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Abstract

This Comment argues that because NAFTA and the IEP do not safeguard environmental interests adequately, additional measures need to be taken to preserve and prevent pollution of transboundary water resources. Part I of this Comment discusses the present status of customary international law, existing treaties, and national environmental laws that govern international water pollution abatement and its judicial enforcement. This part specifically addresses liability under the U.S. Federal Water Pollution Control Act, commonly known as the Clean Water Act (the "CWA").20 Part II discusses aspects of evolving international law, NAFTA, and the IEP with respect to transboundary environmental resources. Part III demonstrates the deficiencies of existing laws and treaties. This Comment concludes that although NAFTA and the IEP provide incentives to protect transboundary waters through economic stability and shared scientific technology, only specific implementation schemes and corresponding enforcement by an international agency and the judicial system can guarantee adequate protection of transboundary water resources.

THE NORTH AMERICAN FREE TRADE AGREEMENT: THE NEED TO PROTECT TRANSBOUNDARY WATER RESOURCES

INTRODUCTION

Fear that the proposed North American Free Trade Agreement ("NAFTA")[1] does not adequately address regional environmental conditions at the U.S.-Mexican and U.S.-Canadian borders currently impedes its passage.[2] Policy experts believe that free trade between countries of unequal economic standing results in a compromise in environmental regulation.[3] Consequently, trade negotiators must recognize the differences between each country's environmental regulations as they work to promote free trade.[4] As a developing country, Mexico suffers from an enormous foreign debt, the inability to acquire additional loans, an escalating population, and a high unemployment rate.[5] Mexico maintains environmental standards that are among the worst in the world.[6] In addition, even where comprehensive environmental legislation exists, Mexico chooses a policy of economic growth over the costly enforcement of environmental legislation.[7] The potential consequences of free trade to transboundary waters at the U.S.-

1. North American Free Trade Agreement (Tentative Draft Sept. 6, 1992) [hereinafter NAFTA], *available in* WESTLAW, NAFTA Database.

2. Myron A. Brilliant, *The Importance of the Environment in International Trade: Spotlight on NAFTA*, BARRISTER, Fall 1992, at 47. NAFTA is currently being considered under the fast-track legislative procedures. To avoid excessive revision that could delay trade negotiations between heads of state, fast-track procedures prohibit the U.S. Congress from amending a proposal prior to its adoption. *Id.*; *see* 19 U.S.C. § 2191 (1988) (setting forth fast-track procedures for trade negotiations).

3. Michael S. Feeley & Elizabeth Knier, *Environmental Considerations of the Emerging United States-Mexico Free Trade Agreement*, 2 DUKE J. COMP. & INT'L L. 259, 261 (1992). Much of the controversy arises due to the disparate environmental standards and differing levels of environmental regulatory enforcement. *Id.*; *see generally Developments in the Law—International Environmental Law*, 104 HARV. L. REV. 1484 (1991) [hereinafter *Developments*] (discussing failure of international law to address disparate environmental standards and regulatory enforcement among countries).

4. Rebecca A. Sanford, Comment, *The Canada-U.S. Free Trade Agreement: Its Aspects, Highlights, and Probable Impact on Future Bilateral Trade and Trading Agreements*, 7 DICK. J. INT'L L. 371, 390 (1989).

5. Feeley & Knier, *supra* note 3, at 262.

6. *Id.* at 285; DEPT. OF EXTERNAL AFFAIRS AND INTERNATIONAL TRADE, NORTH AMERICAN FREE TRADE AGREEMENT: CANADIAN ENVIRONMENTAL REVIEW 73 (Oct. 1992) [hereinafter CANADIAN REVIEW].

7. CANADIAN REVIEW, *supra* note 6, at 73; Feeley & Knier, *supra* note 3, at 285.

Mexican border[8] raise special concerns because current treaties and laws have left these surface and ground waters either scant or polluted.[9]

Mexico, however, is in a unique position as a developing country to improve its economic and environmental conditions because it shares a border with the United States.[10] In 1990, U.S. exports to Mexico totaled US$112 billion, which represents twenty-eight percent of total U.S. exports, and U.S.-Mexican trade totaled US$59 billion.[11] By stabilizing its economy through free trade under NAFTA, Mexico potentially could increase its technical resources to protect the environment and thus raise and enforce its environmental standards.[12]

Although NAFTA may improve economic conditions in Mexico, it does not guarantee protection of transboundary water resources at the U.S.-Mexican border.[13] Current environmental conditions of the Great Lakes region and lack of environmental provisions in the Canada-United States Free Trade Agreement ("CFTA")[14] demonstrate that existing mechanisms are inadequate to maintain environmental stan-

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8. Brilliant, *supra* note 2, at 47.

9. *See* Melissa Crane, Note, *Diminishing Water Resources and International Law: U.S.-Mexico, A Case Study*, 24 CORNELL INT'L L.J. 299, 313-317 (1991) (discussing inadequacies of current and developing theories of international law regarding transboundary water resources). Ground water is distinguished from surface water as water that flows underground and can enter surface water resources. *Id.* at 299 n.1.

10. *See* U.S. DEPARTMENT OF STATE DISPATCH, NORTH AMERICAN FREE TRADE AGREEMENT 110, 111 (Tentative Draft Feb. 17, 1992) [hereinafter DEPT. OF STATE DISPATCH] (predicting benefits to Mexico from free trade with United States). The United States accounts for more than two-thirds of total Mexican trade. *Id.* at 110. In addition, in 1990, U.S. commerce with Canada and Mexico totaled US$234 billion, or 26% of total U.S. trade. *Id.* NAFTA would create the largest single market in the world. *Id.* at 112.

11. *Id.* at 110.

12. Feeley & Knier, *supra* note 3, at 285. NAFTA may stimulate economic and technical growth and allow Mexico to improve its environmental conditions. Brilliant, *supra* note 2, at 49; *see generally* DEPT. OF STATE DISPATCH, *supra* note 10 (discussing potentials of NAFTA including job creation and increased trade and investment).

13. *See, e.g., Reilly Says NAFTA Gives Precedence to Environment Treaties Allowing Sanctions*, Int'l Trade Rep. (BNA) 1447, 1448 (Aug. 19, 1992) [hereinafter *NAFTA Sanctions*]. While NAFTA may provide trade sanctions for environmental enforcement, environmentalists severely criticize NAFTA. *Id.* Roni Lieberman of the Sierra Club stressed that NAFTA will prohibit the strengthening of environmental standards. *Id.* Justin Ward of the National Resource Defense Council also commented that there is still a need to scrutinize NAFTA and its possible impact on the environment. *Id.*

14. Canada-United States Free Trade Agreement, Jan. 2, 1988, 27 I.L.M. 281 (1988) [hereinafter CFTA].

dards and to resolve international environmental disputes.[15] In addition, international law provides no binding obligation between neighboring nations with respect to transboundary natural resources.[16] NAFTA also fails to provide additional safeguards for the protection of transboundary waters at the U.S.-Canadian border.[17] The proposed Integrated Environmental Plan (the "IEP") currently represents the initiatives of the United States and Mexico designed to protect the environment at the U.S.-Mexican border.[18] The IEP, however, lacks treaty status, adequate enforcement provisions, and sufficient funding for environmental regulation.[19]

This Comment argues that because NAFTA and the IEP do not safeguard environmental interests adequately, additional measures need to be taken to preserve and prevent pollution of transboundary water resources. Part I of this Comment discusses the present status of customary international law, existing treaties, and national environmental laws that govern international water pollution abatement and its judicial enforcement. This part specifically addresses liability under the U.S. Federal Water Pollution Control Act, commonly known as the Clean Water Act (the "CWA").[20] Part II discusses aspects of evolving international law, NAFTA, and the

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15. Peter Gorrie, *Great Lakes Clean-up at Critical Turning Point*, CANADIAN GEOGRAPHIC, Dec. 1990/Jan. 1991, at 47-48; *see* Joel A. Gallob, *Birth of the North American Transboundary Environmental Plaintiff: Transboundary Pollution and the 1979 Draft Treaty for Equal Access and Remedy*, 15 HARV. ENVTL. L. REV. 85, 116-19 (1991) (discussing environmental treaties and laws specifically addressing water pollution of Great Lakes region); *see also* Barbara K. Bucholtz, *Coase and the Control of Transboundary Pollution: The Sale of Hydroelectricity Under the United States-Canada Free Trade Agreement of 1988*, 18 B.C. ENVTL. AFF. L. REV. 279, 316-17 (1991) (discussing possibility of using free trade agreement such as CFTA to encourage behavior that protects environment). Canada and the United States are the world's largest trading partners. *Id.* at 296-97 n.98. Over 25% of Canada's exports go to the United States. *Id.*

16. *See* Crane, *supra* note 9, at 315-17 (analyzing current and developing theories of international law regarding transboundary natural resources).

17. *See* CANADIAN REVIEW, *supra* note 6, at 16-22 (discussing environmental provisions of NAFTA and advocating further negotiations and agreements before adoption of NAFTA).

18. *See* U.S. ENVIRONMENTAL PROTECTION AGENCY ET AL., INTEGRATED ENVIRONMENTAL PLAN FOR THE MEXICO-U.S. BORDER AREA (FIRST STAGE 1992-1994) (Working Draft Aug. 1, 1991) [hereinafter IEP] (setting forth U.S.-Mexican commitment to address environmental issues at border area).

19. Feeley & Knier, *supra* note 3, at 267.

20. Federal Water Pollution Control Act §§ 310(a), 505(a), 33 U.S.C. §§ 1320(a), 1365(a) (1988).

IEP with respect to transboundary environmental resources. Part III demonstrates the deficiencies of existing laws and treaties. This Comment concludes that although NAFTA and the IEP provide incentives to protect transboundary waters through economic stability and shared scientific technology, only specific implementation schemes and corresponding enforcement by an international agency and the judicial system can guarantee adequate protection of transboundary water resources.

I. *CURRENT REGULATION OF TRANSBOUNDARY WATERS OF THE UNITED STATES AND MEXICO*

Customary international law and several national laws and treaties currently create binding obligations between the United States, Mexico, and Canada with respect to transboundary waters.[21] The U.S.-Mexican transboundary waters primarily encompass ground water and surface water including the Colorado River, the Rio Grande, the Tijuana River, the Rio Bravo, and the New River.[22] The U.S.-Canadian transboundary waters primarily consist of the Great Lakes basin.[23] Customary international law, treaties, and domestic laws contribute to the regulation of pollution of water resources.[24]

A. *Customary International Law*

Under customary international law, a nation has an absolute and exclusive right to use, and even exploit, its own natural resources without concern for the neighboring nation that shares such natural resources.[25] The United Nations General Assembly Resolution on Permanent Sovereignty over Natural

21. *See generally* Feeley & Knier, *supra* note 3 (discussing NAFTA and environmental concerns with respect to Mexico); Robert E. Cattanach & Peter V. O'Conner, *Environmental Concerns Raised by the Canada-United States Free Trade Agreement*, 18 WM. MITCHELL L. REV. 461 (1992) (discussing CFTA and environmental concerns with respect to Canada); Crane, *supra* note 9 (discussing transboundary groundwater resources and related international law and treaties with Mexico).

22. *See* IEP, *supra* note 18, at III-16 to III-25 (discussing major environmental concerns regarding transboundary water resources at U.S.-Mexican border).

23. *See* Gallob, *supra* note 15, at 116-19 (discussing environmental treaties and laws specifically addressing water pollution of Great Lakes region).

24. *Developments*, *supra* note 3, at 1489.

25. Permanent Sovereignty over Natural Resources, G.A. Res. 3171, U.N. GAOR, 28th Sess., Supp. No. 30, at 52, U.N. Doc. A/9030 (1973).

Resources espouses this view of territorial sovereignty.[26] Accordingly, customary international law provides no specific legal obligations with respect to irrigation and industrial uses of waters.[27]

Despite this view of absolute territorial sovereignty, the obligation to prevent transboundary pollution may fall upon a nation.[28] The international Arbitral Tribunal in *Trail Smelter (U.S. v. Can.)*[29] held that a nation is liable where the court finds a substantial environmental harm by clear and convincing evidence.[30] In *Trail Smelter*, the United States brought suit against Canada for air pollution that damaged U.S. crops resulting from a Canadian smelting operation in British Columbia.[31] The Arbitral Tribunal's decision required Canada to compensate for damage from the smelting operation, which may suggest an acknowledgement of an obligation between nations to protect transboundary resources.[32] *Trail Smelter* echoes the common law principle of *sic utere tuo ut alienum non laedas* ("*sic utere*"), meaning that activities within one nation should not harm persons or property within another nation.[33] Currently, however, there is no binding assent to the international duty of *sic utere*.[34] Therefore, customary international law provides lit-

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26. *Id.*. *But see* United Nations Convention on the Law of the Sea, Dec. 20, 1982, art. 194(2), U.N. Doc. A/CONF.62/122, *reprinted in* 21 I.L.M. 1261, 1308 [hereinafter Law of the Sea Convention] (acknowledging duty limited by territorial sovereignty).

27. Crane, *supra* note 9, at 317 (highlighting reliance of nations on theory of territorial sovereignty)

28. *Developments*, *supra* note 3, at 1492.

29. 3 R.I.A.A. 1906, 1938 (1949).

30. *Id.* at 1965.

31. *Id.*

32. *See id.*

33. *See* Chapman v. Barnett, 169 N.E.2d 212, 214 (Ind. Ct. App. 1960). The court in *Chapman* sets forth the common law maxim of *sic utere tuo ut alienum non laedas* ("*sic utere*"). *Id.*; *see* BLACK'S LAW DICTIONARY 1380 (6th ed. 1990) (defining *sic utere*). *Sic utere* means that "one should use his own property in such a manner as not to injure that of another." *Id.* The dicta of the Arbitral Tribunal in *Trail Smelter* provides

> [u]nder the principles of international law . . . no State has the right to use or permit the use of its territory in such a manner as to cause injury . . . 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.

Trail Smelter, 3 R.I.A.A. at 1965.

34. *See Developments*, *supra* note 3, at 1501 (discussing lack of consensus necessary to establish customary international law).

tle basis for cooperation between the United States, Mexico, and Canada in the cleanup of transboundary waters.

