has been studying the law of state responsibility and believes that such responsibility may arise when transboundary environmental harm occurs. In addition, the ILC recently began inspecting international liability for injurious consequences arising out of acts not prohibited by international law. The initial report by the subject's Special Rapporteur affirmed the "principle that States, even when undertaking acts that international law [does] not prohibit [have] a duty to consider the interests of other States that might be affected."[119] Issues of transfrontier environmental damage will apparently receive the bulk of the ILC attention in its study of the topic.[120]

The ILA, a widely respected private organization founded in 1873 and composed largely of international law experts, adopted Rules of International Law Applicable to Transfrontier Pollution (Rules) in 1982. Article 3(1) of the Rules declares: "States are in their legitimate activities under an obligation to prevent, abate and control transfrontier pollution to such an extent that no substantial injury is caused in the territory of another State."[121] Significantly, comment one to the Rule's first article states that the "rules restate general international law as actually existing in the field of transfrontier pollution and should therefore be applied in the relations between States. . . ."[122] Thus, the ILA does not attempt to develop international law; rather it merely states what the law is.

Although there is no convention containing provisions protecting the environment as a whole, there are hundreds of bilateral and multilateral agreements that seek to protect elements of the environment. Most of these agreements are regional, but a few have global aspects. Environmentally protective components

118. Examples of such views include: "[E]merging principles of international environmental law suggest some international constraints on a nation's freedom to pursue any resource policy it chooses, at least if those policies disregard the environment of other nations." Bilder, *International Law and Natural Resources Policies*, 20 NAT. RESOURCES J. 451, 460 (1980). International common law prescribes "international liability for injury caused to a foreign country in case the environment of the latter has suffered damage" and this is "one of the main principles of international environmental law. . . ." A. KISS, *supra* note 62, at 18. Underlying the various formulae for a general rule prohibiting transfrontier pollution "there is certainly a principle which definitely reflects customary law, namely the principle whereby every State is forbidden to allow its territory to be used in a way prejudicial to the rights of other States." Dupuy, *International Liability for Transfrontier Pollution*, in TRENDS IN ENVIRONMENTAL POLICY AND LAW 366 (M. Bothe ed. 1980).

119. Draft Articles on State Responsibility, [1980] 2 Y.B. INT'L L. COMM'N 159, U.N. Doc. A/CN.4/SER. A/1930/Add. 1 (Part 2).

120. *See* 2 Y.B. INT'L L. COMM'N at 160-61.

121. INT'L LAW ASS'N., REPORT OF THE SIXTIETH CONFERENCE HELD AT MONTREAL 160 (1983).

122. *Id.* at 158.

can be found in conventions concerning numerous subjects, for example, the Antarctic,[123] outer space,[124] nuclear weapons testing,[125] and the marine environment.[126]

All of the above sources lend credence to the general conclusion that extraterritorial pollution is illegal under international law. Two qualifications, however, must be made. First, it is not a breach of international law if just minor environmental damage results. Second, international liability for transfrontier pollution is not strict, but arises only upon fault.

Transfrontier pollution must reach a certain level of severity before international legal responsibility attaches; that is, merely polluting the environment of another state is not in itself a violation. The level of severity that must be reached is often referred to as "material." The *Trail Smelter* judgment ruled that a state is only responsible for environmental damage "when the case is of serious consequence,"[127] thus rejecting an absolute prohibition against transboundary pollution. Furthermore, the ILA has stated that "the majority of the international scholars agree that interferences on the territory of other States constitute an internationally wrongful act only when they produce substantial injury."[128] Gunter Handl, a professor at Wayne State law school, has examined case law and the practice of states and concluded:

> [I]njury in the sense of material damage is the foundation of state responsibility in cases where a state activity lawful per se entails extraterritorial environmental effects. The mere fact of the "violation of sovereignty" implicit in the transfrontier crossing of pollutants is thus insufficient to render a state liable for the activity generating the pollutant.[129]

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123. Antarctic Treaty, Dec. 12, 1959, 12 U.S.T. 794, T.I.A.S. No. 4780.

124. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, T.I.A.S. No. 6347.

125. Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, Aug. 5, 1963, 14 U.S.T. 1313, T.I.A.S. No. 5433, 480 U.N.T.S. 43 *reprinted in* 57 AM. J. INT'L. L. 1026 (1963).

126. Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matter, Dec. 29, 1972, 26 U.S.T. 2403, T.I.A.S. No. 8165.

127. Trail Smelter (U.S. v. Can.), 3 R. Int'l Arb. Awards 1905, 1965 (1941), *reprinted in* 35 AM. J. INT'L L. 684, 716 (1941).

128. INT'L LAW ASS'N, *supra* note 121, at 161. In addition, Article 3(1) of the ILA's Rules on Transfrontier Pollution also sets the threshold for international responsibility at the occurrence of "substantial injury." *Id.* at 160. Article 3(2) of the rules, however, abandons the "substantial injury" requirement where "new and increased transfrontier pollution" is concerned. In such a case "States shall limit [the pollution] . . . to the lowest level that may be reached by measures practicable and reasonable under the circumstances." *Id.*

129. Handl, *Territorial Sovereignty and the Problem of Transnational Pollution,* 69 AM. J. INT'L L. 50, 72 (1973). Professor Brownlie seems to agree, stating as follows: "Existing customary law is tolerant

Scholars are debating whether there is strict liability for extraterritorial environmental injury. Strict liability is defined as "liability without fault, and it may be said to exist when compensation is due from one actor to another for injuries caused despite compliance with any particular standards of care."[130] Under this concept, no international liability will attach to a state where the harm originates only when damage is caused by a *force majeure*, act of God, or by intervention of third parties.[131] A number of publicists contend that international decisions, conventions, and state practice indicate that strict liability is a rule of international law applicable to incidents of environmental harm.[132] Closer analysis of the sources relied upon by these scholars, however, proves the nonexistence of strict liability in international law.[133] On the contrary, the general standard for liability in cases of transfrontier pollution is fault.[134] This standard imposes liability not strictly, but only when harm is caused intentionally or negligently. Fault liability for negligence occurs when a state fails to take reasonable care to avoid environmental damage that it can reasonably foresee.[135]

C. A STATE'S GENERAL OBLIGATION TO PREVENT ENVIRONMENTAL DAMAGE TO INTERNATIONAL WATER RESOURCES

Three basic theories regarding the use of international watercourses have existed throughout the history of international water law. The three concepts are absolute territorial sovereignty, absolute territorial integrity, and limited territorial sovereignty.[136]

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of a degree of 'ordinary-user' including certain, at present tolerated, levels of contamination and pollution." Brownlie, *supra* note 64, at 180. Likewise, "industrial societies have necessarily developed a tolerance to some degree of [transboundary] pollution." Ianni, *International and Private Actions in Transboundary Pollution*, 11 CAN. Y.B. INT'L L. 258, 262 (1973).

For international water resources the rule is the same, for only in the case of "substantial damage to other States . . . is there a violation of a rule of international law." D. CAPONERA, *supra* note 61, at 8.

130. J. SCHNEIDER, *supra* note 62, at 163-64.

131. *Id.* at 164.

132. *Id.* at 163-67; Note, *New Perspectives on International Environmental Law*, 82 YALE L.J. 1659, 1665 (1973). Another authority states, "A number of writers consider that a State must ensure that no environmental damage emanating from areas under its jurisdiction is caused to other countries. This view results in postulating a system of absolute liability in respect of the environment. . . ." Arechaga, *International Law in the Past Third of a Century*, in 159 RECUEIL DES COURS 1978-I 1, 272 (Academie De Droit International 1979).

133. *See* Handl, *supra* note 92; Handl, *State Liability for Accidental Transnational Environmental Damage by Private Person*, 74 AM. J. INT'L L. 525 (1980). Professor Handl concedes, however, that a state may incur strict liability for transnational damage due to an accident involving an abnormally dangerous activity. *Id.* at 564.

134. Handl, state liability, *supra* note 133, at 536 n.50.

135. Goldie, *Liability for Damage and the Progressive Development of International Law*, 14 INT'L & COMP. L.Q. 1189, 1196 (1965).

136. *See* F. BERBER, RIVERS IN INTERNATIONAL LAW 14-39 (R. Batstone trans. 1959); Caponera &

Absolute territorial sovereignty is also known as the Harmon Doctrine, having been enunciated by United States Attorney General Harmon in 1895 in response to Mexico's protest against diversion of the Rio Grande River.[137] Attorney General Harmon asserted that "[t]he fundamental principle of international law is the absolute sovereignty of every nation, as against all others, within its own territory."[138] Based on this, Harmon concluded that "the rules, principles, and precedents of international law impose no liability or obligation upon the United States."[139]

Under the absolute territorial sovereignty theory, or Harmon Doctrine, a state has the unfettered right to do what it wishes with its natural resources, even though it causes damage to another state. The Harmon Doctrine, however, has been rejected by the international community.[140] "[I]n the present state of international law, the principle of absolute territorial sovereignty has become untenable and. . . the Harmon Doctrine is a thing of the past."[141]

On the other hand, the antithesis of the Harmon Doctrine, absolute territorial integrity, has also been denied by international law.[142] This theory (also known as the natural flow theory) demands that a lower riparian receive water in an unaltered state, otherwise a violation of its territorial integrity results. Were this principle a part of international law, an unacceptable situation would result: a downstream state could halt any water project of its co-basin state, even if the project would cause little or no harm.

The third concept in international water law, limited territorial sovereignty, seeks to reconcile the first two theories. There seems to be two versions of this concept. One version is referred to as the equitable utilization theory and the other as the community theory.[143] Under the equitable utilization theory, states have the obligation "to attempt to reconcile their interests with those of other potentially affected states; and . . . any claim to the rightful use of a shared natural resource has, therefore, to be judged in . . . the overall social, environmental and economic context in

Alheritiere, *Principles for International Groundwater Law*, 18 NAT. RESOURCES J. 589, 614-16 (1978); Utton, *supra* note 87, at 282-83.

137. McCaffrey, *Trans-Boundary Pollution Injuries: Jurisdictional Considerations in Private Litigation Between Canada and the United States*, 3 CAL. W. INT'L L.J. 191, 206 (1973).

138. 21 Op. Att'y Gen. 274, 283 (1895). For a discussion of the Harmon Doctrine, see Utton, *International Environmental Law and Consultation Mechanisms*, 12 COLUM. J. TRANSNAT'L L. 56, 57-59 (1973); Lester, *supra* note 72, at 831-32.

139. 21 Op. Att'y Gen. 274, 283 (1895).

140. *See* Lester, *supra* note 72, at 847.

141. Statement by M. Williams, INT'L LAW ASS'N, *supra* note 121, at 180.

142. See Utton, *supra* note 87, at 285; LeMarquand, *Politics of International River Basin Cooperation and Management*, 16 NAT. RESOURCES J. 883, 890 (1976).