Concerning private parties, international legal analysts have developed the notion of state responsibility where a state is responsible for the acts of private citizens.[35] Efforts to establish an effective international liability scheme for environmental pollution, however, have failed.[36] Currently, there is no codification of state responsibility for violations by private citizens.[37] Consequently, only vague customary duties exist, and almost any activity can be construed as consistent with customary international law.[38]

B. *Treaties Concerning U.S.-Mexican and U.S.-Canadian Transboundary Waters*

The United States and Mexico have negotiated a series of treaties to address preservation and pollution abatement issues involving transboundary water resources.[39] The United States and Canada similarly have signed treaties to address these

35. *E.g.*, JAMES BARROS & DOUGLAS M. JOHNSTON, THE INTERNATIONAL LAW OF POLLUTION 75 (1974). Corfu Channel (U.K. v. Alb.), 1949 I.C.J. 4, 22 (Judgment of Apr. 9), can be construed as establishing state responsibility for transboundary pollution. *See Developments*, *supra* note 3, at 1497 n.31. When two British cruisers, while passing through the Corfu Channel where right of innocent passage had been established, were sunk by Albanian mines, the International Court of Justice affirmed the theory that a state has an "obligation not to allow knowingly its territory to be used for acts contrary to the rights of other states." *Corfu Channel*, 1949 I.C.J. at 22. *Corfu Channel* may, however, offer the international environmental polluter an escape from liability by notifying another nation of its intent to pollute. *See* Christopher D. Stone, 86 AM. J. INT'L L. 445, 464 (1992) (discussing interpretation of *Corfu Channel* with respect to liability for pollution of transboundary waters).

36. *Developments*, *supra* note 3, at 1506-08. Generally, the acts of police, legislatures, and administrative officials are attributable to the nation. *Id.* at 1495. Private parties, however, are more likely to be the source of transboundary pollution. *Id.* In such a case, a nation must only exercise "due diligence" to prevent substantial transboundary pollution. *Id.*

37. *Id.* International courts inadequately resolve international environmental disputes. *Id.* at 1561. Customary international law is not well-defined. *Id.* at 1562. Nor does the International Court of Justice have the necessary scientific and technical expertise to address environmental disputes. *Id.* Furthermore, only nations have standing to sue in the International Court of Justice. *Id.* Private citizens are therefore unlikely to receive compensation for damage to persons or property resulting from environmental harm. *Id.*; *see* Statute of the International Court of Justice, June 26, 1945, arts. 94-95, 59 Stat. 1031, 1051 (1945). "All Members of the United Nations are *ipso facto* parties to the Statute of the International Court of Justice." *Id.*

38. *Developments*, *supra* note 3, at 1493.

39. *See* Feeley & Knier, *supra* note 3, at 282-84 (discussing bilateral treaties ad-

common interests in transboundary water resources.[40] These treaties and customary international law attempt to resolve issues concerning transboundary water resources.[41]

1. Treaties Concerning U.S.-Mexican Transboundary Waters

The U.S.-Mexican border has a long history of environmental problems.[42] The border area consists of 1550 miles from the Pacific Ocean to the Gulf of Mexico.[43] Six states of Mexico (Baja California, Sonora, Chihuahua, Coahuila, Nuevo Leon, and Tamaulipas) and four states of the United States (California, Arizona, New Mexico, and Texas) adjoin the border.[44] In 1990, the population of the major border cities was approximately six million, having grown from over three million in 1980.[45] The population at the border remains among the poorest in the United States.[46] Although economic growth has sometimes brought federal, state, and local investment in the infrastructure, the border area of the United States and Mexico, known as the *colonias*,[47] continues to maintain substandard housing, inadequate roads and drainage, and substan-

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dressing water resources at the U.S.-Mexican boundary); Crane, *supra* note 9, at 313-17 (same).

40. *See* Gallob, *supra* note 15, at 112-16 (discussing bilateral treaties concerning water resources at the U.S.-Canadian border).

41. *Developments*, *supra* note 3, at 1489.

42. *See* IEP, *supra* note 18, § III (discussing environmental conditions at U.S.-Mexican border).

43. *Id.* at I-2.

44. *Id.*

45. *Id.* at III-7.

46. *Id.* The disparity in wealth on the two sides of the U.S.-Mexican border is of great significance. *Id.* For example, in 1984 the per capita income of San Diego, the most affluent part of the border, was 6.5 times greater than that of the Mexican national average. *Id.* Along the border, U.S. per capita incomes remain at least twice that of the Mexican average. *Id.* Overall, U.S. border counties rank among the poorest in the United States. *Id.* More specifically, along the U.S. portion of the border area, 25% of all families fall below the poverty line. *Id.* at III-11. Additionally, 50% of the families at the border earn less than US$12,000. *Id.*

47. *Id.* at III-37. Approximately 200,000 residents of Texas and New Mexico reside in *colonias*. *Id.* These *colonias* are rural, unincorporated subdivisions along the border. *Id.* Texas has 500 *colonias* accounting for a population of 140,000. *Id.* While 76% of the Texas *colonias* have water supplies, less than one percent have sewage systems. *Id.* In New Mexico, 80% of the *colonias* have water and only seven percent have sewer systems. *Id.* California also has approximately 10,000 residents in *colonias*. *Id.* at III-38. Where there is a lack of public sewer systems, private septic systems often contaminate shallow wells of water supplies. *Id.* at III-37. Unfortunately, funding for public sewer systems has been unsuccessful. *Id.*

dard or nonexistent water and sewage facilities.[48]

The 1889 International Boundary Convention, an early international agreement addressing environmental problems at the U.S.-Mexican border, established the International Boundary Commission to preserve and prevent future pollution of the transboundary rivers.[49] The Water Treaty of 1944 (the "1944 Treaty") renamed this commission the International Boundary and Water Commission (the "IBWC").[50] Under the 1944 Treaty, the IBWC has limited jurisdiction over ground and surface waters.[51] The 1944 Treaty also extended the authority of the IBWC to undertake sanitation measures.[52] The IBWC currently has authority, subject to joint governmental approval, to enter into agreements on planning, construction, operation, and maintenance of joint projects concerning transboundary rivers.[53]

The 1944 Treaty established the obligations of the United States and Mexico concerning transboundary waters.[54] Article 3 of the 1944 Treaty prioritizes intended uses of the water to limit waste and to protect the more crucial needs of society.[55] Furthermore, Article 10 of the 1944 Treaty allocates a fixed amount of water, 1,500,000 acre-feet, that the United States

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48. *Id.* at III-11.

49. Convention Between the United States of America and the United States of Mexico to Facilitate the Carrying Out of the Principles Contained in the Treaty of Nov. 12, 1884, and to Avoid the Difficulties Occasioned by Reason of the Changes Which Take Place in the Bed of the Rio Grande and That of the Colorado River, Mar. 1, 1889, U.S.-Mex., 26 Stat. 1512, 1513.

50. Treaty Between the United States of America and Mexico Respecting Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, Nov. 14, 1944, U.S.-Mex., 59 Stat. 1219, 1220 [hereinafter 1944 Treaty]. The International Boundary and Water Commission [hereinafter IBWC] consists of one engineer-commissioner from the United States and one engineer-commissioner from Mexico, and each heads a national section composed of engineering and legal advisors. *Id.* art. 2, 59 Stat. at 1223; *see generally* Charles J. Myers & Richard L. Noble, *The Colorado River: The Treaty With Mexico*, 19 STAN. L. REV. 367 (1967) (discussing environmental regulation of Colorado River and related provisions of 1944 Treaty).

51. 1944 Treaty, *supra* note 50, art. 2, 59 Stat. at 1224.

52. *Id.* art. 3, 59 Stat. at 1225; *see* IEP, *supra* note 18, at III-16 (noting that IBWC has had lead role for undertaking water sanitation since 1944 Treaty was entered into force).

53. *See* 1944 Treaty, *supra* note 50, art. 2, 59 Stat. at 1222-25 (discussing general duties of IBWC).

54. *See id.* arts. 3, 10, 59 Stat. at 1225, 1237-38.

55. *Id.* art. 3, 59 Stat. at 1225. For example, domestic uses take priority over recreational uses. *Id.*

must supply to Mexico through the Colorado River, although it may originate from any source.[56] The United States has complied with its obligations under the 1944 Treaty and has avoided liability to Mexico by so doing.[57]

The 1973 Agreement Confirming Minute 242 of the International Boundary and Water Commission (the "1973 Agreement") between the United States and Mexico specifically addresses the problems of high concentrations of salt in the Colorado River.[58] The 1973 Agreement also regulates groundwater and limits the pumping of water within five miles of the Arizona-Sonora boundary.[59] The 1973 Agreement respects the obligations under the 1944 Treaty.[60]

Finally, the 1983 Border Environmental Agreement (the "1983 Agreement") commits the United States and Mexico to cooperate to solve environmental problems in a 100-kilometer-wide area on each side of the border.[61] The goal of the

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56. *Id.* art. 10, 59 Stat. at 1237-38. The United States used the 1944 Treaty to bind together obligations with respect to the Rio Grande and the Colorado River to compensate Mexico for the fact that the United States uses much more of the Rio Grande waters than it contributes. *See* Myers & Noble, *supra* note 50, at 371 (discussing political background to 1944 Treaty). The United States must also provide an additional 200,000 acre-feet in times of surplus. 1944 Treaty, *supra* note 50, art. 10, 59 Stat. at 1237-38. In addition, Article 15 of the 1944 Treaty limits U.S. obligations to 375,000 acre-feet through all of the All American Canal. *Id.* art. 15, sched. II, 59 Stat. at 1245-49. The 1944 Treaty also addresses the Tijuana River. *Id.* art. 16, 59 Stat. at 1249-50; *see* Convention Providing for the Equitable Distribution of the Waters of the Rio Grande for Irrigation Purposes, May 21, 1906, U.S.-Mex., 34 Stat. 2953 (setting forth additional U.S.-Mexican treaty obligations); Convention for the Rectification of the Rio Grande in the El Paso-Juarez Valley, Feb. 1, 1933, U.S.-Mex., 48 Stat. 1621 (same).

57. *See* 1944 Treaty, *supra* note 50 (setting forth principal U.S.-Mexican obligations concerning transboundary waters); Anne M. Morgan, Note, *Transboundary Liability Goes With the Flow?* Gasser v. United States*:* *The Use and Misuse of a Treaty*, 30 NAT. RESOURCES J. 955, 964-68 (1990) (arguing that United States can rely on Article 10 of 1944 Treaty, which limits U.S. obligations to fixed allotment of water to avoid liability to Mexico from harm caused by dams in United States).

58. August 30, 1973, U.S.-Mex., 24 U.S.T. 1968 [hereinafter 1973 Agreement].

59. *Id.* § 5, 24 U.S.T. at 1975. The limit is 160,000 acre-feet per year. *Id.*

60. *E.g.* 1944 Treaty, *supra* note 50, art. 10, 59 Stat. 1237-38 (setting forth principal U.S.-Mexican obligations with respect to Colorado River); 1973 Agreement, *supra* note 58, § 2, 24 U.S.T. at 1974 (reinforcing obligations under 1944 Treaty).

61. Agreement Between the United States of America and the United Mexican States on Cooperation for the Protection and Improvement of the Environment in the Border Area, Aug. 14, 1983, U.S.-Mex., art. 4, 22 I.L.M. 1025, 1027 (1983) [hereinafter 1983 Agreement]. Article 27 of the Mexican Constitution of 1917, however, prohibits foreign involvement, ownership, and investment in the border area. CONST. art. 27 (Mex.). Mexico historically has maintained a protectionist and isola-

1983 Agreement is to improve environmental conditions to "the fullest extent practicable."[62] Mexico has sought the cooperation of the United States to improve standards for water resources through the 1983 Agreement, under which the United States must provide Mexico with quality water.[63]

2. Treaties Concerning U.S.-Canadian Transboundary Waters

Treaties between the United States and Canada, analogous to the treaties between the United States and Mexico, complement customary international law in defining the obligations concerning preservation and pollution abatement issues involving U.S.-Canadian transboundary water resources.[64] The Boundary Waters Treaty of 1909 established the primary obligations between the United States and Canada.[65] This bilateral treaty created the six-member International Joint Committee (the "IJC"), consisting of three members from each country.[66] The IJC plays a central role in managing the transboundary waters, especially the Great Lakes basin.[67] Under Article VIII of the Boundary Waters Treaty of 1909, the IJC has primary authority to manage issues arising under this treaty.[68] While Article IV prohibits pollution of transboundary waters, the IJC has no binding authority with respect to pollution and can only make recommendations to

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tionist position that may impede cooperation with respect to environmental regulation at the border. Feeley & Knier, *supra* note 3, at 259-61.

62. 1983 Agreement, *supra* note 61, art. 2, 22 I.L.M. at 1026.

63. *Id.*; *see* Morgan, *supra* note 57, at 964-68 (analyzing failed attempt by Mexico to seek remedy since 1983 Agreement due to 1944 Treaty).

64. *E.g.*, Boundary Waters Treaty, Jan. 11, 1909, U.S.-U.K., 36 Stat. 2448 [hereinafter Boundary Waters Treaty of 1909].

65. *Id.*; *see* Gallob, *supra* note 15, at 112-16 (discussing Boundary Waters Treaty of 1909); Cattanach & O'Conner, *supra* note 21, at 470-71 (same).

66. Boundary Waters Treaty of 1909, *supra* note 64, art. VII, 36 Stat. at 2451.

67. Gallob, *supra* note 15, at 112-13. Article II of the Boundary Waters Treaty of 1909 provides that

> any interference with or diversion from their natural channel of such waters on either side of the boundary, resulting in any injury on the other side of the boundary, shall give rise to the same rights and entitle the injured parties to the same legal remedies as if such injury took place in the country where such diversion or interference occurs . . . .

Boundary Waters Treaty of 1909, *supra* note 64, art. II, 36 Stat. at 2449.