143. *See* Caponera & Alheritiere, *supra* note 136, at 615-16; Utton, *supra* note 87, at 283; LeMarquand, *supra* note 142, at 890.

which the right is being asserted."[144] The community theory recognizes the physical and biological unity of the waters of a drainage basin. Despite the fact such waters might cross one or more international boundaries, the concept demands that the co-riparians manage and develop them cooperatively and that their benefits be shared equitably.[145] Clearly, each version of the limited territorial sovereignty concept limits absolute territorial sovereignty as well as absolute territorial integrity.

Of all these theories, the principle of equitable utilization "has become the most widely advocated by the international community, as evidenced by treaties, judicial decisions, academics, and international bodies."[146] With the rejection of absolute territorial sovereignty and integrity, it is appropriate to cite some sources that have led to the acceptance of limited territorial sovereignty (equitable utilization), the concept that now governs the uses of international drainage basins.

1. Judicial Decisions

The only international case addressing the issue of pollution of an international river is the *Lake Lanoux* arbitration[147] between France and Spain. The dispute arose out of France's intention to divert water from Lake Lanoux for a hydroelectric project. Although Lake Lanoux is in French territory, the Carol River originates in the lake and flows into Spain. Spain contended that the proposed French diversion would alter the Carol and injure Spanish interests, thus violating a convention it had with France, the 1866 Treaty of Bayonne, and its Additional Act of the same date. Although the arbitral tribunal concluded that France had not breached these agreements, it commented on water pollution. The tribunal, after concluding that none of the Spanish "users will suffer in his enjoyment of the waters,"[148] stated:

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144. Handl, *The Principle of 'Equitable Use' as Applied to Internationally Shared Natural Resources: Its Role in Resolving Potential International Disputes Over Transfrontier Pollution*, in TRANSFRONTIER POLLUTION AND THE ROLE OF STATES 98, at 103 (Org. for Econ. Co-operation & Dev. ed. 1981). Further elucidation of the equitable utilization principle can be found in the comments to Articles IV-XI of the Helsinki Rules. *See* INT'L LAW ASS'N, *supra* note 6, at 486-505.

145. *See* Utton, *supra* note 87, at 283.

146. LeMarquand, *supra* Note 142, at 890. *See also* Johnston, *supra* note 63, at 22; Caponera & Alheritiere, *supra* note 136, at 615; Nanda, *Emerging Trends in the Use of International Law and Institutions for the Management of International Water Resources*, 6 J. INT'L L. & POL'Y 239, 258 (1976). "The idea of equitable utilization now is embodied in some 300 international agreements dealing with rivers, lakes, and drainage basins throughout the world." Bilder, *supra* note 118, at 459.

147. 12 R. Int'l Arb. Awards 281, 24 I.L.R. 101 (1957) (Lake Lanoux Arbitral Tribunal).

For an analysis of the case, see Laylin & Bianchi, *The Role of Adjudication in International River Disputes: The Lake Lanoux Case*, 53 AM. J. INT'L L. 30 (1959).

148. Lake Lanoux (Spain v. Fr.), 12 R. Int'l. Arb. Awards 281, 303, 24 I.L. R.101,123 (1957) (Lake Lanoux Arbitral Tribunal).

> One might have attacked this conclusion in several different ways.
>
> It could have been argued that the works would bring about an ultimate pollution of the. . . Carol or that the returned waters would have a chemical composition or a temperature or some other characteristic which could injure Spanish interests. Spain could then have claimed that her rights have been impaired in violation of the Additional Act. Neither the "dossier" nor the debates of this case carry any trace of such an allegation.[149]

Scholars of international law have used this language to support arguments for the existence of an international duty to avoid water pollution. For example, one scholar has written that "the tribunal's statement might well stand as an expression of a principle of general international law on the responsibility of a riparian State for the pollution of an international river or lake."[150]

One other international decision has relevance to the issue of a state's obligation to prevent pollution of an international river. The *River Oder* case,[151] decided by the Permanent Court of International Justice, adopted a broad standard that requires a state in its use of a river to recognize and respect the uses to which a co-riparian puts the river. This conclusion is based on the following language of the decision:

> [A] community of interest of riparian States. . . becomes the basis of a common legal right, the essential features of which are the perfect equality of all riparian States in the use of the whole course of the river and the exclusion of any preferential privilege of any riparian State in relation to the others.[152]

Although the *River Older* case was not concerned with the environment, it supports the principle that a state is obligated to prevent river pollution as its approach, founded on a "community of interest of riparian States," and implicitly accepts the limited

149. *Id.* Spain did not, however, produce evidence of such an injury, a failure that barred the claim.

150. Ando, *supra* note 67, at 336. *See also* J. SCHNEIDER, *supra* note 62, at 49-50; Lester, *supra* note 72, at 839. Other writers, however, disagree with Ando's conclusion. *See* A. KISS, *supra* note 62, at 47.

151. Case Relating to the Territorial Jurisdiction of the International Commission of the River Oder (U.K., Fr., Swed., Den., Ger. Reich, & Czech. v. Pol.), 1929 P.C.I.J., ser. A, No. 23 (Judgment of Sept. 10).

152. *Id.* at 27.

territorial sovereignty theory.[153]

Besides international judicial decisions, national cases involving river disputes between federated states support the claim that international law places restraints upon a state's use of an international drainage basin. National decisions are used to determine the relevant international law for two reasons. First, disputes between federated states have close analogies with those between sovereign states.[154] Second, national tribunals have referred to international law to solve their river disputes, and thus their opinions aid in determining and elucidating international law.[150] A third reason for the use of national decisions is the distressing lack of international decisions. Be this as it may, national decisions comprise most of the judicial support for the obligation under consideration, although it must be remembered that these are but quasi-international decisions and must be used cautiously.

Relying expressly on international law, the German Supreme Court, in resolving a disagreement between Wurtemberg, Prussia and Baden over the Danube, stated:

> The exercise of sovereign rights by every State in regard to international rivers traversing its territory is limited by the duty not to injure the interests of other members of the international community. Due consideration must be given to one another by States through whose territories there flows an international river. This principle has gained increased recognition in international relations. . . ."[156]

Similarly, the Italian Court of Cassation has ruled:

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153. *See* Handl, *supra* note 79, at 42; J. SCHNEIDER, *supra* note 62, at 43; D. CAPONERA, *supra* note 61, at 8; Goldie, *Development of an International Environmental Law: An Appraisal*, in LAW, INSTITUTIONS AND THE GLOBAL ENVIRONMENT 104, 130 (J. Hargrove ed. 1972).

154. The policies, water economics, and the factual problems "are not essentially different in interstate and international disputes." Laylin & Bianchi, *supra* note 147, at 41. Lester writes "that there are sufficient similarities of principle in this area to justify reference to Federal sources." Lester, *supra* note 72, at 845. Professor Utton states that "[a]lthough national judicial decisions resolving interstate disputes are not strictly international decisions, they do provide helpful guidance to international courts." Utton, *supra* note 87, at 288. On the other hand, it has been stated that "[t]he analogy between inter-state federal . . . law and international law is not so simple . . . as it is often treated." B. CHAUHAN, SETTLEMENT OF INTERNATIONAL WATER DISPUTES IN INTERNATIONAL DRAINAGE BASINS 407 (1981).

155. With regard to the United States Supreme Court, it has been "suggested that although the Court applies a special 'federal common law' it leans heavily on international law sources for its materials of decision." Goldie, *supra* note 153, at 159 n.115. The Court has itself stated: "Sitting, as it were, as an international, as well as a domestic tribunal, we apply Federal law, state law, and international law, as the exigencies of the particular case may demand. . . ." Kansas v. Colorado, 185 U.S. 125, 146-47 (1902).

156. Wurtemberg v. Baden, 4 Ann. Digest 128, 131 (Staatsgerichtshof 1927).

> [A]lthough a State, in the exercise of its right of sovereignty, may subject public rivers to whatever regime it deems best, it 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.[157]

Thus, the Italian court rejected the absolute territorial sovereignty concept as did the Swiss Federal Court (Bundesgericht) in settling a river problem between the cantons of Zurich and Aargau.[158]

The United States Supreme Court has dealt with many interstate river disputes.[159] Rather than examine these decisions individually, it will suffice to note several conclusions that can be drawn from these cases. In treating the litigants of these cases largely as sovereign states the Court has never accepted the extreme theories of absolute territorial sovereignty and absolute territorial integrity, but has resorted to equitable balancing tests to decide the disputes.[160] Furthermore, "in all decisions. . . concerning pollution of inter-State rivers,. . . the Court acted on the presumption that a riparian State of the federation which shares a watercourse should not pollute its waters so as to cause serious damage to the interests of other riparians."[161]

Although only a small number of judicial decisions concerning river pollution have been mentioned here, "in almost every system of municipal water law will be found the principle that one State using water must take into consideration the use of water by other States. . . ."[162] This is an important finding, for although

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157. Societe Energie Electrique du Littoral Mediterranean v. Compagnia Impresse Elettriche Liguri, ___ Forte It. I ___, 9 Ann. Dig. 120, 121 (Corte Cass. 1939).

158. Solothurn v. Aargau, ___ BGII ___, ___ ATFII ___. *See* Schindler, *supra* note 100, at 169-72. The Swiss Court stated:

> In the case of public waters which extend over several cantons and, therefore, belong to several cantons, it follows from the equality of the cantons that none of them may, to the prejudice of the others, take such measures upon its territory, as the diversion of a river or brook, construction of dams, etc., as may make the exercise of the rights of sovereignty over the water impossible for the other cantons, or which exclude the joint use thereof or amount to a violation of territory.

Id. at 170.

159. *See* Nebraska v. Wyoming, 325 U.S. 589 (1945); Colorado v. Kansas, 320 U.S. 383 (1943); Arizona v. California, 298 U.S. 558 (1936); Washington v. Oregon, 297 U.S. 517 (1936); Wyoming v. Colorado, 286 U.S. 494 (1932); Arizona v. California, 283 U.S. 423 (1931); New Jersey v. New York, 283 U.S. 336 (1931); Connecticut v. Massachusetts, 282 U.S. 660 (1931); North Dakota v. Minnesota, 263 U.S. 365 (1923); Kansas v. Colorado, 206 U.S. 46 (1907); Missouri v. Illinois, 200 U.S. 496 (1906).

160. Lester, *supra* note 72, at 845-46.

161. Ando, *supra* note 67, at 337.

162. D. CAPONERA, *supra* note 61, at 19.

municipal law in itself is not a source of international law, it can assist the development and comprehension of international law. Judge McNair, in his separate opinion in *International Status of South West Africa,* stated:

> To what extent is it useful or necessary to examine what may at first sight appear to be relevant analogies in private law systems and draw help and inspiration from them? International law has recruited and continues to recruit many of its rules and institutions from private systems of law. Article 38(I) (c) of the Statute of the [International] Court [of Justice] bears witness that this process is still active, and it will be noted that this article authorizes the Court to "apply . . . the general principles of law recognized by civilized nations."[163]

Thus, if most nations restrict the use of rivers in their municipal law, so too might international law.