68. Boundary Waters Treaty of 1909, *supra* note 64, art. VIII, 36 Stat. at 2451-52.

the governments.[69] Read expansively, however, Article IV may provide a basis for IJC authority to regulate pollution of transboundary water resources.[70]

The United States and Canada have also enacted the Great Lakes Water Quality Agreements of 1972 and 1978.[71] The primary purpose of the Great Lakes Water Quality Agreement of 1972 is the control of the balance between animal and plant life in the waters through the management of phosphorus levels.[72] The primary purpose of the Great Lakes Water Quality Agreement of 1978 is the regulation of the Great Lakes region using broad policies analogous to those of the Boundary Waters Treaty of 1909.[73] In addition, the 1983 Agreement Amending the Agreement on Great Lakes Water Quality enhanced the authority of the IJC to address phosphorus reduction in the Great Lakes, but failed to provide enforcement powers.[74]

C. *National Environmental Legislation*

National legislation plays an important role in preserving transboundary water resources and preventing their pollution.[75] Mexico, Canada, and the United States are federations, and the federal governments primarily regulate transboundary

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69. *Id.* art. IV, 36 Stat. at 2450; *see* Gregory Wetstone & Armin Rosencranz, *Transboundary Air Pollution: The Search for an International Response*, 8 HARV. ENVTL. L. REV. 89, 134 (1984) (discussing IJC authority); Gallob, *supra* note 15, at 112-19 (discussing successes and failures of IJC).

70. Boundary Waters Treaty of 1909, *supra* note 64, art. VI, 36 Stat. at 2450. Article IV provides that "[i]t is further agreed that the waters herein defined as boundary waters and waters flowing across the boundary shall not be polluted on either side to the injury of health or property on the other." *Id.*

71. Great Lakes Water Quality Agreement, Apr. 15, 1972, U.S.-Can., T.I.A.S. No. 7312; Great Lakes Water Quality Agreement, Nov. 22, 1978, U.S.-Can., T.I.A.S. No. 9257.

72. Great Lakes Water Quality Agreement, Apr. 15, 1972, U.S.-Can., T.I.A.S. No. 7312; *see* Gallob, *supra* note 15, at 116-19 (discussing recent environmental conditions, including concentrations of phosphorus).

73. Great Lakes Water Quality Agreement, Nov. 22, 1978, U.S.-Can., T.I.A.S. No. 9257; *see* PAUL R. MULDOON, CROSS-BORDER LITIGATION, ENVIRONMENTAL RIGHTS IN THE GREAT LAKES ECOSYSTEM 116 (1986) (discussing impact of agreement).

74. Agreement Amending the Agreement on Great Lakes Water Quality, Oct. 16, 1983, U.S.-Can., T.I.A.S. No. 10798.

75. *Developments*, *supra* note 3, at 1489 (including national laws as relevant in regulating environmental pollution on international level).

water pollution.[76] In the international arena, the provincial laws of Canada play a greater role than state laws of Mexico and the United States because Canada generally gives priority to provincial rather than federal legislation.[77]

1. Mexican Laws

In addition to bilateral treaties, Mexico maintains federal legislation to address environmental issues.[78] As a result of inadequate governmental policies addressing environmental problems, the Mexican government passed the General Law of Ecological Equilibrium and Environmental Protection (the "GLEEEP") in 1988.[79] The GLEEEP provides for broad protection of water resources, including their preservation and preventing pollution of water resources.[80] The GLEEEP places primary responsibility for applying environmental legislation with the Secretary of the Ministry for Urban Development and Ecology ("SEDUE").[81] The GLEEEP, however, relies on the coordinate responsibilities of other government agencies for environmental protection.[82] Consequently, these conflicting jurisdictions and the lack of economic and technical resources for implementation of legislation have impeded environmental protection.[83] Furthermore, Mexican law and policy has not addressed the issue of environmental problems affecting regions of the United States.[84]

In addition to national legislation, the 1983 amendments to the Mexican Constitution guarantee the right of every citi-

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76. *See* Jeffrey Bates et al., *Doing Business Under Canadian Environmental Law*, 11 Nw. J. INT'L L. & BUS. 1, 3-6 (1990) [hereinafter Bates] (discussing relationship between federal and local legislation of Canada).

77. *See id.* at 5.

78. *See generally* Charles T. DuMars & Salvador Beltran Del Rio M., *A Survey of the Air and Water Quality Laws of Mexico*, 28 NAT. RESOURCES J. 787 (1988) [hereinafter DuMars & Del Rio] (discussing Mexican environmental legislation and constitutional provisions).

79. Ley General del Equilibrio Ecológico y la Protección al Ambiente, Diario Oficial de la Federación, Jan. 28, 1988 [hereinafter GLEEEP], *reprinted in* 4 INTER-AM. LEGAL MATERIALS 663 (1988); *see* DuMars & Del Rio, *supra* note 78, at 812-13 (discussing important provisions of GLEEEP that regulate environment).

80. GLEEEP, *supra* note 79, 4 INTER-AM. LEGAL MATERIALS at 663.

81. *See Id.* ch. 3, 4 INTER-AM. LEGAL MATERIALS at 667-70 (outlining duties of SEDUE).

82. *Id.* ch. 2, 4 INTER-AM. LEGAL MATERIALS at 665-67.

83. DuMars & Del Rio, *supra* note 78, at 801-04.

84. *Id.*

zen to the protection of health.[85] Furthermore, Article 73 of the Mexican Constitution gives the federal government the power to protect public health by protecting the environment.[86] These governmental initiatives set only broad policy statements and do not provide practical implementation and enforcement guidelines.[87]

2. Canadian Laws

Like Mexico, Canada maintains domestic legislation to regulate preservation and pollution abatement issues concerning transboundary water resources.[88] Canada consists of ten provinces and two territories.[89] Unlike the United States and Mexico, the ten provincial governments of Canada have broader legislative power than the federal government, especially in environmental regulation.[90] The federal government indirectly regulates the environment through its power to oversee navigation, fisheries, management of federal lands, and relations with other nations.[91] The federal government also regulates transboundary environmental issues.[92]

The Department of the Environment is the lead federal agency responsible for the implementation of environmental legislation in Canada.[93] Most federal legislation is policy-oriented and articulates broad policy goals.[94] The Fisheries Act addresses issues concerning water resources.[95] In 1986, Canada repealed and reincorporated most of its past environmental legislation into the Canadian Environmental Protection Act

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85. CONST. art. 4 (Mex.); *see* DuMars & Del Rio, *supra* note 78, at 793 (discussing constitutional provision relating to environment).

86. CONST. art. 73, XXIX-G (Mex.).

87. *See* DuMars & Del Rio, *supra* note 78, at 810.

88. *See* Bates, *supra* note 76, at 3-6 (discussing relationship of federal and local legislation of United States and Canada).

89. *Id.* at 3.

90. *Id.* at 4.

91. David Hunter, *The Comparative Effects of Environmental Legislation in a North American Free Trade Area*, 12 CAN.-U.S. L.J. 271, 278 (1987).

92. *Id.*

93. Bates, *supra* note 76, at 6.

94. *Id.*

95. Fisheries Act, R.S.C., ch. F-14 (1970) (Can.). Section 33(2) of the Fisheries Act prohibits pollution of waters with a "deleterious substance." *Id.* § 33(2).

(the "CEPA").[96] The CEPA, however, has had no impact on the Fisheries Act,[97] which continues to regulate water pollution.[98]

Because the CEPA is not comprehensive,[99] provincial legislation maintains concurrent jurisdiction to fill the void left by the CEPA and the Fisheries Act.[100] The most important provincial legislation is that of Ontario, the largest trading partner of the United States.[101] The Ministry of the Environment is the lead Ontario agency.[102] It oversees the Ontario Environmental Protection Act,[103] which broadly regulates all environmental resources, and the Ontario Water Resources Act, which regulates all ground and surface water resources.[104] The Ontario Water Resources Act prohibits the discharge of anything that impairs the quality of ground or surface water resources.[105] These provincial laws work concurrently with federal legislation to address environmental protection.[106] Canadian law and policy fail to address environmental conditions affecting the United States adequately.[107]

3. U.S. Laws

The United States also maintains strong domestic legislation to regulate the environment.[108] The Clean Water Act au-

96. R.S.C., ch. 22 (1988) (Can.); *see* Bates, *supra* note 76, at 6-10 (discussing provisions and role of CEPA).

97. Fisheries Act, R.S.C., ch. F-14 (1970) (Can.).

98. *Id.*; *see* Hunter, *supra* note 91, at 279 (discussing impact of Fisheries Act on environmental regulation).

99. Cattanach & O'Conner, *supra* note 21, at 466.

100. Fisheries Act, R.S.C., ch. F-14 (1970) (Can.); *see* Hunter, *supra* note 91, at 278 (discussing relationship between Canadian federal and local legislation).

101. Ontario Environmental Protection Act, R.S.O., ch. 140 (1980) (Can.); *see* Bates, *supra* note 76, at 3 (discussing significance of legislation of Ontario).

102. Bates, *supra* note 76, at 12 n.48.

103. R.S.O., ch. 140 (1980) (Can.); Cattanach & O'Conner, *supra* note 21, at 467-68.

104. Ontario Water Resources Act, R.S.O., ch. 361 (1980) (Can.); Cattanach & O'Conner, *supra* note 21, at 468.

105. Ontario Water Resources Act, R.S.O., ch. 361, § 16 (1980) (Can.); Cattanach & O'Conner, *supra* note 21, at 468.

106. *See* Gallob, *supra* note 15, at 145-46 (discussing court procedure concerning choice of law questions).

107. *See id.* at 126-33 (discussing inability of courts to resolve analogous legislation of Canada and United States concerning transboundary pollution).

108. *See Developments*, *supra* note 3, at 1610 (discussing strength of U.S. legislation and importance in international environmental regulation).

thorizes the Environmental Protection Agency (the "EPA") to promulgate specific guidelines for national water quality standards.[109] With respect to international water pollution, section 310(a) of the CWA gives U.S. courts statutory authority through the EPA to award damages to non-U.S. nations injured due to pollution originating in the United States.[110] Nothing in this statute, however, in any way affects the provisions of the 1944 Treaty between Mexico and the United States.[111] The IBWC still resolves most issues under treaties concerning transboundary waters of the United States and Mexico.[112]

Although no claims have been brought under section 310(a) of the CWA, judicial application of the analogous statute for international air pollution, section 115 of the Clean Air Act (the "CAA"),[113] demonstrates the current status of inter-

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109. 33 U.S.C. §§ 1311, 1314 (1988).

110. *Id.* § 1320(a). Regarding international pollution abatement, the CWA provides that

> [w]henever the Administrator, upon receipts of reports, surveys, or studies from any duly constituted international agency, has reason to believe that pollution is occurring which endangers the health or welfare of persons in a foreign country, and the Secretary of State requests him to abate such pollution, he shall give formal notification thereof to the State water pollution control agency of the State or States in which such discharge or discharges originate and to the appropriate international agency, if any. He shall also promptly call such a hearing . . . if such foreign country has given the United States essentially the same rights with respect to the prevention and control of pollution occurring in that country as is given that country by this subsection.

Id.

111. *Id.*

112. *See Developments*, *supra* note 3, at 1559-60 (discussing important role of international agencies).

113. Clean Air Act § 115, 42 U.S.C § 7415 (1988). The relevant part of the statute provides

> (a) Whenever the Administrator, upon receipt of reports, surveys or studies from any duly constituted international agency has reason to believe that any air pollutant or pollutants emitted in the United States cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare in a foreign country . . . the Administrator shall give formal notification thereof to the Governor of the State in which such emissions originate.
>
> (b) The notice of the Administrator shall be deemed to be a finding under section 7410(a)(2)(H)(ii) of this title which requires a plan revision . . . .
>
> (c) This section shall apply only to a foreign country which the Administrator determines has given the United States essentially the same rights with

national pollution abatement.[114] During negotiations of the Canada-United States Free Trade Agreement,[115] the effect of acid rain on the environment was a primary concern.[116] Acid rain is suspected of contaminating water resources and endangering marine and human life.[117] Concerning acid rain originating in the United States, the Court of Appeals for the District of Columbia in *Her Majesty the Queen ex rel Ontario v. United States Environmental Protection Agency* held that, absent clear congressional intent to the contrary, a U.S. court must defer to EPA discretion unless there is a clear abuse of agency discretion.[118] A finding that pollution is emitted from the United States is an "endangerment finding" under section 115(a) of the CAA.[119] A finding that the non-U.S. country

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respect to the prevention or control of air pollution occurring in that country as is given that country by this section.

Id.; *see* Oil Pollution Act, 33 U.S.C. § 2707 (1988) (setting forth analogous statute for foreign claims resulting from oil pollution originating in United States).

114. *See* Her Majesty the Queen *ex rel* Ontario v. United States Environmental Protection Agency, 912 F.2d 1525 (D.C. Cir. 1990) (holding that EPA delay in making "endangerment finding" and "reciprocity finding" was reasonable).

115. CFTA, *supra* note 14.

116. Brilliant, *supra* note 2, at 47. Acid rain is believed to result from sulphur and nitrogen oxide emissions that convert to acids, combine with water vapors, and precipitate later. *Queen v. EPA*, 912 F.2d at 1528. The Economic Commission for Europe Convention on Long-Range Transboundary Air Pollution demonstrates the importance of acid rain. Convention on Long-Range Transboundary Air Pollution, Nov. 13, 1979, T.I.A.S. No. 10541, 18 I.L.M. 1442. The Memorandum of Intent Between the United States and Canada also concerns transboundary air pollution and specifically addresses acid rain. Memorandum of Intent Between the United States and Canada Concerning Transboundary Air Pollution, Aug. 5, 1980, 32 U.S.T. 2521.

117. *Developments*, *supra* note 3, at 1488; *Queen v. EPA*, 912 F.2d at 1528.

118. *Queen v. EPA*, 912 F.2d at 1528. In *Queen v. EPA*, EPA Administrator Douglas M. Costle sent two letters, one to U.S. Secretary of State Edmund Muskie and one to U.S. Senator George Mitchell (D-Maine), expressly specifying an "endangerment finding" and a "reciprocity finding." *Id.* at 1528-29. Subsequent to these letters, Don R. Clay, acting Administrator for Air and Radiation, wrote a letter stating that they did not have sufficient information to undertake the regulatory program required by section 115. *Id.* at 1530. The court allowed the EPA to rely on these letters as final agency action. *Id.* at 1531. The court relied upon the reasoning from the trial court that an "endangerment finding" and a "reciprocity finding" require a case-by-case analysis. *Id.* The court also concluded that the EPA's interpretation of the letters was permissible, there was no abuse of discretion, and a 10-year wait for agency action was not an undue delay. *Id.* at 1535.