2. Treaties

There is a large and expanding body of international agreements concerning watercourses and drainage basins, and many contain pollution related clauses.[164] Space limitations make it impossible to study these treaties thoroughly. What is important to note is that nearly all of these treaties adopt in some form the principle of equitable utilization.[165] Although treaties only bind the parties involved, a similar clause appearing in many agreements can have legal significance beyond the signatories, for treaties

163. International Status of South West Africa, 1950 I.C.J. 128, 148 (Advisory Opinion of July 11).

164. In 1975 Professor Bilder stated that "[t]here are now some 300 international agreements dealing with particular rivers, lakes or drainage basins, which together cover something less than one-half of the world's international drainage basins." Bilder, *The Settlement of Disputes in the Field of the International Law of the Environment,* in 144 RECUEIL DES COURS 1975-I, at 139, 168 (Academie De Droit International 1976).

For surveys, of varying completeness, of agreements concerning international rivers, see United Nations: Legislative Texts and Treaty Provisions Concerning the Utilization of International Rivers for Other Purposes than Navigation, U.N. Doc. ST/LEG/SER.B/12 (1963); [1974] 2 Y.B. INT'L L. COMM'N Part 2, at 33-56, U.N. Doc. 4/SER.A/1974/Add.1. For a list of 133 treaties on international rivers and lakes with provisions on pollution prevention, *see* Ando, *supra* note 67, at 358-70. For a less complete list of such treaties, see A. KISS, *supra* note 62, at 73-76. For a list of International Agreements Between Governments on Transfrontier Pollution and Land-Use Management, see ENVIRONMENTAL PROTECTION IN FRONTIER REGIONS 55-90 (Org. for Econ. Co-operation & Dev. ed. 1979). This book also contains detailed chapters on a number of agreements seeking to control pollution in various rivers and lakes. *Id.* at 231-503. Lastly, Chauhan mentions throughout his book many international agreements concerning water resources in general. *See* B. CHAUHAN, *supra* note 154.

165. Bilder, *supra* note 164, at 168.

generate international customary law. A number of "rules of international customary law have their origin in standards of conduct which were developed over centuries in a multitude of treaties."[166] Therefore, as numerous states in a multitude of bilateral and multilateral agreements have practiced the doctrine of limited territorial sovereignty, the doctrine may now be an international customary law within Article 38(1) (b) of the Statute of the International Court of Justice.[167]

Canada and the United States have reached a number of agreements with environmental significance.[168] Two significant agreements are the 1909 Boundary Waters Treaty[169] and the 1972 Great Lakes Water Quality Agreement (Great Lakes Agreement).[170] As each of these pacts, particularly the Great Lakes Agreement, contain clauses illustrative of the body of agreements concerning international watercourses, it will be helpful to mention several of their provisions.

The Boundary Waters Treaty was not drafted with environmental considerations directly in mind. Its primary purpose, as mentioned in the Preamble, is to prevent disputes along the common border and to settle those pending as well as any that might arise in the future. The treaty focuses on disputes related to navigation and the flow and level of transboundary waters. Article IV contains the sole specific environmental provision, and even it appears to have been added to the Article as an afterthought. The clause states that "boundary waters and waters

166. G. SCHWARZENBERGER & E. BROWN, A MANUAL OF INTERNATIONAL LAW 28 (6th ed. 1976). On treaties as customary law, see D'Amato, *Treaties as a Source of General Rules of International Law*, 3 HARV. INT'L L. J. 1 (1962).

167. For the text of Article 38(1), see *supra*, text accompanying note 59. On treaties as authority for the rule that limited territorial sovereignty is a part of international law, Ando states:

> [W]ith respect to the great majority of international rivers and lakes, where the pollution of their waters is causing problems among riparians, the riparian's concern has almost always crystallized into a legal obligation formulated in various treaty provisions. Even though some of these provisions refer only indirectly to pollution, a consistent tendency is observable towards the formation of an *opinio juris* which makes the prevention of pollution in international rivers and lakes obligatory for riparians.

Ando, *supra* note 67, at 343.

168. On United States-Canadian boundary relations and problems in general, see Carroll & Mack, *On Living Together in North America: Canada, the United States and International Environmental Relations*, 12 DEN. J. INT'L L. & POL'Y 35 (1982); Cohen, *The Regime of Boundary Waters — The Canadian-United States Experience*, in 146 RECUEIL DES COURS 1975-III, at 219 (Academie De Droit International 1977); Jordan, *The International Joint Commission and Canada-United States Boundary Relations*, in CANADIAN PERSPECTIVES ON INTERNATIONAL LAW AND ORGANISATION 522 (R. MacDonald, G. Morris & D. Johnston eds. 1974).

169. Boundary Waters Treaty, *supra* note 5.

170. Agreement Between Canada and the United States of America on Great Lakes Water Quality, April 15, 1972, United States-Canada, T.I.A.S. No. 7312, *reprinted in* 11 INT'L LEGAL MATERIALS 694 (1972). For a detailed discussion of this agreement, see Bilder, *Controlling Great Lakes Pollution: A Study in United States-Canadian Environmental Cooperation*, in LAW, INSTITUTIONS AND THE GLOBAL ENVIRONMENT 294 (J. Hargrove ed. 1972).

flowing across the boundary shall not be polluted on either side to the injury of health or property on the other." This language restates the *sic utere tuo* principle and is just as general as that maxim, perhaps fatally so. The treaty defines neither "pollution" nor "injury," a lapse placing an obstacle before anyone seeking to bring an action based upon it. The treaty's environmental significance is also weakened by the failure of Article IV to give the IJC (which was established by the treaty) specific power to enforce it. Furthermore, there are questions whether Article II, the "remedies" clause of the agreement, applies to pollution.[171]

The Great Lakes Agreement is a far different document than the Boundary Waters Treaty. This agreement's only concern is the environment, and it sets up a detailed regime for protecting the Great Lakes. It is much more representative of the body of international water resource agreements than is the Boundary Waters Treaty. The Great Lakes Agreement sets general and specific water quality objectives (Articles II and III, Annex 1). Detailed provisions and annexes set forth those programs the parties agree to undertake to achieve the water quality objectives (Articles IV and V, Annexes 2-8). The agreement vested the IJC with certain authority (Article VI) and established the Great Lakes Water Quality Board to administer and assist in accomplishing the agreement's purposes (Article VII). Importantly, the agreement provides for exchange of data (Article VIII) and for modification of the water quality objectives if events so require (Article IX).

To summarize this section on treaties, "the extent of treaty provisions dealing with pollution. . . when combined with the yet more extensive practice dealing in general with international streams, reinforces the conclusion that these treaties, taken as a whole, represent international practice from which general rules of customary international law may be deduced."[172] One of these deducible rules places limits on the manner in which a state may utilize an international drainage basin, particularly when a use will harm a neighboring state's environment.

171. S. MCCAFFREY, PRIVATE REMEDIES FOR TRANSFRONTIER ENVIRONMENTAL DISTURBANCES 92 (1975). The effectiveness of Article II has been extensively debated. *See* Austin, *Canadian-United States Practice and Theory Respecting the International Law of International Rivers: A Study of the History and Influence of the Harmon Doctrine*, 37 CAN. BAR REV. 393 (1959); Bourne, *The Columbia River Controversy*, 37 CAN. BAR REV. 444 (1959); Cohen, *Some Legal and Policy Aspects of the Columbia River Dispute*, 36 CAN. BAR REV. 25 (1958); Scott, *The Canadian-American Boundary Waters Treaty: Why Article II?*, 36 CAN. BAR REV. 511 (1958); Griffin, *Problems Respecting the Availability of Remedies in Cases Relating to the Uses of International Rivers*, 51 PROC. AM. SOC'Y INT'L L. 36 (1957).

172. Utton, *supra* note 87, at 285.

3. Publicists

Rather than examine the opinions of individual authorities claiming that international law prohibits transboundary water pollution, a look at organizations composed of international legal scholars will suffice. The groups that have addressed the issue are the Institute of International Law, the International Law Association, and the International Law Commission.[173]

As early as 1911 the Institute of International Law (IIL), in its Madrid Declaration, stated that "[w]hen a stream traverses successively the territories of two or more States. . . [a]ll alterations injurious to the water [are] forbidden."[174] The IIL's 1961 Salzburg Resolution made a similar statement,[175] and in 1979 the Institute met in Athens and adopted a Resolution on the Pollution of Rivers and Lakes and International Law. Article II of the Resolution declares that "[s]tates shall be under a duty to ensure that their activities or those conducted within their jurisdiction or control cause no pollution in the waters of international rivers or lakes beyond their boundaries."[176] A state that violates this obligation "shall incur international liability under international law."[177]

Although the International Law Association (ILA) adopted environmentally protective articles on the uses of rivers at its 1956, 1958, and 1960 conferences,[178] it was at the 1966 meeting that the ILA adopted the important Helsinki Rules on the Uses of Waters of International Rivers (Helsinki Rules).[179] The influential Helsinki Rules contain several explicit provisions concerning pollution. Article IX defines "water pollution,"[180] and Article X states:

> 1. Consistent with the principle of equitable utilization of waters of an international drainage basin, a State
>
> (a) must prevent any new form of water pollution or

173. On the value of such organizations and of international conferences, Professor Handl has stated that their work "often amount[s] to authoritative expositions of the state of the law, or, in any event, given the peculiarities of the international law-making process, are highly significant in that they tend to reflect an emerging international consensus in respect of the provisions incorporated." Handl, *supra* note 79, at 59.

174. Institute of Int'l Law, Madrid Declaration, *reprinted in* M. WHITEMAN, *supra* note 95, at 921.

175. Institute of Int'l Law, Salzburg Resolution, *reprinted in* M. WHITEMAN, *supra* note 95, at 922.

176. Institute of Int'l Law, Athens Resolution, *reprinted in* D. CAPONERA, *supra* note 61, at 282.

177. *Id.* at 283.

178. For a reprint of these resolutions, see M. WHITEMAN, *supra* Note 95, at 924-29.

179. HELSINKI RULES ON THE USES OF WATERS OF INTERNATIONAL RIVERS, INT'L LAW ASS'N, *supra* note 6, at 477.

180. "Water pollution" means "any detrimental change resulting from human conduct in the natural composition, content, or quality of the waters of an international drainage basin." *Id.* at 494.