119. *Id.* at 1527. Furthermore, under section 115(b) of the CAA, the need for revision of a State Implementation Plan ("SIP") is the SIP revision. *Id.* at 1528; *see* 33 U.S.C. § 1320(a) (1988) (setting forth similar requirement for "endangerment finding" in CWA).

grants the United States similar rights as set forth in this section is a "reciprocity finding" under section 115(c) of the CAA.[120] To this date, neither Canada or the United States has made an "endangerment finding" or a "reciprocity finding."[121] *Queen v. EPA* demonstrates that courts are reluctant to compel an "endangerment finding" and a "reciprocity finding" by the EPA, and that the EPA is extremely slow in making such determinations on its own.[122]

Under section 310(a) of the CWA, non-U.S. nations injured by pollution created in the United States can recover damages in U.S. courts.[123] The CWA requires that the EPA make an "endangerment finding" that pollution originating in the United States caused damage to a non-U.S. nation.[124] It also requires that the EPA make a "reciprocity finding" that the non-U.S. nation grants the United States the same rights to sue for damages caused by pollution originating in that non-U.S. nation.[125]

In addition, there are obstacles imposed on lawsuits brought against non-U.S. nations in U.S. courts, primarily under the Foreign Sovereign Immunities Act (the "FSIA") which grants immunity to non-U.S. nations.[126] For example, the FSIA barred jurisdiction to recover damages from oil pollution in Texas that resulted from a tortious act on Mexican territory.[127] In order to deny immunity to the non-U.S. nation,

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120. *Queen v. EPA*, 912 F.2d at 1527; *see* 33 U.S.C. § 1320(a) (1988) (setting forth similar requirement for "reciprocity finding" in CWA).

121. *See Queen v. EPA*, 912 F.2d at 1535 (representing current deference of courts to EPA's decision not to make "endangerment finding" or "reciprocity finding").

122. *See id.*

123. 33 U.S.C. § 1320(a) (1988).

124. *Id.*

125. *Id.*

126. Federal Sovereign Immunities Act of 1976, 28 U.S.C. §§ 1602-1611 (1988) [hereinafter FSIA]. The United States is a strong advocate of territorial sovereignty. *See* Crane, *supra* note 9, at 316 n.124 (discussing effect of FSIA). The FSIA specifies narrow exceptions to the general rule that a non-U.S. nation cannot be tried in a U.S. court. 28 U.S.C. §§ 1602-1611 (1988). The non-U.S. nation may still avoid a U.S. court because the act of state doctrine holds that the United States should not judge the acts of another state's government under the constitution of that state. *Id.*; *see e.g.*, Banco Nacional de Cuba v. Sabbatino, 376 U.S. 398 (1964) (establishing act of state doctrine). *But see* Foreign Assistance Act, 22 U.S.C. § 2370 (1988) (establishing limited court jurisdiction to review acts of another state's government).

127. *In re* Sedco, 543 F. Supp. 561 (S.D. Tex. 1982).

it is necessary for both the tort and the injury to occur in the United States.[128]

Likewise, the Court of Appeals for the District of Columbia in *Public Citizen v. Office of the United States Trade Representatives*[129] held that environmentalists could not sue to require an environmental impact statement on the effects of NAFTA since it is not "final agency action."[130] The U.S National Environmental Policy Act ("NEPA") requires an environmental impact statement on any governmental project that significantly impacts the environment.[131] In addition, an environmental impact statement must be prepared for government projects that significantly impact the environment outside the United States.[132] Legal precedent, however, gives private citizens and environmental groups little recourse to contest direct or indirect injuries or threats of injuries from changes resulting from NAFTA on the basis of their environmental concerns.[133]

Accordingly, international water pollution abatement has proved to be ineffective due to the obstacles of both procedural and substantive law, which often provide immunity to a non-U.S. nation.[134] Again, the IBWC and the IJC retain the most authority to resolve disputes between the United States,

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128. *See* 28 U.S.C. §§ 1602-1611 (1988). Immunity is denied for non-commercial torts "occurring in the United States and caused by the tortious act or omission." *Id.* § 1605.

129. 970 F.2d 916 (D.C. Cir. 1992).

130. *Id.*

131. 42 U.S.C. §§ 4321-4370 (1988) (requiring environmental assessment of social, economic, and environmental concerns for federal actions significantly affecting environment).

132. Exec. Order No. 12,114, 3 C.F.R. 356 (1979) (requiring environmental impact statement for all "major Federal actions significantly affecting the environment" outside territorial control of United States).

133. *E.g.*, *Public Citizen*, 970 F.2d at 918. Plaintiffs have also experienced difficulty in bringing non-U.S. defendants into U.S. courts and subsequently enforcing judgments. *See, e.g.*, *Lujan v. Defenders of Wildlife*, 112 S. Ct. 2130 (1992) (holding that the plaintiffs had no standing to sue under Endangered Species Act without showing of injury). In addition, in the case of harm to shared resources, no individual nation has standing to sue the nation where pollution originates. *Developments*, *supra* note 3, at 1503; *see* South West Africa (Eth. v. S. Af.; Liber. v. S. Af.) (Second Phase), 1966 I.C.J. 4, 47 (Judgment of July 18) (holding that no nation had standing to place responsibility on South Africa for violations of its obligations as United Nations Mandatory).

134. *See* 28 U.S.C. §§ 1602-1611 (1988) (setting forth provisions of FSIA); Crane, *supra* note 9, at 315-16 (discussing inadequacies of international water pollution abatement in light of principle of territorial sovereignty).

Mexico, and Canada concerning pollution and preservation of transboundary water resources.[135] The EPA and U.S. citizens have made few advances through U.S. courts in the protection of transboundary pollution.[136]

II. *PROVISIONS AFFECTING THE ENVIRONMENT UNDER EVOLVING INTERNATIONAL LAW, CFTA, NAFTA, AND THE INTEGRATED ENVIRONMENTAL PLAN*

Currently, legal ideas and proposals are developing that may affect the cleanup and future preservation of transboundary water resources.[137] The proposed IEP directly addresses environmental conditions at the U.S.-Mexican border.[138] The proposed NAFTA and the CFTA indirectly address transboundary pollution through agreements directly regulating trade.[139]

A. *Evolving International Law*

While developing principles of international law appear more sensitive to the effects of diminishing quantities and qualities of natural resources, existing international law fails to provide effective substantive or procedural guidelines to regulate environmental issues.[140] In Helsinki in 1966, the International Law Association proposed the establishment of an obligation among nations to guarantee a reasonable and equitable share of transboundary natural resources to neighboring nations.[141] The International Law Commission of the United Nations asked thirty-four experts to codify the doctrine of state

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135. *See* Gallob, *supra* note 15, at 112-16 (commenting on authority of IJC and U.S.-Canadian treaties); Feeley & Knier, *supra* note 3, at 282-84 (commenting on IBWC authority and U.S.-Mexican treaties).

136. *See* 33 U.S.C. §§ 1320(a), 1365(a) (1988) (setting forth international water pollution abatement and private citizen suit statutes).

137. *See Developments*, *supra* note 3, at 1498-1511 (discussing evolving principles of international law that have not been adopted by nations as customary international law).

138. IEP, *supra* note 18.

139. *See* NAFTA, *supra* note 1, pmbl. (listing priorities of NAFTA); CFTA, *supra* note 14, ch. 6, 27 I.L.M. at 315-16 (setting forth technical standards on goods that only indirectly affect environment).

140. *See Developments*, *supra* note 3, at 1498-1511 (discussing evolving principles of international law that have not been adopted by nations as customary international law).

141. INTERNATIONAL LAW ASSOCIATION, HELSINKI RULES ON THE USES OF THE

responsibility and international liability.[142] The U.N. Water Conference in 1977 at Mar Del Plata, Mexico recommended cooperation between nations to protect and develop shared water resources.[143] In addition, Principle 21 of the Stockholm Conference in 1972 emphasized the need for international obligations between nations to protect transboundary resources.[144] Principle 22, however, required only that a nation "co-operate" in developing an international liability scheme

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WATERS OF INTERNATIONAL WATERS art. V (1966) [hereinafter HELSINKI RULES]. To assess environmental damage, the *Helsinki Rules* provide:

> (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.

142. *Developments*, *supra* note 3, at 1498. A codification of the theory of state responsibility would require a strict governmental scrutiny of private economic activities and make economic development more expensive. *Id.* at 1507-08. Such a codification also implies a homogeneity of capabilities among all nations. *Id.* The study by the International Law Commission to codify the theory of state responsibility overlooks the varied economic and technical resources of each country. *Id.*

143. *The United Nations Water Conference, Report of the Conference*, U.N. Doc. E/CONF.70/29, U.N. Sales No. E.77IIA.12 (1977).

144. *Report Of The United Nations Conference on the Human Environment*, Stockholm, June 5-16, 1972, *reprinted in* 11 I.L.M. 1416, 1420, princ. 21 (1972) (acknowledging duty of care to other states and state's territorial sovereignty).

for transboundary water.[145] Ten years later, the 1982 Law of the Sea Convention reiterated this duty.[146] Finally, the *Restatement (Third) of the Foreign Relations Law of the United States* requires that a nation regulate its own conduct to protect resources that are shared by other nations.[147]

These developing theories, however, differ vastly from the customary practice of territorial sovereignty.[148] The only cases on transboundary pollution decided by the International Court of Justice were the *Nuclear Tests* cases in which the International Court of Justice issued only interim orders directing France to refrain from nuclear testing that might harm Australia or New Zealand.[149] The International Court of Justice later noted that pledges from the French government to refrain from such nuclear testing rendered moot the claims of Australia and New Zealand.[150]

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145. *Id.* princ. 22; *see Development*, *supra* note 3, at 1508 (discussing principle of cooperation among nations with respect to transboundary pollution).

146. Law of the Sea Convention, *supra* note 26, art. 235, 21 I.L.M. at 1315.

147. *See* RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS LAW OF THE UNITED STATES § 601(1) (1987). Relevant sections provide that

> (1) a state is obligated to take such measures as may be necessary, to the extent practicable under the circumstances, to ensure that activities within its jurisdiction or control
>
> (a) conform to generally accepted international rules and standards for the prevention, reduction, and control of injury to the environment of another state or of areas beyond the limits of national jurisdiction; and
>
> (b) are conducted so as not to cause significant injury to the environment of another state or of areas beyond the limits of national jurisdiction.
>
> (2) A state is responsible to all other states
>
> (a) for any violation of its obligations under Subsection (1)(a), and
>
> (b) for any significant injury, resulting from such violation, to the environment of areas beyond the limits of national jurisdiction.
>
> (3) A state is responsible for any significant injury, resulting from a violation of its obligations under Subsection (1), to the environment of another state or to its property, or to persons or property within that state's territory or under its jurisdiction or control.

Id.

148. *See* Crane, *supra* note 9, at 305-08 (discussing competing ideologies and resulting reliance on strict territorial sovereignty).

149. Nuclear Tests (Austl. v. Fr.), 1973 I.C.J. 99, 106 (Interim Order of June 22); Nuclear Tests (N.Z. v. Fr.), 1973 I.C.J. 135, 142 (Interim Order of June 22); *see Developments*, *supra* note 3, at 1499 (citing *Nuclear Tests* as only dispute heard by International Court of Justice on international liability for transboundary pollution).

150. Nuclear Tests (Austl. v. Fr.), 1974 I.C.J. 253, 267-272 (Judgment of Dec. 20); (N.Z. v. Fr.), 1974 I.C.J. 457, 472-478 (Judgment of Dec. 20); *see Developments*, *supra* note 3, at 1500 (noting significance of *Nuclear Tests* cases).

Except for *Trail Smelter*,[151] there are few notable international arbitration cases that address transboundary environmental pollution.[152] The Arbitral Tribunal in *Lac Lanoux*[153] held that the French diversion of water from a French lake that affected Spanish use of water did not violate treaty obligations between France and Spain.[154] Also, the Arbitral Tribunal in *Gut Dam Claims*[155] held that Canada was liable to the United States for damage from a dam constructed under an international agreement.[156] These cases, however, have little precedential value because they were decided on narrow grounds.[157]

B. *Provisions of CFTA and NAFTA That Affect the Environment*

1. CFTA

International free trade agreements currently address the environmental interests of the United States and Canada.[158] On January 2, 1988, Prime Minister Brian Mulroney of Canada and President Ronald Reagan of the United States executed the Canada-United States Free Trade Agreement.[159] It became effective on January 1, 1989.[160] Its primary goal is the elimination of trade barriers in the form of tariffs and quotas.[161] The CFTA consists of eight sections divided into twenty-one chapters.[162] No chapter, however, exclusively ad-

151. Trail Smelter (U.S. v. Can.), 3 R.I.A.A. 1906, 1938 (1949).

152. *Developments*, *supra* note 3, at 1499 (discussing few arbitration cases relevant to transboundary pollution).

153. Lac Lanoux (Spain v. Fr.), 12 R.I.A.A. 281 (1957); *see Developments*, *supra* note 3, at 1500 (noting significance of *Lac Lanoux* case).

154. *Lac Lanoux*, 12 R.I.A.A. at 317.

155. Canada-United States Settlement of Gut Dam Claims (Can. v. U.S.), Sept. 27, 1968 [hereinafter *Gut Dam Claims*], *reprinted in* 8 I.L.M. 118 (1969); *see Developments*, *supra* note 3, at 1500 (discussing significance of *Gut Dam Claims*).

156. *Gut Dam Claims*, 8 I.L.M. at 121.

157. *Developments*, *supra* note 3, at 1500. Furthermore, while international law traditionally espouses a liability scheme based on negligence, as suggested by *Trail Smelter* and *Lac Lanoux*, commentators have recently advocated a strict liability scheme, as echoed by Principle 21 of the Stockholm Conference, to avoid subjectivity. *Id.* at 1509-11. A strict liability scheme, however, also proves to be subjective because it inhibits economic growth in developing nations. *Id.*

158. Brilliant, *supra* note 2, at 49.

159. Bucholtz, *supra* note 15, at 296-97.

160. *Id.* at 297.

161. *Id.* at 297-98.