> 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, and. . .
>
> 2. The rule stated in paragraph one. . . applies to water pollution originating:
>
> (a) within a territory of the State, or
> (b) outside the territory of the State, if it is caused by the State's conduct.[181]

The ILA concluded that if the article is violated, "the State responsible shall be required to cease the wrongful conduct and compensate the injured co-basin State for the injury that has been caused to it."[182]

The ILA continued its work on the uses of international rivers, and after its 1966 session expanded its efforts to include all non-maritime water resources. In 1982 the organization adopted an eleven article resolution[183] that seeks to elaborate and supplement Articles X and XI of the Helsinki Rules.[184] This resolution's first article proclaims that "states shall. . . prevent new or increased water pollution that would cause substantial injury in the territory of another state."[185]

The United Nations International Law Commission is preparing draft articles that will constitute an umbrella agreement of principles for the non-navigational uses of international watercourses. More specifically, the Sixth Committee of the United Nations General Assembly working on the subject agreed that:

> [O]ne of the general principles of the umbrella agreement should be that the waters of an international water course should be regarded as a natural resource to be shared among the riparians of that watercourse. . . [and] that, pursuant to a second such principle, such water should be equitably utilized by the riparians; and that, pursuant to a third, no riparian should so use its share of the waters as to inflict injury upon other uses.[186]

181. *Id.* at 496-97.
182. *Id.* at 501.
183. INT'L LAW ASS'N, *supra* note 121, at 531.
184. *See* Statement by C. Bourne, INT'L LAW ASS'N, *supra* note 121, at 549.
185. *Id.* at 535.
186. [1980] 1 Y.B. INT'L L. COMM'N 123, U.N. Doc. A/CN.4/SER.A/1980.

4. Intergovernmental Organizations and Conferences

One can find further evidence that international law protects international drainage basins in the work of numerous intergovernmental organizations and conferences. The Stockholm Environment Conference, for example, adopted a recommendation declaring that certain principles should be followed when a water resource is developed. Two of these principles are:

> The basic objective of all water resource use and development activities from the environmental point of view is to ensure the best use of water and to avoid its pollution in each country.
>
> The net benefits of hydrographic regions common to more than one national jurisdiction are to be shared equitably by the nations affected.[187]

Also, the 1977 United Nations Conference on Desertification recommended the "wise and efficient management of shared water resources for rational use."[188] The United Nations Water Conference at Mar del Plata that same year insisted upon the equitable utilization of international rivers.[189] The Mar del Plata Plan also recommended that international organizations implement the Stockholm recommendation referred to above[190] and noted the need for cooperation among co-riparians if Stockholm Principle 21 is to be realized.[191]

The Asian-African Legal Consultative Committee formulated draft proposals in 1973 on the law of international rivers largely similar to the Helsinki Rules.[192] The Council of Europe's 1967 European Water Charter[193] and its 1974 Draft European Convention for the Protection of International Watercourses against Pollution[194] along with the work of the Economic

187. Report, *supra* note 80, at 17.

188. Report of the United Nations Conference on Desertification, U.N. Doc. A/CONF.74/36, at 20 (1977).

189. Report of the United Nations Water Conference, U.N. Doc. E/CONF.70/29, at 51-54 (1977).

190. *Id.* at 25.

191. *Id.* at 53.

192. ASIAN-AFRICAN LEGAL CONSULTATIVE COMMITTEE, REPORT OF THE FOURTEENTH SESSION HELD AT NEW DELHI 7 (1973), *reprinted in* [1974] 2 Y.B. INT'L L. COMM'N Part 2, at 339, U.N. Doc. 4/SER.A/1974/Add.1.

193. Council of Europe, European Water Charter, *reprinted in* [1974] 2 Y.B. INT'L L. COMM'N, Part 2, at 342.

194. Council of Europe, Draft European Convention for the Protection of Watercourses Against Pollution, *reprinted in* 2 Y.B. INT'L L. COMM'N, part 2, at 346. The Council of Europe's Consultative Assembly also adopted a Draft European Convention on the Protection of Fresh Water Against Pollution. *Reprinted in* 2 Y.B. INT'L L. COMM'N, Part 2, at 344.

Commission for Europe[195] and the European Communities[196] represent the voice of European regional organizations in regulating and outlawing transboundary water pollution. States on the other side of the Atlantic have also been active in this endeavor. Article 2 of the Montevideo Declaration, adopted in 1933 by the Seventh International Conference of American States,[197] prohibits any industrial or agricultural exploitation of a watercourse that will injure a co-riparian. The 1957 Buenos Aires Resolution of the Inter-American Bar Association affirmed the principle of limited sovereignty in the use of water resources,[198] and in 1965 the Inter-American Juridical Committee prepared a Draft Convention that contains a clause prohibiting utilization of an international river or lake for industrial or agricultural purposes that cause substantial injury to co-riparian states.[199]

D. SUMMARY

The world community, as evidenced by international and national decisions, treaties, publicists, general principles of law, and declarations of organizations, adheres to the doctrine of limited territorial sovereignty and has "adopted the concept of *sic utere tuo* requiring a riparian to use its part of an international drainage basin so as not to injure its coriparians."[200]

Before examining some procedural rules of international environmental law this Article will recapitulate the substantive

195. Some of this organization's work includes: Recommendation to the Economic Commission for Europe [ECE] governments concerning the protection of ground and surface waters against pollution by oil and oil products approved by the Committee on Water Problems, U.N. Doc. E/ECE/WATER/7, Annex I (1970); Recommendation to the ECE governments concerning river basin management, approved by the Committee on Water Problems, U.N. Doc. E/ECE/WATER/9, Annex II (1971); Recommendation to the Governments of Southern European countries concerning selected water problems, approved by the Committee on Water Problems, U.N. Doc. ST/ECE/WATER/6, Add. 1, at 11 (1972). For a collection of these recommendations, see [1974] 2 Y.B. INT'L L. COMM'N, Part 2, at 332-34.

196. Some of the European Community's Council Directives include those of Nov. 22, 1973 on the Approximation of the Laws of the Member States relating to Detergents, O.J. EUR. COMM. (No. L347) 51 (1973); Quality required of Surface Water intended for the Abstraction of Drinking Water in the Member States, O.J. EUR. COMM. (No. L194) 26 (1975); of July 18, 1978 on the Quality of Fresh Waters Needing Protection or Improvement in Order to Support Fish Life, O.J. EUR. COMM. (No. L222) 1 (1978); and of July 15, 1980, relating to the Quality of Fresh Water intended for Human Consumption, O.J. EUR. COMM. (No. L229) 11 (1980).

197. PAN-AMERICAN UNION, SEVENTH INTERNATIONAL CONFERENCE OF AMERICAN STATES, PLENARY SESSIONS, MINUTES AND ANTECEDENTS 114 (1933), *reprinted* in 28 AM. J. INT'L L. 52 (Supp. 1934).

198. INTER-AMERICAN BAR ASSOCIATION, 1 PROCEEDINGS OF THE TENTH CONFERENCE HELD AT BUENOS AIRES FROM 14 TO 21 NOVEMBER 1957, at 117 (1958), *reprinted in* M. WHITEMAN, *supra* note 95, at 929.

199. PAN-AMERICAN UNION, REPORT OF THE INTER-AMERICAN JURIDICAL COMMITTEE ON THE WORK ACCOMPLISHED DURING ITS 1965 MEETING 18 (1966), *reprinted in* [1974] 2 Y.B. INT'L L. COMM'N Part 2, at 349.

200. Utton, *supra* note 87, at 295.

regime. The international authorities initially found that it is unlawful under international law for a state to allow its territory to be used to harm another state. They then determined that this harm includes environmental damage. The authorities defined this point more specifically, leading to the conclusion that only serious transboundary environmental damage is prohibited.[201] More particularly, an examination of the various sources of international law indicated that international law forbids a state from using an international drainage basin in such a way that causes serious harm to a co-basin state. Furthermore, the law governing the use of international drainage basins has advanced beyond this broad prohibition with the establishment of the doctrine of equitable utilization as one of its elements. This doctrine has refined the principle of limited sovereignty by requiring an equitable balancing of "all relevant factors and by comparing the benefits that would flow from the utilization with the injury it might do to the interests of other co-basin states."[202] Thus, even if a state's utilization of a river causes serious harm to another state's beneficial use of the river, the disrupting utilization might nonetheless be lawful if, after a delicate balancing of all the factors in both states, it is determined that such utilization of the watercourse is an equitable one. The "reasonable man" test is thus a part of the international law of rivers.

V. PROCEDURAL INTERNATIONAL LAW

A. A STATE'S DUTY TO GIVE PRIOR NOTIFICATION AND TO EXCHANGE INFORMATION

As international water law uses the standard of reasonableness to distinguish acceptable from unacceptable uses, any interpretation of this concept requires a state planning a project to notify its neighbors of possible transboundary environmental affects. But as "[e]quitable utilization requires the input of interested parties during the planning process,"[203] mere notification is insufficient; it must be accompanied by ample information to allow the potentially affected state the opportunity to

201. *See* Bourne, *The Right to Utilize the Waters of International Rivers*, 3 CAN. Y.B. INT'L L. 187, 208-13 (1965); Bourne, *International Law and Pollution of International Rivers and Lakes*, 21 U. TORONTO L.J. 193, 196-97 (1971).

202. Bourne, *Canada and the Law of International Drainage Basins*, in CANADIAN PERSPECTIVES ON INTERNATIONAL LAW AND ORGANISATION 468, 475 (R. MacDonald, G. Morris & D. Johnston eds. 1974).

203. Utton, *supra* note 87, at 308.

fully understand what risks the project entails. Without full information, such a state will be unable to competently protest the project or negotiate its modification. To be meaningful, the obligation of prior notification must be accompanied by information. These initiatives are international legal duties:

> First, international law imposes [upon] a basin state the obligation to give prior notice of works or utilizations of waters that it proposes to undertake. . . .
>
> Second, international law imposes on a basin state that wishes to undertake a work or utilization that might cause serious injury to co-basin states the obligation to give them sufficient information so that they may appreciate the true nature of the proposed undertaking.[204]

This pronouncement finds support in various sources of international law. The ILA in its 1982 Rules of International Law Applicable to Transfrontier Pollution, which "restate general international law as actually existing,"[205] proclaims:

> States planning to carry out activities which might entail a significant risk of transfrontier pollution shall give early notice to States likely to be affected. In particular they shall on their own initiative or upon request of the potentially affected States, communicate such pertinent information as will permit the recipient to make an assessment of the probable effects of the planned activities.[206]

Also in 1982, the ILA adopted Rules on Water Pollution in an International Drainage Basin, which contain similar procedural requirements specifically for international drainage basins.[207] The ILA's work affirms similar enunciations by other groups of legal authorities, such as the IIL's 1961 Salzburg[208] and 1979 Athens[209] Resolutions and the Inter-American Juridical Committee's 1965 Draft Convention.[210]

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204. Bourne, *Procedure in the Development of International Drainage Basins*, 22 U. TORONTO L.J. 172, 204-05 (1972). These requirements are also a duty of general international environmental law. *See* Handl, *supra* note 79, at 61; Bothe, *Transfrontier Environmental Management*, in TRENDS IN ENVIRONMENTAL POLICY AND LAW 391, 394 (M. Bothe ed. 1980).

205. INT'L LAW ASS'N, *supra* note 121, at 158.

206. *Id.* at 171.

207. *Id.* at 540.

208. Salzburg Resolution, *supra* note 175.

209. Athens Resolution, *supra* note 176.

210. PAN-AMERICAN UNION, *supra* note 199, at ____, *reprinted in* [1974] 2 Y.B. INT'L L. COMM'N Part 2, at 349.

There are a large number of treaties regulating international watercourses and drainage basins,[211] and many contain clauses explicitly requiring prior notification and information exchange. Even those treaties and agreements that do not explicitly require these duties do so implicitly by establishing a regulatory body for the subject watercourse. These administrative commissions typically include members from all the parties to the agreement. An important part of the work of these institutions is to acquire knowledge about the basin and distribute it to the parties to the agreement. It is through the work of the river commissions that the member states will comply with their duty to give prior notification and share information.

The consistent use of notification and information exchange provisions in many treaties is an important source of law because such consistency may create or represent a rule of customary international law.[212] And indeed, such consistency has occurred:

> There is no longer any question that modern treaty practice incorporates the duty to exchange information and to notify other states of plans, projects and activities that may affect them adversely. This duty of exchange and notification is readily perceived in the case of. . . largescale waterworks, diversions, or irrigation projects whose effects are widespread. . . .[213]

United States-Canadian relations produced examples of agreements that require the duties under consideration. The Great Lakes Agreement[214] between these two nations contains numerous notice and information provisions as does their Columbia River Treaty of 1961.[215] Furthermore, the constant use of the IJC under the Boundary Waters Treaty has involved Canada and the United States in a longstanding practice of prior notification and exchange of information.[216]

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211. *See supra* note 164.

212. *See supra* note 166 and accompanying text.

213. Teclaff & Teclaff, *Transboundary Ground Water Pollution: Survey and Trends in Treaty Law*, 19 NAT. RESOURCES J. 629, 663 (1979).

214. Great Lakes Agreement, *supra* note 170.

215. Treaty Between the United States of America and Canada relating to Cooperative Development of the Water Resources of the Columbia River Basin, Jan. 17, 1961, United States-Canada, 15 U.S.T. 1555, 542 U.N.T.S. 244.

216. Boundary Waters Treaty, *supra* note 5. For a short discussion of the IJC cases up to 1964, see M. WHITEMAN, *supra* note 95, at 826-71. For a more current synopsis of the IJC work, see Beaupre, *A Survey of Water and Air Pollution Cases Involving the International Joint Commission (Canada-United States)*, in ENVIRONMENTAL PROTECTION IN FRONTIER REGIONS 439 (Org. for Econ. Co-operation & Dev. ed. 1979).

These same procedural duties have been espoused by various international organizations. The Organization for Economic Co-operation and Development has issued recommendations advocating the notice and information rule,[217] as has the United Nations General Assembly[218] and the Asian-African Legal Consultative Committee.[219] Principle 6 of the United Nations Environment Programme's Draft Principles on Shared Natural Resources states that "[i]t is necessary" for a state "to notify in advance" other states of projects likely to affect their environment.[220] Recommendation 51(b)(i) of the Stockholm Conference states: "Nations agree that when major water resource activities are contemplated that may have a significant environmental effect on another country, the other country should be notified well in advance of the activity envisaged."[221]

Many courts adhere to the notification and information exchange rules in national decisions, such as those of the United States Supreme Court,[222] arbitral decisions, such as the *Lake Lanoux* arbitration,[223] and in rulings of the ICJ. The World Court in the *North Sea Continental Shelf Cases*[224] and in the *Fisheries Jurisdiction Cases*[225] proclaimed that states must enter good faith negotiations with regard to certain disputes. Although this Article will look closer at these decisions shortly, they are pertinent to this discussion, for if the duty to negotiate is to be meaningful and conducted with the requisite good faith, prior notification and exchange of information are conditions precedent to effective compliance with this requirement. The ICJ's *Corfu Channel*[226]

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217. OECD Doc. C(74)224 (Nov. 21, 1974), *reprinted in* 14 INT'L LEGAL MATERIALS 242 (1975); OECD Doc. C(77)28(FINAL) (May 23, 1977), *reprinted in* 16 INT'L LEGAL MATERIALS 977 (1977). Article 8(a) of the latter document states: "The Country of origin, on its own initiative or at the request of an exposed Country, should communicate to the latter appropriate information concerning it in matters of transfrontier pollution or significant risk of such pollution and enter into consultations with it." *Id.* at ____, 16 INT'L LEGAL MATERIALS at 982.

218. G.A. Res. 2995, *supra* note 102, at 42; G.A. Res. 3129, *supra* note 104, at 339-40; G.A. Res. 3281, *supra* note 105.

219. ASIAN-AFRICAN LEGAL CONSULTATIVE COMMITTEE, *supra* note 192, *reprinted in* [1974] 2 Y.B. INT'L LAW COMM'N, Part 2, at 339, U.N. Doc. 4/SER. A/1974/Add. 1.

220. United Nations Env't Programme, Draft Principles on Shared Natural Resources, *reprinted in* 17 INT'L LEGAL MATERIALS 1098 (1978).

221. Report, *supra* note 80, at 17.

222. *E.g.*, Nebraska v. Wyoming, 325 U.S. 589, 656 (1945); Wyoming v. Colorado, 298 U.S. 573, 585-86 (1936).

223. 12 R. Int'l Arb. Awards 281, 24 I.L.R. 101 (Lake Lanoux Arbitral Tribunal). The Lake Lanoux award "does intimate that there is a general principle of customary international law requiring states to take the interests of co-basin states into consideration and that this necessarily leads to the obligation to give notice, to consult and to negotiate." Bourne, *supra* note 204, at 197.

224. North Sea Continental Shelf Cases (W. Ger. v. Den.; W. Ger. v. Neth.) 1969 I.C.J. 4 (Judgment of Feb. 20).

225. Fisheries Jurisdiction (U.K. v. Ice.) 1974 I.C.J. 3 (Judgment of July 25); Fisheries Jurisdiction (W. Ger. v. Ice.) 1974 I.C.J. 175 (Judgment of July 25).

226. Corfu Channel (U.K. v. Alb.) 1949 I.C.J. 4 (Judgment of Apr. 9).

decision also lends some support to the rule that a state has an obligation to notify co-basin states of a potentially harmful situation in its territory.

The duty to give prior notice of a drainage basin development and to exchange data about it is not absolute; that is, a state is not so bound when its proposed project would not affect a co-basin state nor when any affect from it would be insubstantial. Only if it is likely that the transfrontier pollution will be materially damaging are the procedural duties activated. The prior discussion of the "substantial injury" requirement [227] also supports the proposition that the procedural obligations do not arise until the same threshold is met.

Conditioning an obligation in such a manner has obvious faults. Who is to decide a project's potential for environmental harm? Is the state proposing to act as its own judge? Who is to quantify the harm likely to occur? What if the state proposing the project erroneously concludes there is no possibility of serious harm? Or, what if such a conclusion is correct but the exposed state believes it is wrong? International law has not advanced enough to adequately respond to these queries. It imposes no duty on states to resolve such problems in any particular way, except that they must do so peaceably. No state can be forced before the ICJ or an arbitration tribunal. Ideally, all major river systems ought to have a commission composed of representatives from the states through which it flows. Such a commission should be reasonably independent and authorized to regulate the basin so that it is utilized to ensure optimal benefits and that all riparians share its advantages equitably. Furthermore, the commission ought to be empowered to decide disputes and issue binding orders. With its knowledge and experience of the scientific, economic, and social factors within the basin it would more likely render a wise decision than a body, such as the ICJ, unfamiliar with such important factors for determing equitable utilization.

Although international law leaves the questions posed above largely unanswered, it responds to other issues. First, international law indicates that states, for practical reasons, should perform the notice and information duties in writing, not orally.[228] Second, the notice and information must be timely and complete. The timeliness requirement[229] is necessary to ensure that the recipient has an opportunity to study the proposed utilization and make its

227. *See supra* notes 127-29 and accompanying text.
228. Bourne, *supra* note 204, at 178.
229. For detailed remarks on this point, see Bourne, *supra* note 204, at 178-80.

response before the project proceeds. The aim of the timeliness duty is to assure that a state is not faced with transfrontier pollution that is *fait accompli.* In two recent promulgations of rules of international law the ILA required that notice be given "early"[230] and in "due time."[231] The recipient state is also under a time requirement: it must respond within a reasonable time so that the project is not unneccessarily delayed.[232]

The type of information to be communicated, in the words of a committee of the Economic Commission for Europe, should be such "as would enlighten [the recipient state] as to the nature of [the] repercussions"[233] likely to occur in its territory. On this point the ILA concludes that international law requires the information to contain "such pertinent information as will permit the recipient to make an assessment of the probable effects of the planned activities"[234] and also that "all relevant"[235] facts be given. What is relevant can only be determined in light of the facts of each case.

There is a movement within the world community toward requiring states to carry out environmental impact assessments once a project for the utilization of a natural resource had been devised and to include in this study the project's transboundary effects. This developing concept has some relevance to the kind of information that should be exchanged, that is, the full results of the environmental statement ought to be an essential part of the information communicated.

Article 7(2) of the ILA's Rules on Transfrontier Pollution states: "In order to appraise whether a planned activity implies a significant risk of transfrontier pollution, States should make environmental assessments before carrying out such activities."[236] The use of "should" makes the provision merely advisory. Comment 15 to Article 7(2) states that environmental assessment "as a rule of international law is in the stage of development."[237] The concept has obvious value and has been advocated by the

230. INT'L LAW ASS'N, *supra* note 121, at 171.

231. *Id.* at 540.

232. Handl, *supra* note 79, at 62. In support of the proposition that the recipient state must respond within a reasonable time, Handl cited Recommendation 51 of the Stockholm Conference and "international agreements." *Id.* (citing OECD Doc. C(74)224 (Nov. 21, 1974)). Professor Handl goes on to state that "the acting state need only wait for a reasonable period of time before it can go ahead with the project on the assumption that the absence of a response after such a time indicates the absence of objections." *Id.*

233. Committee on Electric Power of the Economic Commission for Europe, U.N. Doc. E/ECE/EP/135 (1953).

234. INT'L LAW ASS'N, *supra* note 121, at 171.

235. *Id.* at 540.

236. *Id.* at 171.

237. *Id.* at 174.

Organisation for Economic Co-operation and Development,[238] the European Communities Commission,[239] and the United Nations Environment Programme.[240] Although Recommendations 60 and 61 of the United Nations Stockholm Conference concern environmental assessments in general,[241] Recommendation 48 specifically addresses water resources. It suggests that:

> Governments, and the Secretary-General in co-operation with the Food and Agricultural Organisation of the United Nations and other United Nations organisations concerned, as well as development assistance agencies, take steps to ensure international co-operation in the research, control and regulation of the side effects of national activities in resource utilization where these affect the aquatic resources of other nations . . . .[242]

Professor Handl argues that the prohibition against transboundary environmental damage "presupposes compliance with a duty of assessment of potential transnational effects of contemplated national activity."[243] He adds that the duty "could be inferred from the general proposition that states are under an obligation to consider possibly conflicting interests of other states and attempt to reconcile them with their own."[244] As cogent as this reasoning is, international law does not yet recognize, as Professor Handl admits,[245] a duty to complete environmental impact statements prior to a water resource project.