162. CFTA, *supra* note 14.

dresses environmental issues.[163] Only Chapter Six of the CFTA contains technical standards that affect the environment.[164] These standards, however, only apply if they serve a legitimate domestic interest.[165] The CFTA contains no other references to environmental protection.[166]

2. NAFTA

NAFTA is a proposed free trade agreement between the United States, Mexico, and Canada.[167] The primary goal of NAFTA is to promote economic growth through expanded trade and investment by reducing barriers to the flow of goods and investment among the three signatory countries.[168] If successful, NAFTA will combine more than 360 million people into the world's largest market with a total output of over US$6 trillion.[169] NAFTA also proposes to foster free trade in a manner consistent with environmental protection and conservation.[170] With respect to the environment, NAFTA promises to bolster the Mexican economy and create more economic and technical resources for Mexico to use in decreasing pollution levels.[171] NAFTA, however, fails to directly address environmental preservation or pollution abatement issues concerning transboundary natural resources.[172]

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163. *Id.*

164. *Id.* ch. 6, 27 I.L.M. at 315-16 (setting forth technical standards for agricultural and other goods).

165. *Id.*

166. Cattanach & O'Conner, *supra* note 21, at 463. The CFTA does contain specific dispute resolution provision but excludes reference to environmental or technical issues. Bucholtz, *supra* note 9, at 300.

167. NAFTA, *supra* note 1; *see* CANADIAN REVIEW, *supra* note 6 (discussing environmental provisions of NAFTA and advocating further negotiations and agreements before adoption of NAFTA).

168. NAFTA, *supra* note 1, pmbl.

169. DEPT. OF STATE DISPATCH, *supra* note 10, at 110.

170. NAFTA, *supra* note 1, pmbl.

171. Brilliant, *supra* note 2, at 49; Feeley & Knier, *supra* note 3, at 285.

172. DEPT. OF STATE DISPATCH, *supra* note 10, at 110. U.S. goals include

(1) elimination of tariff barriers either immediately or over a period of time;

(2) elimination of non-tariff barriers on goods and services, such as import licenses and quotas;

(3) establishment of open investment practices; and

(4) adequate and effective protection and enforcement of intellectual property rights.

Id. NAFTA addresses six major areas: market access, trade rules, services, invest-

NAFTA sets forth four major provisions directly affecting the environment.[173] First, the United States would maintain existing health, safety, and environmental standards by continuing to prohibit the entry of goods that do not conform to environmental standards.[174] Second, NAFTA would allow the parties, including states and cities, to enact even tougher standards than currently exist.[175] Third, NAFTA would encourage the parties to make their standards compatible in order to strengthen environmental and health protection, but not to lower their standards.[176] Finally, NAFTA would preserve the right to enforce obligations under other international treaties, including limits on trade in products that threaten endangered species or the ozone layer.[177]

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ment, intellectual property rights, and dispute settlement. *Id.*; *see* Feeley & Knier, *supra* 3, at 267 (noting NAFTA's omission of environmental provisions).

173. *See* NAFTA, *supra* note 1, Free Trade Negotiations with Mexico—Environmental Matters (discussing major provisions of NAFTA that affect environment).

174. *Id.* art. 904(1). Each nation maintains the right to "adopt, maintain, and apply standards-related measures" with respect to the environment. *Id.* In addition, each nation has the right to "prohibit the importation of a good, if it fails to comply with applicable measures or complete its approval procedures. *Id.*

175. *Id.* art. 904(2). A nation can "in pursuing its legitimate objectives of safety or the protection of human, animal or plant life or health, the environment or consumers, establish the level of protection it considers appropriate." *Id.* Furthermore, Article 905 requires that a party use international standards as the "basis" for setting its own standards and that a party's standards complies with international law. *Id.* art. 905. Finally, Article 906(1) would require that the parties "work jointly to enhance the level of safety and of protection of human, animal and plant life and health, the environment and consumers." *Id.* art. 906(1).

176. *Id.* art. 906. Many express a fear that harmonization, or maintaining equivalent standards among the three nations, would lead to the adoption of the lowest common denominator or the average level of protection. CANADIAN REVIEW, *supra* note 6, at 18-19. This is called "downward harmonization." *Id.* at 18. To protect against "downward harmonization," NAFTA requires Mexico, Canada, and the United States to work jointly and provide technical assistance to enhance standards-related measures. *See* NAFTA, *supra* note 1, art. 913 (providing for technical assistance).

177. NAFTA, *supra* note 1, art. 104. In the event of inconsistencies between NAFTA and other agreements listed in Article 104 and Annex 104.1, prior agreements "shall prevail to the extent of the inconsistency." *Id.* These agreements include (1) Basel Convention on the Control and Transboundary Movements of Hazardous Wastes and Their Disposal, Mar. 22, 1989, 28 I.L.M. 649 (1989); (2) Montreal Protocol on Substances That Deplete the Ozone Layer, Sept. 16, 1987, 26 I.L.M. 1541 (1989); and (3) Convention on International Trade in Endangered Species of Wild Flora and Fauna, March 3, 1973, 27 U.S.T. 1087, 993 U.N.T.S. 243. *Id.* Article 104 does not contain a similar guarantee for the 1983 Agreement or the 1944 Treaty to prevail over NAFTA in the case of inconsistencies. NAFTA, *supra* note 1, art. 104.

Other provisions of NAFTA indirectly address environmental concerns.[178] In response to concerns that new investments in Mexico may exacerbate industrial pollution conditions, the proposed agreement promises that environmental protection will be further enhanced by its investment guidelines.[179] Industries in Mexico that significantly pollute the environment under the auspices of U.S. governmental control are referred to as the *maquiladoras*.[180] NAFTA would allow the parties to require environmental impact statements on any new investments, such as the *maquiladoras*.[181] Accordingly, the parties would be able to impose stringent standards on new investments, as long as the standards apply equally to domestic and foreign investors.[182]

Also relevant to the issue of environmental standards at the border is the method of dispute resolution, its efficiency, and its effectiveness.[183] NAFTA would provide a special dispute settlement procedure for trade issues arising under the agreement and causing environmental problems.[184] Special panels would be able to employ scientific experts to help re-

178. *See* NAFTA, *supra* note 1, Free Trade Negotiations with Mexico—Environmental Matters (discussing provisions of NAFTA that affect environment).

179. *Id.*

180. *See* IEP, *supra* note 18, at III-11. *Maquiladoras* refers to processing and assembly plants at the border area. *Id.* These industries are based outside of Mexico and bring capital equipment, components, and raw materials into Mexico without paying import duties. *Id.* Hazardous waste generated by these industries is either treated locally under Mexican law or returned to the country of origin. *Id.* Finished products from the *maquiladoras* are then exported to other countries subject only to a duty on the value added in Mexico. *Id.* Although hazardous wastes should be treated in such a manner, statistics demonstrate Mexico's low compliance with these rules. Victor M. Castillo & Diane Perry, *Environmental Implications of the Free Trade Agreement in the Maquiladora Industry*, TRANSBOUNDARY RESOURCES REP., Summer 1992, at 3.

181. *See* NAFTA, *supra* note 1, art. 904.

182. *Id.* art. 904(3); *see* IEP, *supra* note 18, at III-11. Since 1985, Mexican industrialization policies have encouraged foreign subsidiaries to relocate on the Mexican side of the border to promote manufactured exports. *Id.* Primarily U.S. firms took advantage of Mexican industrialization policies. *Id.* Mexican exports rose from virtually nothing in the mid-1960s to US$800 million in 1980. *Id.* Article 904(4) requires that any measure serve a "legitimate objective" to avoid unfair practices. NAFTA, *supra* note 1, art. 904(4). Article 915(1) includes "protection of human, animal or plant life" and "sustainable development" as legitimate objectives. *Id.* art. 915(1). Article 907 would then allow a party to conduct a risk assessment of the legitimate objective. *Id.* art. 907.

183. CANADIAN REVIEW, *supra* note 6, at 22 (discussing relevance of methods of dispute settlement).

184. NAFTA, *supra* note 1, arts. 2005, 2007.

solve disputes.[185] Under the proposed NAFTA, the burden of proving that an environmental standard is consistent with the agreement would be placed on the complaining party.[186]

Finally, NAFTA should result in more efficient land transport at the borders.[187] With less bureaucratic red tape, there should be less time for vehicles to sit idle at the border. This would clear congestion and pollution levels and will reduce air pollution directly.[188]

C. *The Integrated Environmental Plan*

Because NAFTA does not directly address environmental issues, environmentalists have advocated further negotiations for agreements to protect the environment.[189] Consequently, on November 27, 1990, President Carlos Salinas de Gortari of Mexico and President George Bush of the United States met in Monterrey, Mexico to discuss issues of importance to both countries.[190] Their meeting resulted in a joint communique that includes commitments and directives concerning the environment at the border extending from 1992 through 1994.[191] The EPA of the United States and SEDUE of Mexico will work together to develop an environmental plan to address issues pertaining to the border area.[192] Subsequently, Presidents Bush and Salinas released this comprehensive, multi-year Integrated Environmental Plan specifically to protect the interests of the border area in February 1992.[193]

Congress, however, is not considering the IEP along with NAFTA for ratification.[194] Nor does the IEP reconcile the 1944 Treaty, which establishes fixed obligations between the United States and Mexico, with the 1983 Agreement, which re-

185. *Id.* art. 2015.

186. *Id.* art. 914(4).

187. *Id.* annex 913-A.

188. *Id.* annex 913-A.

189. *NAFTA Sanctions*, *supra* note 13, at 1448 (expressing concerns of environmentalists over NAFTA); *see supra* notes 173-88 and accompanying text (discussing provisions of NAFTA that affect environment).

190. IEP, *supra* note 18, at II-1.

191. *See id.* (discussing joint communique).

192. *See Id.* (discussing role of EPA and SEDUE).

193. Brilliant, *supra* note 2, at 48. Consistent with the 1983 Agreement, the IEP addresses issues of the border area defined as "an area 100 km on each side of the international boundary" of the United States and Mexico. IEP, *supra* note 18, at I-1.

194. Brilliant, *supra* note 2, at 47.

quires a commitment to improve environmental conditions at the border.[195] The IEP includes goals with respect to major transboundary waters but contains no binding implementation schemes for either Mexico or the United States.[196] The IEP is a statement of common environmental concerns of the United States and Mexico.[197] Efforts are underway to improve air quality, management and disposal of hazardous waste, and cooperation in enforcing environmental regulations, particularly at the border.[198] As a separate document from NAFTA, however, the IEP will impose no new obligations even if the United States and Mexico ratify NAFTA.[199]

III. *DEFICIENCIES IN CURRENT PRACTICES AND THE NEED FOR EFFECTIVE ENFORCEMENT OF IMPLEMENTATION SCHEMES*

Currently, customary international law, international treaties, and national laws do not effectively address the need to cleanup and protect transboundary waters.[200] Although evolv-

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195. IEP, *supra* note 18, at I-9. The 1983 Agreement "will be updated at a future time as appropriate to take account of new information that results from implementation of this [p]lan." *Id.*; *see* 1983 Agreement, *supra* note 61, art. 3, 22 I.L.M. at 1026; *see also* Morgan *supra* note 57, at 964-68 (analyzing fixed obligations under 1944 Treaty).

196. IEP, *supra* note 18, at VI-3 to VI-10. The IEP only designates areas of concern and an intent to cooperate in order to improve environmental conditions in these areas. *Id.* The four goals with respect to the border area are to

> (1) continue media-specific and multimedia monitoring and pollution control activities,
>
> (2) strengthen present environmental regulatory activities and to supplement the 1983 Border Environmental Agreement with new cooperative programs,
>
> (3) mobilize additional resources for pollution control, and
>
> (4) supplement present pollution control programs through pollution prevention and voluntary action programs.

Id. at VI-1 to VI-2.

197. *See* DEPT. OF STATE DISPATCH, *supra* note 10, at 114 (discussing some environmental issues presented by IEP).

198. *Id.*

199. Brilliant, *supra* note 2, at 47-49; *see* Feeley & Knier, *supra* note 3, at 267 (commenting on lack of treaty status of IEP).

200. *See generally* Feeley & Knier, *supra* note 3 (discussing inadequacy of NAFTA, IEP, treaties, and national laws in resolving environmental problems at U.S.-Mexican border); Gallob, *supra* note 15 (discussing inadequacy of treaties and national laws in resolving environmental problems at U.S.-Canadian border); Crane, *supra* note 9, at 313-17 (discussing inadequacies of international law concerning transboundary pollution).

ing international law, the CFTA, and the proposals of NAFTA and the IEP provide incentives to improve environmental conditions, they do not include guarantees of protection of transboundary water resources.[201] Therefore, the current system requires specific standards and implementation schemes for enforcement through international agencies and U.S. courts.

A. *Deficiencies in Existing Customs, Laws and Treaties*

Customary international law has failed to preserve and to prevent pollution of transboundary natural resources in an adequate fashion.[202] Furthermore, although international treaties address environmental interests at the U.S.-Mexican and U.S.-Canadian borders, they do not protect natural resources adequately.[203] Finally, national laws ineffectively address pollution of transboundary waters.[204] The inadequacy of these laws necessitates further implementation schemes and enforcement of environmental standards.

1. Deficiencies in International Legal Theories

International law has failed to protect transboundary water resources.[205] International custom only becomes international law when it satisfies the requirement of *opinio juris*, which occurs when all nations agree to be bound legally to that custom.[206] Customary international law develops only when nations follow a constant practice under the assumption that international law requires such conduct.[207] Given the great di-

201. Feeley & Knier, *supra* note 3, at 267; *see* Gallob, *supra* note 15, at 112-19 (discussing inadequacy of treaties and national laws in resolving water pollution problems at U.S.-Canadian border); Crane, *supra* note 9, at 315-17 (discussing inadequacies of international law concerning transboundary pollution).

202. *See Developments*, *supra* note 3, at 1498-1511 (discussing generally ineffectiveness of customary international law to address issue of transboundary pollution).

203. *See generally* Feeley & Knier, *supra* note 3 (discussing inadequacy of treaties and national laws in resolving environmental problems at U.S.-Mexican border); Gallob, *supra* note 15 (discussing inadequacy of treaties and national laws in resolving environmental problems at U.S.-Canadian border).

204. *See generally* DuMars & Del Rio, *supra* note 78 (discussing relevant U.S.-Mexican laws); Gallob, *supra* note 15 (discussing relevant U.S.-Canadian laws).