In contrast to international law, the law of the United States requires consideration of the transboundary environmental effects of a national activity.[246]

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238. Strengthening International Co-Operation on Environmental Protection in Frontier Regions, OECD Doc. C(78) 77 (Final) (Sept. 21, 1978), *reprinted in* ORG. FOR ECONOMIC CO-OPERATION AND DEV., OECD AND THE ENVIRONMENT 120 (1979).

239. Proposal for a Council Directive concerning the Assessment of the Environmental Effects of certain Private and Public Projects, submitted by the Commission to the Council, June 16, 1980, O.J. EUR. COMM. (No. C169) 14 (1980).

240. 197 Draft Principles on Shared Natural Resources, U.N. Doc. UNEP/IG.12/2 (1978), *reprinted in* 17 INT'L LEGAL MATERIALS 1097 (1978). Principle 4 states: "States should make environmental assessments before engaging in any activity with respect to a shared natural resource which may create a risk of significantly affecting the environment of another State or States sharing that resource." *Id.*, *reprinted in* 17 INT'L LEGAL MATERIALS at 1098 (footnote omitted).

241. Report, *supra* note 80, at 19.

242. *Id.* at 16.

243. Handl, *supra* note 79, at 57.

244. *Id.* at 62.

245. *Id.* at 56.

246. *See* Federal Water Pollution Control Act of 1956, ch. 518, 70 Stat. 498 (superceded 1972) (contains notice and consultation provisions); National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (1970) (codified in scattered sections of 42 U.S.C.) (requires that environmental impact statements include an assessment of the transboundary impact potential of

B. A STATE'S DUTY TO NEGOTIATE AND TO CONSULT

"With respect to the use of the waters of international drainage basins the principle of consultation and negotiation has become a rule of customary international law . . . ."[247] Judicial decisions, treaty terms, state practice, declarations and statements of governmental and nongovernmental organizations, and the opinion of publicists all support this conclusion. After a diligent study of this issue Canadian scholar Charles Bourne determined that international law requires negotiation and consultation.[248] To substantiate this determination he traced the origin of the rule to a 1923 convention and cited many post-1923 sources of law.

Since Bourne's study there have been a number of developments that more firmly establish the consultation and negotiation obligations.[249] For example, Article 6 of the ILA's water pollution rules declares:

> Basin states shall consult one another on actual or potential problems of water pollution in the drainage basin so as to reach, by methods of their own choice, a solution consistent with their rights and duties under international law. This consultation, however, shall not unreasonably delay the implementation of plans that are the subject of consultation.[250]

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any project under review).

For two articles on NEPA's applicability outside of the United States, see Brower, *Is NEPA Exportable?*, 43 ALB. L. REV. 513 (1979); Yost, *American Governmental Responsibility for Environmental Effects of Actions Abroad*, 43 ALB. L. REV. 528 (1979).

Also on the United States requirement for international environmental impact statements, see Exec. Order No. 12,114, 3 C.F.R. 354 (1980), *reprinted in* 42 U.S.C. § 4321, at 515-17 (1982). Additionally, in 1978 the United States Senate passed a resolution calling for a global Treaty on International Environmental Assessments. S. Res. 49, 95th Cong., 2d Sess., 124 CONG. REC. S11, 523-24 (daily ed. July 21, 1978).

247. INT'L LAW ASS'N, *supra* note 121, at 175. Professor Bilder, writing in 1976, was only willing to state that there is a "growing consensus that co-riparian States" ought to enter consultations and negotiations. Bilder, *supra* note 164, at 180. Professor Bothe, writing several years later, argued that negotiation and consultation are general duties that arise in all cases "where transfrontier pollution has occurred or is likely to occur [and] . . . [t]his duty is particularly well established for shared water resources." Bothe, *supra* note 204, at 395.

248. Bourne, *Procedure in the Development of International Drainage Basins: The Duty to Consult and to Negotiate*, 10 CAN. Y.B. INT'L L. 212 (1972).

249. *See* Report, *supra* note 80, at 7; G.A. Res. 3129, *supra* note 104, at 49; G.A. Res. 3281, *supra* note 105, at 52; OECD Doc. C(74)224 (Nov. 21, 1974), *reprinted in* 14 INT'L LEGAL MATERIALS 242, 246 (1975); Proposition 10 of the Asian-African Legal Consultative Committee's draft proposals on international rivers, ASIAN-AFRICAN LEGAL CONSULTATIVE COMMITTEE, *supra* note 192, at 13; United Nations Environment Programme, Draft Principles five and six on shared natural resources, *reprinted in* 17 INT'L LEGAL MATERIALS 1091, 1097 (1978); Council of Europe, 1974 Draft European Convention for the Protection of International Watercourses Against Pollution, [1974] 2 Y.B. INT'L L. COMM'N 346, U.N. Doc. 4/SER.A/1974/Add.1; Institute of International Law, Athens Resolution (1979), *reprinted in* D. CAPONERA, *supra* note 61, at 282.

250. INT'L LAW ASS'N, *supra* note 121, at 541.

Important evidence for the proposition that states have a duty to consult and negotiate is the long-standing consistent pattern of state practice in consulting and negotiating when problems have arisen over the exploitation of a common water resource[251] and the fact that many water resource treaties impose such obligations.[252]

Although the ICJ in its *Corfu Channel* opinion may have implicity required consultation in situations that may cause injury to another state,[253] the court clearly required this in the *North Sea Continental Shelf Cases* and in the *Fisheries Jurisdiction Cases*. The former case concerned the delimitation of the North Sea that appertains to each of the litigants, West Germany, Denmark, and the Netherlands. The ICJ held that the states were obligated to negotiate in good faith in an attempt to settle their dispute.[254] A factor that led the court to this conclusion is the unity of deposits of natural resources in the subsoil of the sea, a fact strikingly similar to the unity of water in an international water basin and one that allowed the ICJ to reason as follows:

> The nature of the two situations is sufficiently analogous so that, if there is an obligation of international law to negotiate continental shelf boundaries, taking the unity of resource deposits into account, there is equally an obligation under international law to negotiate with respect to the apportionment of the use of water.[255]

The *Fisheries Jurisdiction Cases* addressed the rights of Iceland, West Germany, and the United Kingdom to exploit fish off the Icelandic coast. Rather than determine these rights, the ICJ ordered the states to seek a resolution through good faith negotiations.[256] This case is especially relevant to a study of the negotiations requirement because the court was faced with the problem of apportioning a natural resource, which is essentially what must be done in determining whether an international water resource is being equitably utilized.

The broad statement that there is a responsibility to negotiate

251. Bothe, *supra* note 204, at 394; Bourne, *supra* note 248, at 220; Utton, *supra* note 87, at 307; Handl, *supra* note 79, at 59.

252. *See* Florio, *Water Pollution and Related Principles of International Law*, 17 CAN. Y.B. INT'L L. 134, 142 (1979); B. CHAUHAN, *supra* note 154, at 277-80.

253. Bilder, *supra* note 164, at 158. It has been argued that the obiter dicta of the *Lake Lanoux* arbitration "suggest that a duty to consult and negotiate with a co-basin state is a general principle of international law." Bourne, *supra* note 248, at 219.

254. North Sea Continental Shelf Cases (W. Ger. v. Den.; W. Ger. v. Neth.) 1969 I.C.J. 4, 46-47, 53-54 (Judgment of Feb. 20).

255. [1980] 2 Y.B. INT'L L. COMM'N 171, U.N. Doc. 4/CN.4/SER.A/1980/Add. 1.

256. Fisheries Jurisdiction (U.K. v. Ice.) 1974 I.C.J. 3, 31-33 (Judgment of July 25).

and consult gives little indication what these duties entail. To be meaningful, the obligations must be carried out in good faith.[257] Good faith itself has ramifications. It requires that the consultations and negotiations be carried out for a reasonable time, that they not be unjustifiably broken off or delayed, and that the parties adhere to agreed procedures.[258] The disputing states must take account of one another's various interests.[259] Each state is under "an obligation to accept in good faith all communication and contacts which could . . . provide States with the best conditions for concluding agreements."[260] In addition, the parties must negotiate with the object of reaching an agreement,[261] even if there is no obligation to actually reach an agreement.[262] The requirement that consultation and negotiation be meaningfully conducted can be summarized by the words of the ICJ:

> [T]he parties are under an obligation to enter into negotiations with a view to arriving at an agreement, and not merely to go through a formal process of negotiation . . .; they are under an obligation so to conduct themselves that the negotiations are meaningful, which will not be the case when either of them insists upon its own position without contemplating any modification of it . . . .[263]

Although there is some authority for requiring that co-basin states unable to reach an agreement over the utilization of a drainage basin must resort to third parties to settle the dispute, either by mediation, conciliation, or adjudication, such an obligation is not yet recognized by international law.[264]

VI. RESOLVING U.S. — CANADIAN CONFLICTS

The procedural duties discussed above can be summarized as

257. Bourne, *supra* note 248, at 223-25.

258. *See, e.g.*, INT'L L. ASS'N, RULES OF INTERNATIONAL LAW APPLICABLE TO TRANSFRONTIER POLLUTION, art. 8 (1), *reprinted in* INT'L LAW ASS'N, *supra* note 121, at 175; Article 6 of the Institute of International Law's Salzburg Resolution, 56 AM. J. INT'L L. 738 (1962).

259. 12 R. Int'l Arb. Awards 281, 303, 24 I.L.R. 101, 128 (Lake Lanoux Arbitral Tribunal, 1957).

260. 12 R. Int'l. Arb. Awards 281, 308; 24 I.L.R. 101, 130 (Lake Lanoux Arbitral Tribunal, 1957).

261. Continental Shelf Cases, 1969 I.C.J., at 48; Railway Traffic between Poland and Lithuania, 1931 P.C.I.J., ser. A/B, No. 42, at 116 (Judgment of Oct. 15).

262. Bourne, *supra* note 248, at 225-31.

263. Continental Shelf Cases, 1969 I.C.J., at 47.

264. *See* Bourne, *Mediation, Conciliation and Adjudication in the Settlement of International Drainage Basin Disputes*, 9 CAN. Y.B. INT'L L. 114 (1971).

the responsibility of states to cooperate when a disagreement arises over the use of an international drainage basin. Has the United States cooperated with Canada in the development of Garrison Diversion? If so, has this cooperation been sufficient to meet the strictures of international procedural law? It is beyond the scope of this Article to answer these questions thoroughly. Nonetheless, a few general remarks on them will be made.