205. *See Developments*, *supra* note 3, at 1504 (concluding that effective international law requires nations to surrender some sovereignty).

206. RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS LAW OF THE UNITED STATES § 102(2) (1987).

207. *Developments*, *supra* note 3, at 1504.

versity of views, no binding obligation between nations to preserve or to prevent pollution of transboundary natural resources exists.[208] Currently, no operational system to establish international liability has emerged.[209] The principle of *sic utere* remains a vague concept without realistic application.[210]

With respect to transboundary natural resources, there are two competing views that define the relationship between neighboring nations. The traditional view advocates a rule of territorial sovereignty where a nation has the absolute and exclusive right to explore and exploit its resources in any manner.[211] In opposition, there is a developing concept that a nation may not substantially injure a neighboring nation through pollution of transboundary resources.[212] In addition, developing theories in international law provide that neighboring nations have a right to a "reasonable and equitable share" of transboundary resources.[213] Nations, however, have not agreed to be bound legally to these latter views that create a duty from one nation to another to both prevent pollution and preserve natural resources.[214] Irrigation and industrial pollution have destroyed waters that cross the U.S. borders.[215] Each country, however, still has the right to the absolute and

208. *Id.* at 1506. The diversity of interests among nations results in only vague obligations. *Id.*

209. *Id.* at 1499.

210. *Id.* at 1501; *see supra* note 33 and accompanying text (discussing concept of *sic utere*).

211. *See supra* notes 25-27 and accompanying text (discussing theory of territorial sovereignty).

212. *See Trail Smelter*, 3 R.I.A.A. at 1965.

213. HELSINKI RULES, *supra* note 141, art. V; *see supra* notes 140-57 and accompanying text (discussing non-binding international legal theories creating duties among nations to protect transboundary waters).

214. *Developments*, *supra* note 3, at 1506.

215. *E.g.*, 1973 Agreement, *supra* note 58, § 6, 24 U.S.T. at 1975-76 (representing an attempt by the United States and Mexico to address environmental problems of transboundary waters); Gorrie, *supra* note 15, at 51-53. The 1973 Agreement addresses the salinity problem of the Colorado River resulting from U.S. irrigation and drainage practices. 1973 Agreement, *supra* note 58, § 6, 24 U.S.T. at 1975-76. This agreement limits developments in the border area that might adversely affect either country. *Id.* The United States and Mexico also must consult each other on new projects that might adversely affect each other. *Id.* The Great Lakes similarly have a long history of pollution from agricultural and other "non-point" sources. Gorrie, *supra* note 15, at 51-53.

exclusive use of the waters under its jurisdiction.[216] Therefore, under international law there is no operational rule to preserve natural resources and to reduce pollution for the benefit of a neighboring nation.[217]

Furthermore, ineffective procedural rules developed by legal analysts hamper elimination of transboundary pollution because they fail to prevent confrontations among nations before they arise.[218] For example, a duty to inform another nation of an existing danger provides no concrete guidance for a nation to determine whether certain conduct comports with customary international law.[219] A duty to assess environmental dangers to transboundary resources, as enunciated in *Lac Lanoux*, also fails to establish specific criteria to guide countries.[220] Such procedural duties, similar to those in the United States under NEPA,[221] also fail to provide for adequate judicial review.[222] These duties have also failed to gain consensus in the international community.[223] Finally, procedural rules fail by allowing countries to escape liability by merely informing a neighboring nation of an existing environmental danger.[224]

2. Deficiencies in Existing U.S.-Mexican Treaties

Tensions exist between the United States and Mexico due to their reliance on competing treaties, the 1944 Treaty[225] and

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216. *See Developments*, *supra* note 3, at 1498-1506 (discussing acceptance of territorial sovereignty).

217. *Id.* at 1499.

218. *See id.* at 1512-20 (discussing procedural duties to protect environment outside nation's jurisdiction); *supra* notes 126-33 and accompanying text (discussing relevant procedures).

219. *Developments*, *supra* note 3, at 1513.

220. Lac Lanoux (Spain v. Fr.), 12 R.I.A.A. 281 (1956); *see Developments*, *supra* note 3, at 1500 (discussing *Lac Lanoux* case); *supra* notes 153-54 and accompanying text (discussing significance of case). The Law of the Sea Convention also provides a similar duty to assess environmental dangers. Law of the Sea Convention, *supra* note 26, arts. 204-206, 21 I.L.M. at 1309.

221. *See supra* note 131 and accompanying text (discussing procedures related to NEPA).

222. *See* Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223, 226 (1980) (establishing "arbitrary and capricious" standard of judicial review); *Developments*, *supra* note 3, at 1515.

223. *Developments*, *supra* note 3, at 1515.

224. *Id.* at 1520.

225. 1944 Treaty, *supra* note 50, 59 Stat. at 1219.

the 1983 Treaty.[226] The United States currently relies on the 1944 Treaty, which limits its obligations to provide Mexico a fixed allocation of water from U.S. rivers.[227] The 1944 Treaty does not guarantee Mexico any quality of water through these allocations.[228] For example, even the brine from a desalination plant is counted as part of the water delivery commitment.[229] Consequently, under the 1944 Treaty, Mexico may not obtain adequate water resources from the United States.[230]

In contrast, Mexico interprets the 1983 Agreement as a commitment that the United States has a duty to preserve and prevent pollution of these same transboundary waters.[231] The 1983 Agreement, upon which Mexico currently relies, sets forth the commitment between the United States and Mexico to improve environmental conditions at the border area.[232] This agreement by its terms obligates improvement of environmental conditions only to "the fullest extent practicable."[233] In addition, given the weak economy of Mexico, the standard of "the fullest extent practicable" imposes only a minimal obligation on Mexico to preserve transboundary water resources or to prevent their pollution.[234] Therefore, the 1983 Agreement is currently ineffective and needs to be strengthened.[235]

Conflicting U.S. and Mexican interests in water quantity and quality has resulted in diminished cooperation and lack of incentives for either nation to regulate its agricultural and in-

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226. 1983 Agreement, *supra* note 61, 22 I.L.M. at 1025.

227. 1944 Treaty, *supra* note 50, arts. 10, 15, 59 Stat. at 1237-38, 1243-1249; *see supra* notes 50-57 and accompanying text (discussing major provisions of 1944 Treaty).

228. 1944 Treaty, *supra* note 50, arts. 10, 15, 59 Stat. at 1237-38, 1243-1249; *see supra* notes 50-57 and accompanying text (discussing major provisions of 1944 Treaty).

229. Allen V. Kneese, *Environmental Stress and Political Conflicts: Salinity in the Colorado River*, TRANSBOUNDARY RESOURCES REP., Summer 1990, at 3.

230. *See id.* (presenting facts suggesting inadequacy of treaties in solving environmental problems)

231. 1983 Agreement, *supra* note 61, art. 1, 22 I.L.M. at 1026; *see supra* notes 61-63 (discussing major provisions of 1983 Agreement).

232. 1983 Agreement, *supra* note 61, art. 1, 22 I.L.M. at 1026.

233. *Id.* art. 2, 22 I.L.M. at 1026.

234. Castillo & Perry, *supra* note 180, at 3; *see* 1983 Agreement, *supra* note 61, art. 3, I.L.M. at 1026 (setting forth U.S.-Mexican commitment to improve environmental conditions at border).

235. Castillo & Perry, *supra* note 180, at 3.

dustrial uses of its waters to protect the waters that reach the other country.[236] Without cooperation, the United States has been forced to implement plans that are not cost-effective.[237] For example, as a result of negotiations and the treaties, a desalination plant in Yuma Valley, Arizona was constructed over a period of fourteen years at the cost of US$258 million to U.S. taxpayers.[238] More economical solutions may have included reduction of irrigated acreage or the purchase of water rights.[239] The desalination plant is expected to cost US$584 per acre-foot of water, whereas the purchase of water rights would cost only forty U.S. dollars per acre-foot.[240] Although the purchase of water rights may have been a better choice, U.S. politics defeated these options.[241] The problem arises from the 1944 Treaty because it gives priority to the goal of maintaining a fixed allocation of water to Mexico regardless of quality.[242]

The conflicting attitudes of the United States and Mexico have hindered environmental preservation and pollution abatement attempts to protect transboundary water resources.[243] The 1983 Agreement fails to specifically set technical standards as goals for the two nations.[244] The 1944 Treaty completely excludes any obligation to supply quality water to Mexico.[245] A significant problem arises because much of the destruction of water resources at the U.S.-Mexican border re-

236. *See, e.g.*, Morgan, *supra* note 57, at 964-68 (analyzing inadequacy of 1944 Treaty in addressing pollution of U.S.-Mexican transboundary waters).

237. Kneese, *supra* note 229, at 2-3.

238. *See* Jenifer Warren, *Yuma Desalination Plant Comes of Age—Too Late*, L.A. TIMES, March 8, 1992 (discussing salinity problems of Colorado River and costly measures to remedy its destruction).

239. Kneese, *supra* note 229, at 2.

240. *Id.*

241. *Id.*

242. *See* Morgan, *supra* note 57, at 964-68 (discussing inadequate regulation of environment at border since 1944 Treaty); 1944 Treaty, *supra* note 50, arts. 10, 15, sched. II, 59 Stat. at 1237-38, 1245-49 (setting forth very specific obligations under 1944 Treaty).

243. *See* Feeley & Knier, *supra* note 3, at 284 (commenting on lower standards and enforcement of Mexico as compared to United States).

244. *See* 1983 Agreement, *supra* note 61, art. 2, 22 I.L.M. at 1026 (setting forth obligations under 1983 Treaty); Castillo & Perry, *supra* note 180, at 3 (discussing ineffectiveness of 1983 Agreement).

245. 1944 Treaty, *supra* note 50, 26 Stat. at 1219; *see supra* notes 50-57 and accompanying text (setting forth major provisions of 1944 Treaty).

sults from "non-point" sources, sources that are difficult to regulate because their origins are untraceable.[246] Consequently, the IBWC, the international commission with authority to regulate transboundary waters, requires greater enforcement powers to preserve and to prevent pollution of transboundary water resources.[247]

3. Deficiencies in U.S.-Canadian Treaties

Treaties between the United States and Canada have proven to be equally limited in preserving and preventing pollution of transboundary water resources.[248] The Boundary Waters Treaty of 1909 limits the authority of the IJC to regulate diversion of water channels.[249] It does not extend IJC authority to regulate the introduction of pollutants into water resources.[250] Expansion of IJC authority is necessary to resolve short-range pollution of natural resources.[251] Additional safeguards are necessary to resolve long-range pollution since site-specific regulation is impossible.[252] Water pollution resulting from "non-point" sources, such as agricultural pollutants and rain run-off, also pose serious challenges since site-specific regulation is impossible.[253] Accordingly, IJC authority needs to be expanded to regulate long-range pollution and "non-point" source destruction of transboundary water resources.

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246. *See* Myers & Noble, *supra* note 50, at 406-11 (discussing water quality problems resulting from irrigation and agricultural uses of water in United States).

247. *See* Feeley & Knier, *supra* note 3, at 288 (advocating comprehensive program, greater enforcement, and increased funding). Similarly, the IJC has failed to adequately protect the environment. *See* Gallob, *supra* note 15, at 113-19 (discussing IJC's inability to make binding decisions regarding pollution of shared resources and IJC's inability to resolve disputes due to lack of reciprocal rights and remedies in courts).

248. *See* Gorrie, *supra* note 15, at 47 (discussing current environmental conditions of Great Lakes region); Gallob, *supra* note 15, at 116-19 (discussing efficacy of cleanup of Great Lakes).

249. Boundary Waters Treaty of 1909, *supra* note 64, art. II, 36 Stat. at 2449; *see supra* notes 64-70 and accompanying text (discussing major provisions of treaty).

250. Boundary Waters treaty of 1909, *supra* note 64, arts. IV, VI, 36 Stat. at 2450, 2451.

251. *See* Gallob, *supra* note 15, at 143 (discussing possibility to expand IJC authority with respect to short-range pollution).

252. *Id.*

253. *Id.* at 117; *see* Gorrie *supra* note 15, at 51 (discussing various "non-point" sources).

4. Deficiencies of Existing Domestic Mexican, Canadian, and U.S. Legislation

International environmental regulation includes adequate domestic laws to prevent pollution and preserve natural resources on a national level.[254] Mexico has less stringent environmental standards and enforcement of domestic legislation than the United States and Canada.[255] In addition, although provinces in Canada and the United States have similar environmental standards and enforcement measures, both nations have not adequately resolved the problem of pollution of transboundary water resources.[256]

a. Mexican Laws

Even with the introduction of the GLEEEP, the comprehensive environmental legislation of Mexico in 1988, the IBWC and SEDUE have managed issues concerning transboundary water resources ineffectively because of a lack of enforcement powers and financial resources.[257] Mexico and the United States have had great difficulty in providing adequate facilities for the rapid population and industrial growth at the border.[258] Despite Mexico's current law, SEDUE's lack of financial resources has obstructed major advances in the environmental conditions of the border area.[259]

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254. *See Developments*, *supra* note 3, at 1550-63 (discussing role of national laws and additional need for comprehensive international liability scheme). For example, a radical approach to improve environmental regulation in Mexico involves better enforcement of existing national legislation and passage of legislation granting the United States limited jurisdiction to regulate U.S. companies relocating in Mexico. Feeley & Knier, *supra* note 3, at 291-92.

255. *See* Feeley & Knier, *supra* note 3, at 288-95 (discussing lack of enforcement measures and funding in Mexico to address environmental concerns).

256. *E.g.*, Bucholtz, *supra* note 15, at 316-17 (advocating implementation under free trade agreements to allow polluting natural resources, but only at higher cost); *see generally*, Gorrie, *supra* note 15 (discussing disappointing environmental conditions of Great Lakes region).

257. Feeley & Knier, *supra* note 3, at 285-87; *see supra* notes 78-84 and accompanying text (discussing relevant Mexican national environmental legislation).

258. *See* Feeley & Knier, *supra* note 3, at 285-87; SEDUE, *Programa Nacional para la Protección del Medio Ambiente 1990-1994*, 21-22 (June 5, 1989) (admitting inability of Mexico in addressing rapid population and industrial growth at border with respect to water quality).

259. *See* EMBASSY OF MEXICO, OFFICE FOR PRESS & PUBLIC AFFAIRS, MEXICO ENVIRONMENTAL ISSUES—FACT SHEETS 4-5 (Sept. 1992) (setting forth statistics demonstrating lack of resources in Mexico). By 1992, Mexico increased the number of envi-

Without proper management and treatment of surface wastewaters and hazardous wastes, the risk of pollution of transboundary ground waters is great.[260] Over 120 volatile organic compounds, which are carcinogenic compounds linked to industry in the *maquiladoras*, have been detected in the New River, which crosses the U.S.-Mexican border.[261] The raw sewage conditions in the Tijuana River have similarly worsened.[262] Furthermore, of the estimated 1850 *maquiladoras* in Mexico at the end of 1990, 1035 companies were labeled significant generators of waste by the Mexican governmental agency SEDUE, but only 33.5% complied with Mexican legislation, only nineteen percent complied with all SEDUE requirements, and only 14.5% recycled legally or sent residues to the United States.[263] These statistics demonstrate the inadequacy of the IBWC's enforcement in preserving and abating pollution of natural resources.

b. Canadian Laws

Canadian laws, both federal and provincial, have failed to preserve and prevent pollution of the Great Lakes region.[264] Since the late 1960s, all five of the Great Lakes have contained toxic chemicals linked to human health problems, including dangerous levels of DDT, PCBs, and other pesticides.[265] Since the 1980s, numerous "point" and "non-point" sources have contributed to the pollution of the Great Lakes.[266] Although

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ronmental inspectors of the border region to 200, a four-fold increase since 1989. *Id.* at 4. In 1991, inspectors shut down 134 *maquiladora* plants for non-compliance with environmental standards. *Id.* In addition, Mexico and the United States have jointly built water treatment plants and sewage facilities along the border area. *Id.* at 5. In 1991, the government of Mexico announced a three-year US$460 million program to address environmental concerns at the border. *Id.* at 25.

260. *See* IEP, *supra* note 18, at III-22 to III-25 (discussing need for wastewater treatment of Tijuana/San Diego, Mexicali/Imperial County, Nogales/Nogales, Ciudad Juarez/El Paso, Nuevo Laredo/Laredo, Bajo Rio Bravo/Lower Rio Grande).

261. Castillo & Perry, *supra* note 180, at 3.

262. *Id.*

263. *Id.*

264. *See* Gorrie, *supra* note 15, at 46-49 (discussing current pollution of Great Lakes region); *supra* notes 88-107 and accompanying text (discussing Canadian laws that address water pollution of Great Lakes region).

265. Gorrie, *supra* note 15, at 47.

266. *Id.* at 48-50. "Point" sources include pulp mills, steel factories, petrochemical complexes, assembly plants, and city sewage systems that discharge wastes directly into the lakes or tributaries leading to the lakes. *Id.* at 48. Less pro-

there have been important improvements in environmental conditions in Canada, new types of pollution of the Great Lakes have evolved and need to be addressed.[267]

c. U.S. Laws

The EPA, the IBWC, and the IJC have also failed to protect U.S. environmental interests in transboundary waters adequately.[268] On a national level, the EPA can enforce the CWA to maintain specified water quality standards.[269] Internationally, the IBWC has the authority to protect transboundary waters at the U.S.-Mexican border.[270] The IJC has similar authority at the U.S.-Canadian border.[271] None of the agencies has fulfilled expectations in protecting the valuable waters which cross these borders.[272] Excessive irrigation and industrial use of the U.S.-Mexican waters continue,[273] and pollution of the Great Lakes basin persists.[274] By the time the water reaches the borders, the IBWC and the IJC must resort to implementing costly procedures to mitigate the environmental damage.[275]

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gress has been made in controlling "non-point" sources, including acid rain and agricultural run-off into water sources. *Id.* at 51.

267. Gallob, *supra* note 15, at 119; Gorrie, *supra* note 15, at 49.

268. 33 U.S.C. §§ 1311, 1314 (1988) (establishing EPA authority); 1944 Treaty, *supra* note 50, art. 2, 59 Stat. at 1222-25 (establishing IBWC authority); Boundary Waters Treaty of 1909, *supra* note 64, art. VII, 36 Stat. at 2451 (establishing IJC authority).

269. 33 U.S.C. §§ 1311, 1314 (1988).

270. 1944 Treaty, *supra* note 50, art. 2, 59 Stat. at 1222-25. Through the IBWC, both SEDUE and the EPA exchange water pollution regulations and industrial wastewater pretreatment regulations for their respective countries. *See* IEP, *supra* note 18, at III-21. Other information exchanges include categorical effluent standards, potential treatment of industrial wastes, effluent limitation guidelines for existing sources, performance standards for new sources, and pretreatment standards for new and existing sources of water pollution. *Id.*

271. Boundary Waters Treaty of 1909, *supra* note 64, arts. II, IV, VIII, 36 Stat. at 2449, 2450, 2451-52.

272. *See* Feeley & Knier, *supra* note 3, at 288-95 (discussing handicaps for IBWC in Mexico, specifically lack of enforcement and insufficient funding); Gallob, *supra* note 15, at 113 (discussing persistent water pollution problems of Great Lakes region and IJC authority which lacks complete control of pollution).

273. *E.g.*, Warren, *supra* note 238 (discussing salinity problems of Colorado River).

274. *E.g.*, Gorrie, *supra* note 15.

275. *See, e.g.*, Warren, *supra* note 238 (discussing high costs of Yuma Valley desalination plant).

Regardless of international laws, treaties, and national laws, environmental cooperation between the United States and Mexico lags far behind their economic cooperation.[276] Only a joint effort to decrease international pollutants can solve the problems associated with transboundary waters.[277] This lack of cooperation manifests itself in the ineffectiveness of section 310(a) of the CWA to control international water pollution.[278] Since its enactment in 1972, federal courts have never been called upon to decide EPA claims under this statute.

Similarly, the rejection of a claim under the analogous section of the CAA demonstrates the ineffectiveness of the EPA in addressing international pollution.[279] Due to agency inaction and judicial reluctance to compel agency action, section 115 has been consistently criticized as ineffective.[280] The IJC, which is primarily responsible for enforcement of international air pollution laws between Canada and the United States, has inadequately addressed environmental issues due to judicial deference to EPA decisions.[281] In addition, there are substantial costs associated with a case-by-case analysis for an "endangerment finding" and a "reciprocity finding."[282] Section 310(a) of the CWA may suffer from the same handicaps.[283]

5. Deficiencies in NAFTA and the IEP

NAFTA lacks specific environmental obligations to fill the void left by customary international law, treaties, and domestic

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276. *See* Feeley & Knier, *supra* note 3, at 285-95 (discussing different environmental standards, weak enforcement of environmental laws, and lack of funding).

277. *See id.*

278. 42 U.S.C. § 7415 (1988); *see supra* notes 113-25 and accompanying text (discussing federal case law and lack of EPA decision-making).

279. *See supra* notes 113-25 and accompanying text (discussing federal case law and lack of EPA decision-making).

280. *See* Gallob, *supra* note 15, at 115 (discussing lack of reciprocal rights and remedies and ineffectiveness of IJC in handling disputes concerning transboundary resources).

281. *See id.*

282. *Id.* at 130 (discussing time-consuming process of dispute resolution for each issue that arises). Both U.S. and Canadian courts do provide access to non-nationals in their respective courts. *Id.* at 142. Both nations, however, have not recognized equal rights and remedies for non-nationals. *Id.* at 115.

283. *See* 33 U.S.C. § 1320(a) (1988) (setting forth analogous international water pollution abatement statute).

legislation to preserve and prevent pollution of transboundary natural resources.[284] NAFTA includes environmental conditions in its chapters on investment, standards, and dispute resolution.[285] These conditions, however, are subservient to trade issues.[286] Environmental standards are addressed only if they have a direct impact on free trade.[287] The agreement provides only a vague commitment to the environment.[288] The lack of standards and enforcement mechanisms severely limits the effectiveness of treaty provisions contributing to environmental protection.[289]

Currently, the IBWC has no authority to enforce standards under Mexico's jurisdiction.[290] NAFTA does not provide a mechanism for procedural enforcement of an environmental impact statement on investments in Mexico resulting from the agreement.[291] In addition, NAFTA excludes the rights of private parties under the agreement.[292] Therefore, the IBWC cannot ensure that Mexico improves or complies with its environmental standards.

The proposed NAFTA does provide an option for alternate dispute resolution for commercial disputes.[293] It provides that a party can suspend benefits under NAFTA in response to non-compliance.[294] It does not, however, define the voting procedures or what scientific or technical information is ac-

284. Feeley & Knier, *supra* note 3, at 261. Similarly, Canadians are disappointed with the CFTA because it disregards environmental issues. CFTA, *supra* note 14, ch. 6, 27 I.L.M. at 315-16 (setting forth only provision of CFTA that affects environmental issues by setting technical standards on agricultural products); Sanford, *supra* note 4, at 384 (discussing disappointment of Canadians over pollution); *see supra* notes 173-88 and accompanying text (discussing major provisions of NAFTA that affect environment).

285. Brilliant, *supra* note 2, at 49.

286. *Id.*

287. *Id.*

288. *Id.* Consequently, NAFTA resembles a "cooperation agreement" that only places environmental issues into the negotiations and increases environmental awareness. *Developments*, *supra* note 3, at 1555.

289. *See Developments*, *supra* note 3, at 1555-56 (discussing ineffectiveness of agreements with few concrete obligations).

290. 1944 Treaty, *supra* note 50, art. 2, 59 Stat. at 1222-25.

291. *See supra* note 131 and accompanying text (discussing NEPA and federal environmental assessments); 42 U.S.C. §§ 4321, 4331 (1988) (setting forth procedures for environmental assessment of federal actions).

292. NAFTA, *supra* note 1, art. 2021.

293. *Id.* art. 2022.

294. *Id.* art. 2019.

ceptable for the resolution of environmental disputes.[295] Environmental agreements pose special difficulties because of the uncertainty of scientific evidence and the different levels of technical resources among nations.[296] Furthermore, NAFTA does not provide whether the signatories would negotiate independent issues simultaneously.[297] Experience from the CFTA and the IJC demonstrates that an inefficient or incomplete decision-making process can stall negotiations on ratification of a treaty such as NAFTA.[298]

In addition, the impact of the IEP is insubstantial because it is not a component of NAFTA.[299] It is merely an expression of a commitment between the United States and Mexico.[300] Consequently, it may be easier to negotiate separate agreements for free trade and environmental protection.[301] The IEP could be a separate environmental agreement, but it is currently not a proposed treaty.[302] In addition, it does not address environmental concerns of Canada or areas outside the U.S.-Mexican border.[303]

Furthermore, the IEP fails to satisfy one of its own objectives: to set out implementation plans to mobilize the cooperative efforts of governments at all levels.[304] The implementa-

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295. *Id.* arts. 2005, 2007, 2015; *see Developments*, *supra* note 3, at 1527 (discussing advantage of having specific procedures incorporated into agreement).

296. *See Developments*, *supra* note 3, at 1529-42.

297. *See* NAFTA, *supra* note 1, arts. 2005, 2007 (setting forth major dispute resolution provisions); Gallob, *supra* note 15, at 130 (discussing time-consuming process of resolving disputes on case-by-case basis).

298. *See Developments*, *supra* note 3, at 1527.

299. Brilliant, *supra* note 2, at 47-48; *see supra* notes 189-99 (discussing IEP). Environmentalists argued that the IEP should be contained within the four corners of NAFTA because

> (1) NAFTA would not naturally lead to sustainable development in Mexico,
> (2) the disparity of standards of Mexico and the United States would lead to increased industry in Mexico resulting in increased pollution, and
> (3) NAFTA could undermine U.S. and Canadian environmental standards in order to compete effectively with Mexico and their lower wages and environmental costs.

Brilliant, *supra* note 2, at 47-48.

300. IEP, *supra* note 18, at II-1.

301. *E.g.*, Montreal Protocol on Substances That Deplete the Ozone Layer, *supra* note 177; *see Developments*, *supra* note 3, at 1528 (discussing its success as environmental agreement).

302. Feeley & Knier, *supra* note 3, at 267.

303. IEP, *supra* note 18.

304. Brilliant, *supra* note 2, at 48.

tion plan proposed on water quality would address water supply, municipal waste water, control of industrial wastes, and ground water monitoring in the border area.[305] The IEP itself states that, given its implementation plans,[306] future cleanup depends on collecting more data.[307] Presently, the U.S. and Mexican governments are exchanging information on developments concerning ground water along the border.[308] Salinity and sanitary data for surface waters are exchanged through the IBWC for the Rio Bravo/Rio Grande, the Colorado River, the New River, and the Tijuana River.[309] Accordingly, the IBWC has primary authority to regulate transboundary waters. The IEP prospectively suggests environmental strategies to protect and improve water quality.[310] As a separate document from NAFTA, however, the IEP potentially has no effect on the environmental standards of transboundary waters.[311]

In addition, the IEP only extends from 1992 through 1994 and incorporates short-term provisions.[312] Mexico and the United States have had discussions only on how to handle polluters at the border area.[313] Solving the problem of transboundary water pollution, however, requires long-term solutions and technical goals.[314] For example, industrial toxic wastewater and sewage in the New River crosses from Mexico into the United States, but it is too expensive to treat the entire flow in the United States.[315] Therefore, long-term cooperative action is needed to provide for disposal of sewage and wastewater on the Mexican side of the border.[316] NAFTA does, however, promise to enhance the economic and technical re-

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305. *Id.*

306. IEP, *supra* note 18, at VI-1 to VI-2 (listing goals of IEP); *see supra* notes 189-99 and accompanying text (discussing provisions of IEP).

307. IEP, *supra* note 18, at I-6.

308. *Id.* at III-21 to III-22.

309. *Id.* at III-22. The two governments also exchange information on surface flow from streams that cross the boundary. *Id.*

310. *Id.* at VI-3 to VI-10.

311. *See* Feeley & Knier, *supra* note 3, at 263-67 (discussing that NAFTA and IEP are separate documents and IEP does not have treaty status).

312. IEP, *supra* note 18, at II-2.

313. Brilliant, *supra* note 2, at 49.

314. Cliff Metzner, *Transboundary Sewage Problems: Tijuana/San Diego-New River/Imperial Valley*, TRANSBOUNDARY RESOURCES REP., Spring 1988, at 5-6.