The United States did not negotiate with its northern neighbor about Garrison Diversion either when the project was proposed or before construction began. Furthermore, the United States does not seem to have given Canada information and effective notice of the project prior to the beginning of construction in 1967. But it is debatable whether the procedural duties or notification, exchange of information, negotiation, and consultation were indeed obligations of international law in 1967. After 1967 and prior to the IJC study of GDU, the United States discussed the water project with Canada and gave it information about this utilization of the water resource the two states share.[265] In fact, it was data supplied by the United States Bureau of Reclamation that led to Canada's early formal objections.[266]

International legal duties were surely adhered to by the United States when it agreed to refer the matter to the IJC, thereby allowing Canada full access to all facts about the project. Resort to the IJC was in the finest spirit of international cooperation. After the IJC's findings were issued, work on Garrison Diversion stopped. Although not wholly due to the United States' respect for Canadian interests, halting the project was in part respective of these interests and was in conformance with the law of the world community.

Since issuance of the ICJ's report in 1977, and prior to the formation of the GDUC in 1984, the United States appears to have, by various means, continued to comply with its procedural obligations of notification, exchange of information, negotiation, and consultation. First, the United States decided to develop a closed system.[267] Second, discussions between the two countries on the water project have proceeded at high levels. In the past few years Secretary of State George Schultz has met eight times with his Canadian counterpart and the GDU was on the agenda each time and discussed at length in several meetings.[268] The Canadian

265. Nossal, *supra* note 3, at 3-7.
266. *Id.* at 4.
267. *See supra* notes 42-44 and accompanying text.
268. Statement of Mr. Carroll Brown, Director, Office of Canadian Affairs, U.S. Department of State, before the Garrison Commission (Aug. 30, 1984).

Environment Minister has gone to Washington to exchange views on the project with the Secretary of Interior.[269] Third, for several years there has been in operation a formal deliberative body, the Garrision Consultative Group (Group), composed of representatives of the two countries.[270] In Canada's opinion the Group has operated "effectively,"[271] and Canada has proposed "that future consultations proceed under the aegis of this Group."[272] This is an indication that Canada is satisfied with the Group as a mechanism by which the United States heeds its procedural duties. Because protection of Canadian interests involves many technical matters, a Garrison Joint Technical Committee (Committee) of three Canadians and three Americans has been set up within the Group.[273] The Committee, composed of four specialized Task Forces, monitors GDU features under planning, design, and contruction as well as the plans for future development, all in an effort to meet Canadian concerns.[274]

Indeed, progress has been made. The Committee reports: "A number of modifications have been made to the design features with the potential for impact on Canada as a result of deliberations of the Committee and its Task Force."[275] A Canadian official has remarked that the United States has developed "innovative engineering solutions"[276] and that Canada is "impressed by the thoroughness, competence and talent of the engineers and biologists in developing and implementing design solutions"[277] that seek to satisfy Canadian worries. Consequently, Canadian objections to Phase 1 have been almost entirely eliminated.[278] With regard to Phase 2, Canadian concerns persist, but even here agreements reached between Canada and the United

269. *Id.*

270. Bismarck Tribune, Aug. 21, 1984, at 1B, col. 5.

271. Canada Diplomatic Note No. 693, at 2-3 (Dec. 12, 1984) (a copy of this note is on file with the author).

272. *Id.* at 3.

273. *See* Report of the Garrison Joint Technical Committee to the Consultative Group on the Garrison Project 2 (Apr. 18, 1984).

274. *Id.* The Task Forces are: Biota and Fisheries, Wildlife Mitigation, Engineering, and West Oakes Research Activities. *Id.* at 2-3.

275. *Id.* at 2.

276. Presentation of the Government of Canada to Secretarial Commission for the Garrison Unit: Technical Concerns 6-7 (Sept. 11, 1984).

277. *Id.* at 6. A representative of various Canadian groups opposing the GDU, testifying before the GDUC, listed several of the United States responses to Canadian demands and remarked that these "are all excellent examples of the time, money and effort that has been spent by the U.S. Department of Interior in attempting to deal with Canadian concerns . . . ." Testimony of Bruce Popka, 2 Transcript of Proceedings in the Matter of the Public Meeting before the Garrison Diversion Unit Commission 37 (Sept. 11, 1984) [hereinafter cited as GDUC Transcript]. He also recognized that "large sums of money have been spent on studying . . . [the leaching process of soil chemicals in irrigation drainage] and on designing means by which the chemicals in the water can be reduced." *Id.* at 39.

278. Statement of Carroll Brown, *supra* note 268, at 7.

States have reduced Canadian objections to this phase.[279]

Further compliance with international procedural law by the United States has resulted due to the nature of the United States' system of government. Thus, Canadian opponents to Garrison have been allowed to express their opinions before congressional subcommittees and have been able to conduct concerted lobbying efforts in Washington to halt North Dakota's water project.[280] It is probably true that the United States, more than any other nation, allows foreign nationals and governments the widest, least restricted opportunity to present their opinions to United States decisionmakers.

The GDUC is the most recent manifestation of the United States' adherence to international law. Congress directed the GDUC "to examine, review, evaluate, and make recommendations with regard to the contemporary water needs of . . . North Dakota, taking into consideration . . . the international impacts of the water development alternatives . . . and make recommendations to reduce and minimize those impacts."[281] Although Congress also instructed the GDUC to address a number of other issues of the GDU controversy, based upon comments made by senators in the debate prior to acceptance of the GDUC idea, it appears that transboundary implications were to receive prominent consideration.[282]

Canada was not consulted as to the wisdom of creating the GDUC or as to its mandate.[283] During the selection process of GDUC members, Canada was not consulted, and although "some Canadian officials did broach the subject of Canadian representation on the commission . . . those efforts were rebuffed."[284] None of these points, however, are violative of international law. Besides, as the GDUC was mandated to consider Canadian concerns, little more could have been achieved by Canada had it been consulted about the formation and powers of the GDUC. Furthermore, procedural international law does not require that a foreign nation be represented on a body such as the GDUC, formed by a nation, even if the body is established to address a transfrontier issue affecting the foreign state.

The GDUC, as directed, considered Canadian concerns, and

279. Canada Diplomatic Note No. 465 (Aug. 24, 1984) (a copy of this note is on file with the author).

280. Testimony of Gerry McKinney, GDUC Transcript, *supra* note 277, at 31.

281. Act of July 16, 1984, Pub. L. No. 98-360, § 207(c)(2)(K), 98 Stat. 403, 412.

282. *See* 130 CONG. REC. S7924-7928 (daily ed. June 21, 1984) (Statements of Sens. Andrews, Burdick, Proxmire, Stafford, and Percy).

283. Letter from Sen. Mark Andrews to the author (Sept. 10, 1984) (on file with the author).

284. *Id.*

significantly, the United States suspended work on the project while the GDUC deliberated.[285] The governments of Canada and Manitoba, Canadian environmental groups, and other representatives of Canadian interests were allowed to present written submissions to the GDUC and to testify at its public hearings. This access was the same as that given Garrison advocates. In its deliberations the GDUC gave close attention to the transboundary problems.[286] The Final Report of the GDUC states: "International impacts of biota transfer and irrigation return flows were considered in all alternatives . . . and were given serious consideration in the decisionmaking process of the Commission. The Commission believes that its [recommended] plan satisfies all Canadian concerns . . . ."[287] Canada, in its reactions to the GDUC deliberations, apparently agrees that its interests have been respected.[288]

Thus, the United States seems to have adhered to international law's procedural obligations. This is only a tentative conclusion, however, for this aspect of the international legal elements of Garrison Diversion has not been closely studied here. Furthermore, the project goes on. The GDUC's Final Report states that "continued diplomatic consultations are necessary during project implementation,"[289] and Canada has already listed a number of specific areas of the project design upon which it desires to consult.[290] International procedural law, therefore, will continue to impose duties upon the United States.

In its development of the GDU the United States has not breached its substantive duty to prevent transboundary environmental damage. But this too is a tentative conclusion, for the project is not yet operative. If damage to Canadian waters results, the United States might be responsible for the harm under international law if 1) the harm is serious and 2) a balancing of all relevant factors in both states proves that Garrison Diversion is an inequitable use of the water resource the two nations share. What these factors might involve has been studied by the ILA and listed in Article 5 of the Helsinki Rules.[291] Stated generally, the factor-analysis approach of Article 5 seeks to determine:

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285. Bismarck Tribune, Aug. 26, 1984, at 1A, col. 5.

286. *See* GARRISON DIVERSION UNIT COMM'N, INTERIM STAFF REPORT ON ISSUES AND ALTERNATIVES 14-18 (Nov. 7, 1984).

287. GARRISON DIVERSION UNIT COMM'N, *supra* note 53, at 53.

288. *See* Canada Diplomatic Note No. 63, *supra* note 271; McGregor, *Canada Sets Terms on Garrison Project,* Grand Forks Herald, Nov. 22, 1984, at 1A, col. 3.

289. GARRISON DIVERSION UNIT COMM'N, *supra* note 53, at 53.

290. Canada Diplomatic Note No. 693, *supra* note 271, at 3.

291. HELSINKI RULES, *supra* note 179. Article Five states:

> [W]hether (i) the various uses are compatible, (ii) any of the uses is essential to human life, (iii) the uses are socially and economically valuable, (iv) other resources are available, (v) any of the uses is "existing" within the meaning of Article VIII, (vi) it is feasible to modify competing uses in order to accommodate all to some degree, (vii) financial contributions by one or more of the interested basin States for the construction of works could result in the accommodation of competing uses, (viii) the burden could be adjusted by the payment of compensation to one or more of the co-basin States, and (ix) overall efficiency of water utilization could be improved in order to increase the amount of available water.[292]

If Canadian waters are eventually damaged by GDU, a tribunal would likely be called to determine whether the United States had complied with substantive international environmental law. The determination would likely be based on the above factors. Although none of the criteria are preeminent, Article 8 of the Helsinki Rules gives some preference to existing uses.[293] The provision seems to require protection of an existing reasonable use where a study of all the factors in the two nations indicates that neither nation's interests predominate. Thus, if it were determined

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(1) What is a reasonable and equitable share within the meaning of Article IV is to be determined in the light of all the relevant factors in each particular case.

(2) Relevant factors which are to be considered include, but are not limited to:

(a) the geography of the basin, including in particular the extent of the drainage area in the territory of each basin State;

(b) the hydrology of the basin, including in particular the contribution of water by each basin State;

(c) the climate affecting the basin;

(d) the past utilization of the waters of the basin, including in particular existing utilization;

(e) the economic and social needs of each basin State;

(f) the population dependent on the waters of the basin in each basin State;

(g) the comparative costs of alternative means of satisfying the economic and social needs of each basin State;

(h) the availability of other resources;

(i) the avoidance of unnecessary waste in the utilization of waters of the basin;

(j) the practicability of compensation to one or more of the co-basin States as a means of adjusting conflicts among uses; and

(k) the degree to which the needs of a basin State may be satisfied, without causing substantial injury to a co-basin State;

(3) The weight to be given to each factor is to be determined by its importance in comparison with that of other relevant factors. In determining what is a reasonable and equitable share, all relevant factors are to be considered together and a conclusion reached on the basis of the whole.

Id.

292. *Id.* at 488-89.

293. *Id.* at 493.

that Canadian water quality, water quantity, fishing, and waterfowl interests are not of equal or greater value than the interests of the United States in irrigated farm land and augmented municipal and industrial water supplies, then the harm caused by Garrison Diversion would not violate international law. As a result, Canada would have to suffer impairment of its water uses even though it might be entitled to some monetary compensation for its loss.

Determining the substantive legality of a fully functioning GDU would be a difficult task. It is doubtful that the interests of Canada would clearly prevail over those of the United States, and vice versa. That Article 5 criteria involve some issues requiring scientific determinations does not necessarily make reaching a decision any easier, for scientists often reach different conclusions upon similar facts. Furthermore, many of the factors will require a subjective determination.

Assuming Garrison Diversion eventually harms Canada and substantially so, what are Canada's remedies? Can sanctions be imposed on the United States? This point can be addressed both from the perspective of a Canadian citizen who has been individually damaged and from that of Canada as a sovereign nation.

No rule of public international law gives a foreign national an international forum in which to sue the United States or any governmental body within it. Article 34(1) of the Statute of the International Court of Justice states: "Only States may be parties in cases before the Court."[294] Nor could an individual bring the United States before an arbitration tribunal.[295] A Canadian citizen's only recourse, other than seeking his government's direct intervention, is in private international law, that is, within the municipal legal systems of Canada and the United States.[296] There is a dearth of decisions involving pollution crossing the Canada-United States border. Yet a private tort action brought either in Canadian or United States courts might well result in an effective remedy and ought to be given more consideration than such approaches have received in the past. This is so even if such an attempt is fraught with more than a little uncertainty.

If a Canadian citizen brought suit in his own country's court he would have to overcome problems concerning sovereign

294. BASIC DOCUMENTS, *supra* note 59, at 395.

295. *See id.*

296. *See* S. MCCAFFREY, *supra* note 171, at 70; McCaffrey, *Trans-Boundary Pollution Injuries: Jurisdictional Considerations in Private Litigation Between Canada and the United States*, 3 CAL. W. INT'L L.J. 191 (1973).

immunity, extraterritorial service of process, and establishment of personal jurisdiction by the court over the defendant. If these problems were solved the court would then be required to determine whether it is bound to apply Canadian law, United States law, or some fusion thereof. If the Canadian citizen received a favorable verdict he may well have to start a second proceeding in a United States court to enforce it. Although the United States Supreme Court has ruled that foreign judgments should be recognized as a matter of comity among nations,[296] a United States court could well determine that enforcing the judgment would be inimical to American interests. It is unlikely that an American court would recognize a Canadian court's injunction ordering the cessation of a fully operative GDU. On the other hand, a United States court would give more respect to a monetary damage award.[298]

If the injured Canadian were to sue in the United States the foremost issue would be whether an American court has jurisdiction of actions to recover for damage to foreign land. Professor McCaffrey studied this issue and concluded:

> There is . . . ample American precedent for entertaining jurisdiction of actions to recover for damage to foreign land when the injury was caused by an act committed within the court's jurisdiction. Since a court with power over the person of the defendant can grant effective relief, the fact that the injured land was located in Canada would probably make no difference.[299]

The Canadian litigant in a United States court will be faced with practical problems of expense, unfamiliarity with United States law and procedure, and perhaps a bias against his position. Despite these problems and others mentioned above, a private suit might succeed. Consideration ought to be given to private actions should Garrison Diversion prove environmentally harmful to Canada. The Canada-United States boundary seems to have a mystique; it somehow prevents a pollution victim from taking direct legal action in national courts and under municipal law. It need not be so inhibiting. Indeed, a private action might be a more

297. Hilton v. Guyot, 159 U.S. 113, 202 (1885).

298. On the enforcement of foreign judgments by American courts, see Kulzer, *Some Aspects of Enforceability of Foreign Judgments*, 16 BUFF. L.R. 84 (1966); Note, *The Enforceability of Foreign Judgments in American Courts*, 37 NOTRE DAME LAW. 8 (1961); Reese, *The Status in this Country of Judgments Rendered Abroad*, 50 COL. L.R. 783 (1950).

299. S. MCCAFFREY, *supra* note 171, at 70 (1975).

effective response than Canada as a sovereign nation seeking to recover for environmental damage done to its territory by Garrison Diversion.

If Canada were to seek to recover for environmental damage caused by the Garrison Diversion project it would be confronted initially with the rule, as enunciated by the Permanent Court of International Justice, that "no State can, without its consent, be compelled to submit its disputes with other States either to mediation or to arbitration, or to any other kind of pacific settlement."[300] Yet a state is bound to settle its disputes with other states peaceably. Article 2(3) of the United Nations Charter (Charter) states: "All Members shall settle their international disputes by peaceful means in such a manner that international peace and security, and justice, are not endangered."[301] The means of peaceably settling a Garrison Diversion dispute include continuing negotiations, and if these fail, seeking resolution through intermediary procedures. These procedures may be formal or informal, but are not binding and stop short of judicial settlement and arbitration. They include such mechanisms as good offices, mediation, conciliation, and inquiry, and any other form of third party assistance aimed at helping the disputants reach an acceptable solution. The intermediary might be another nation that Canada and the United States respect and that has experience in international law and disputes, such as the United Kingdom. The third party could also be a statesman or an international body, such as the United Nations or the Organisation for Economic Co-operation and Development. As environmental problems are often made complex by scientific factors, the aid of a scientific organization such as the International Council of Scientific Unions and its Scientific Committee on Problems of the Environment, might be requested.

Should intermediary measures not be used, or if they fail, settlement by the ICJ or an arbitration tribunal are the final possibilities for peaceful settlement.[302] The ICJ "is open to the

300. Advisory Opinion Concerning the Status of Eastern Carelia, 1923 P.C.I.J. ser. B, No. 5, at 27 (Judgment of July 23).

301. U.N. CHARTER art. 2, para. 3.

302. G. SCHWARZENBERGER & E. BROWN, MANUAL OF INTERNATIONAL LAW 195 (6th ed. 1976). The authors state as follows:

> Arbitration differs from mediation and conciliation in the duty incumbent on parties to arbitral proceedings to accept and carry out the award in good faith. The only difference between arbitration and [judicial settlement] lies in the method of selecting the members of these judicial organs. While, in arbitration proceedings, this is done by agreement between the parties, judicial settlement presupposes the existence of a standing tribunal with its own bench of judges and its own rules of procedure which parties to a dispute must accept.

States Parties to [its] Statute."[303] Although Canada and the United States are parties to the ICJ's Statute neither can be required to come before the court. Article 36(1) of the Statute states: "The jurisdiction of the Court comprises all cases which the parties refer to it and all matters specially provided for in the Charter of the United Nations or in treaties or conventions in force."[304] Thus, only if the United States agrees to take a Garrison Diversion problem to the ICJ will Canada be able to use it to test the United States' compliance with substantive and procedural international environmental law. Furthermore, there is neither a treaty in force between these two nations, nor anything in the Charter, that would give the ICJ jurisdiction over a Garrison Diversion environmental problem. Article 36(2) of the Statute states that parties to it can declare "that they recognize as compulsory 'ipso facto' and without special agreement . . . the jurisdiction of the Court in all legal disputes . . . ."[305] Although the United States has made a declaration accepting compulsory jurisdiction under this clause it included an important reservation in doing so. The United States declaration does not apply to "disputes with regard to matters which are essentially within the domestic jurisdiction of the United States of America as determined by the United States of America . . . ."[306] By this "self-judging" reservation America has in fact not committed itself to compulsory jurisdiction, but has reserved to itself the right to choose which cases it will have decided by the ICJ. Taking a Garrison Diversion dispute before an arbitration tribunal is also wholly dependent upon America's consent.[307]

Clearly then, the international law of compulsory adjudication and sanctions is primitive compared to that of municipal systems of law. What is likely to happen? If Canadian waters are harmed by foreign biota because of GDU, how will the consequential dispute be settled?

It is certainly possible that the United States will agree to the ICJ's jurisdiction of the matter and, if so, it would surely abide by the final decision. Importantly, the United States has consented to the ICJ's jurisdiction in another continuing disagreement with

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Id.

303. BASIC DOCUMENTS, *supra* note 59, at 396.

304. *Id.*

305. *Id.*

306. INT'L COURT OF JUSTICE, YEARBOOK 1982-1983, at 88 (1983).

307. Although the 1909 Boundary Waters Treaty gives the International Joint Commission the responsibility to examine and report upon issues submitted to it, its determinations are not binding, only advisory. Furthermore, it has not been the practice of Canada and the United States to unilaterally refer matters to the Commission but only to use it upon agreement.

Canada. The two states have asked the ICJ to decide the course of the maritime boundary that divides their continental shelves and fisheries zones in the Gulf of Maine.[308] It is more likely, however, that a Garrison Diversion dispute will be decided by an arbitration tribunal. The United States has participated in hundreds of arbitrations in its dealings with other countries. The *Trail Smelter* and *Gut Dam* disputes, for example, were resolved in this manner. Arbitration is favored by states over the ICJ because they have greater control over the composition of an arbitration tribunal, its procedures, and the legal principles it is to apply.

It is probable that the United States will settle any future problem over GDU by one of the methods discussed above. It is doubtful that the dispute would be allowed to fester. The United States has to live with its northern neighbor; the fact that they share the continent requires them to deal continually with one another. Failure to resolve a Garrison Diversion dispute would inimically affect Canadian-United States relations regarding such problems as acid rain, the division of sea resources, and pollution of the Great Lakes. Such failure would also adversely affect their overall relations in a world of interdependent states. The United States aspires to achieve a reputation as a trustworthy and law abiding country and to maintain this reputation, which also leads one to believe that it would not object to some form of third party settlement.

VII. CONCLUSION

The United States' recent record regarding disputes with Canada is mixed. On the one hand, it recognized and responsibly addressed the dispute with Canada over the Gulf of Maine; on the other hand, it largely ignored Canadian protests that air pollution from American industries is destroying Canadian wildlife, lakes, and forests. Therefore, the will of the United States to adhere to international law is being tested in its handling of North Dakota's Garrison Diversion project. Eyes will focus on how a mighty country handles the bitter pill of economic loss occasioned by the cry for justice of a weaker country. Will the United States continue its apparent respect for procedural international law? If Canadian waters are damaged by Garrison Diversion, will the United States reaction be as deferential to its legal duties as Canada's was in the *Gut Dam* and *Trail Smelter* disputes?

308. YEARBOOK, *supra* note 306, at 123.

Clearly, the Garrison Diversion project has matured into a confrontation that will occupy a far more dramatic place in Canadian-United States relations and diplomacy, as well as in legal history, than was first envisioned. The true character of the United States as a world citizen will be cast in the style and substance of its management and resolution of the Garrision Diversion dispute.