315. *Id.*

316. *Id.*

sources of Mexico.[317] Consequently, NAFTA may give effect to the 1983 Agreement by raising the potential financial and technical resources available to Mexico.[318]

B. *The Need for Implementation and Judicial Enforcement*

While international adjudication may encourage the preservation of natural resources and deter pollution of transboundary natural resources, nations rarely submit to such adjudication unless a binding treaty exists that entitles a party to seek a remedy in an international arbitration.[319] In addition, only nations may appear before the International Court of Justice.[320] Unless a nation has espoused a claim, this may exclude private parties, who are the principal polluters, from adjudication.[321] Furthermore, the ineffectiveness of national and international organizations in addressing international pollution mandates the need for additional measures to protect U.S. environmental standards at the border.[322] NAFTA provides such an exchange in which Mexico may accept environmental obligations to the United States in return for increased economic and technical resources.[323] The CFTA demonstrates that Canada and the United States already share these trade inter-

317. DEPT. OF STATE DISPATCH, *supra* note 10, at 111. With NAFTA, Mexico should be able to finance infrastructure improvements, technological and scientific pollution control strategies, and efficient resource management. Feeley & Knier, *supra* note 3, at 285.

318. *See* Feeley & Knier, *supra* note 3, at 285; *see* 1983 Agreement, *supra* note 61, art. 2, 22 I.L.M. at 1026 (setting forth minimum obligation under 1983 Treaty); DEPT. OF STATE DISPATCH, *supra* note 10, at 111 (predicting economic and technical growth in Mexico to strengthen environmental protection at border).

319. *Developments*, *supra* note 3, at 1501-02. Only one international environmental treaty that addresses oil pollution encourages signatories to submit disputes to the International Court of Justice. *Id.* at 1501 n.58; *see* 1954 International Convention for the Prevention of Pollution of the Sea by Oil, May 12, 1954, 12 U.S.T. 2989, 327 U.N.T.S. 3.

320. Statute of the International Court of Justice, June 26, 1945, arts. 94, 95, 59 Stat. 1031, 1051 (1945); *e.g.*, Nuclear Tests (Austl. v. Fr.), 1974 I.C.J. 253, 267-272 (Judgment of Dec. 20); (N.Z. v. Fr.), 1974 I.C.J. 457, 472-478 (Judgment of Dec. 20).

321. *Id.*; *see supra* notes 35-38 (discussing state responsibility and role of private citizens in international law).

322. *See* discussion *supra* part III.A (discussing inadequacies of laws, treaties, international agencies, and proposed agreements); *see generally Developments*, *supra* note 3 (discussing inadequacies of current international environmental regulation).

323. Feeley & Knier, *supra* note 3, at 285.

ests.[324] The United States and Canada may also seek to reinforce their efforts to preserve and prevent pollution of water resources at the U.S.-Canadian border.[325] Since NAFTA cannot guarantee environmental protection,[326] two safeguards would ensure that U.S. standards concerning the quality and quantity of transboundary waters will be maintained. First, the IBWC and the IJC should be empowered to set and enforce reasonable technical standards and long-term plans for transboundary waters under the existing treaties.[327] Second, there should be judicial enforcement of section 310(a) and section 505(a) of the CWA[328] based on permanent finding of reciprocity of laws to encourage compliance with such standards.[329] Effective treaty implementation normally requires stringent monitoring and enforcement of treaty provisions.[330]

1. The Role of the IBWC and the IJC in Enforcement of Treaties

A more effective treaty than NAFTA would include an explicit framework of procedures and duties governing its imple-

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324. CFTA, *supra* note 14, 27 I.L.M. at 281; *see supra* notes 159-66 and accompanying text (discussing primary role of CFTA).

325. CANADIAN REVIEW, *supra* note 6, at 46. Article 904 of NAFTA may allow Canada to continue to adopt and enforce measures to protect Canada's waterways. *Id.* Since most of the new NAFTA-induced economic growth in the United States would most likely occur in the south and imports would not be expected to increase significantly, NAFTA probably would not drastically affect the conditions of transboundary resources. *Id.*

326. *See supra* notes 173-88 and accompanying text (discussing NAFTA provisions that involve environment).

327. *See* Feeley & Knier, *supra* note 3, at 285-92 (advocating harmonization of standards and better enforcement of environmental laws). With respect to additional agreements on environmental regulation, on December 17, 1992 President Bush of the United States, President Salinas of Mexico, and Prime Minister Mulroney of Canada separately signed NAFTA. *See* David A. Gantz, *NAFTA Update* (Reid & Priest International Business Transactions Newsletter), Feb. 1993, at 8. President Clinton of the United States has endorsed NAFTA and promised not to renegotiate the agreement. *Id.* at 9. He has instead decided to encourage the negotiations of subsidiary agreements, including an agreement on environmental protection. *Id.* NAFTA and subsidiary agreements are likely to be submitted to the U.S. Congress by the early summer of 1993 in order to enter into force as scheduled on January 1, 1994. *Id.*

328. *See* 33 U.S.C §§ 1320(a), 1365(a) (1988) (setting forth international pollution abatement and private citizen suit statutes).

329. *See* Gallob, *supra* note 15, at 147-48 (advocating equal access to courts to ensure compliance with environmental laws).

330. *Developments*, *supra* note 3, at 1551.

mentation by an international agency.[331] International agencies can monitor treaty compliance, lower information-gathering and processing costs, and effectively enforce international commitments.[332] They can also work with other interest groups and place pressure on nations to comply with treaty provisions.[333] The efforts of international agencies are also unlikely to raise significant state sovereignty concerns.[334] A treaty can minimize the sovereignty ceded by affording an agency scientific legitimacy and expertise.[335] International agencies can stimulate the growth of environmental science and adequately train national officials.[336] If a nation believes that an agency will act on objective standards, it can expect consistent agency action and is more likely to comply with treaty provisions.[337]

Various implementation schemes for the IBWC are possible.[338] One such implementation scheme could require that U.S. companies relocating in Mexico register with the EPA, thereby eliminating some of the reliance on SEDUE, an inefficient government agency.[339] In addition, an implementation scheme could require U.S. companies in Mexico to contribute to long-term development of the infrastructure.[340] The U.S. government could set a fee for all environmental services and directly related revenues to SEDUE.[341] Also, the U.S. government could implement rigorous evaluations for high-risk industries.[342] There could be a multinational tracking system to facilitate planning and enforcement.[343] The IBWC, which has

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331. *See id.* at 1559 (advocating specific implementation schemes and procedures for effective treaties in general).

332. *Id.* at 1551-52.

333. *Id.* at 1552.

334. *Id.*

335. *Id.* at 1559-60.

336. *Id.* at 1552.

337. *Id.* at 1560.

338. Castillo & Perry, *supra* note 180, at 4-5.

339. *Id.* at 4.

340. *Id.*

341. *Id.*

342. *Id.*

343. *Id.* at 4-5. These are just some possible implementation schemes. *See* HELSINKI RULES, *supra* note 141, arts. xxxi, xxxii, xxxiv. These rules recommend the formation of joint agencies for the resolution of disputes. *Id.* art. xxxi. These agencies would formulate plans in the interests of affected states. *Id.* If the joint agency fails to resolve the dispute, the nations involved should seek mediation by a third

international authority under the 1944 Treaty,[344] should devise and maintain such implementation schemes.

In addition to implementation schemes, the IBWC, in cooperation with the EPA and SEDUE, should enforce higher environmental standards in Mexico and in the United States.[345] Increased economic and technical resources can facilitate treaty compliance.[346] In his introduction to the GLEEEP,[347] the 1988 Mexican federal environmental law, former President de la Madrid of Mexico recognized that improvement of environmental standards and regulation requires economic stability.[348] Mexico has announced a three-year US$460 million program for border cleanup.[349] President Bush proposed a budget for fiscal year 1993 including US$243 million to address border environmental issues, more than double the amount of the previous year.[350] Increased resources should raise the level to which Mexico is bound under the 1983 Agreement to act to "the fullest extent practicable" to improve the environment.[351] Standards could improve according to a specified timetable. With fewer economic burdens, the signatory countries also would be more likely to enforce environ-

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party or qualified international organization or person. *Id.* art. xxxii. If still unsuccessful, the nations should form an ad hoc conciliation commission. *Id.* The final alternative to resolve the dispute should be an ad hoc tribunal or the International Court of Justice. *Id.* art. xxxiv.

344. 1944 Treaty, *supra* note 50, art. 2, 59 Stat. at 1222-25.

345. Feeley & Knier, *supra* note 3, at 287 (advocating harmonization of environmental standards of Mexico and United States).

346. *Id.*

347. *See supra* notes 78-84 and accompanying text (setting forth major aspects of GLEEEP).

348. IEP, *supra* note 18, at II-3. President de la Madrid of Mexico recognized that "the conflict between environmental protection and economic development in Mexico has now arrived at the point where the best environmental solution is also often the best economic solution." *Id.*

349. DEPT. OF STATE DISPATCH, *supra* note 10, at 114.

350. *Id.* Funds are allocated for water supply and wastewater treatment; municipal solid waste treatment; highway, bridge, and border-crossing projects; and the provision of necessary utilities in housing areas. *Id.* at 114-15. The 100-year-old IBWC is currently constructing a joint sewage treatment plant at Nuevo Laredo to improve quality of water of the Rio Grande. *Id.* A major international wastewater treatment plant at Nogales, Arizona is underway. *Id.* Construction of a joint sewage treatment project at the San Diego/ Tijuana area has begun. *Id.* Also, the IEP provides for improvements of the New River near Mexicali and Calexico, California. *Id.*

351. 1983 Agreement, *supra* note 61, art. 2, 22 I.L.M. at 1026; *see* Feeley & Knier, *supra* note 3, at 285 (discussing possibility of environmental improvements in Mexico with better economic and technical resources).

mental laws.[352] The IBWC, a well-established international agency, should be given greater authority to resolve disputes and to enforce higher environmental standards.[353]

Similarly, Canada and the United States should expand IJC authority under the Boundary Waters Treaty of 1909 to include explicitly the regulation of transboundary water pollution.[354] Additional IJC authority can further improve those environmental conditions.[355] Some treaties already place liability on private operators.[356] NAFTA could also include a provision for private liability to encourage compliance with environmental laws.[357]

2. The EPA and Law Enforcement

In addition to expanding powers of international agencies, Canada, Mexico, and the United States should guarantee effective judicial authority to enforce environmental standards on pollution of transboundary resources.[358] Prior difficulties in implementing analogous national air pollution laws suggest future obstacles to the implementation of international pollution abatement statutes, such as section 310(a) of the CWA.[359] Pollution abatement at the border requires cooperation between the United States and Mexico.[360] A permanent "reciprocity finding" should facilitate suits between the United States and Mexico.[361] Only court-based remedies offer routine and non-

352. *See* Feeley & Knier, *supra* note 3, at 285.

353. *Id.* at 288 (advocating more comprehensive and stronger enforcement authority of SEDUE, EPA, and IBWC). The IBWC, however, provides the greatest opportunity to enforce environmental standards in Mexico because it can better protect the sovereignty of both nations. *Developments*, *supra* note 3, at 1559-60.

354. *See* Boundary Waters Treaty of 1909, *supra* note 64, art. IV, 36 Stat. at 2450 (setting forth treaty provisions concerning pollution of transboundary water resources); *supra* notes 66-74 and accompanying text (discussing IJC authority).

355. Wetstone & Rosencranz, *supra* note 69, at 133-34.

356. *E.g.*, International Convention on Civil Liability for Oil Pollution Damage, 1969, 9 I.L.M. 45 (1970) (establishing personal liability for injuries resulting from oil pollution).

357. *See generally* JEFFREY G. MILLER, CITIZEN SUITS: PRIVATE ENFORCEMENT OF FEDERAL POLLUTION CONTROL LAWS 4 (1987).

358. *Id.*

359. *See* Gallob, *supra* note 15, at 112-19 (discussing obstacles to analogous provision of CAA).

360. *See supra* notes 108-25 and accompanying text (discussing CAA and CWA and obstacles in judicial system).

361. *E.g.*, Her Majesty the Queen *ex rel* Ontario v. United States Environmental

politicized access to enforce environmental legislation. In addition, an "endangerment finding" need not be site-specific where a nation is liable for acts within a nation that substantially harm water quantity or quality in another nation.[362] Fewer legal obstacles from the EPA and U.S. courts should facilitate litigation and ensure compliance with environmental standards.

Environmentalists are especially concerned because recent court rulings have denied standing to environmental groups and private citizens to sue to enforce both substantive and procedural laws.[363] Private citizen suits, however, would encourage compliance with regulations by government agencies.[364] These private citizen suits could be enforced under section 505(a) of the CWA.[365] The EPA could also ensure compliance with domestic U.S. environmental standards.[366] Some countries, like Mexico, often fail to protect the environment because they set low environmental standards, do not allow private citizens to invoke these standards, or lack the power to enforce these standards.[367] Some commentators urge countries with stronger environmental regulation, such as the United States, to extend their authority to influence other countries through extraterritorial legislation and adjudication.[368] Control of irrigation and industrial uses of rivers, typical "non-point" source pollution, is essential in eliminating the

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Protection Agency, 912 F.2d 1525 (D.C. Cir. 1990) (discussing failure of EPA to make "reciprocity finding"); *see* Gallob, *supra* note 15, at 147-48 (advocating equal access and remedies for non-nationals in courts).

362. *See* Gallob, *supra* note 15, at 130 (discussing delays that impede "endangerment finding"). Consequently, this would enhance environmental regulation of "non-point" sources of pollution. *See* Kneese, *supra* note 229, at 3 (discussing environmental problems at U.S.-Mexican border); Gorrie, *supra* note 15 (discussing environmental problems at U.S.-Canadian border).

363. *See supra* notes 126-33 and accompanying text (discussing statutory and judicial obstacles to both procedural and substantive legislation).

364. *See generally* MILLER, *supra* note 357, at 4 (stressing importance of private citizen suits to ensure compliance with water pollution legislation).

365. 33 U.S.C. § 1365(a) (1988).

366. *See Developments*, *supra* note 3, at 1609.

367. *Id.* at 1610 (discussing potential for extraterritorial enforcement of national laws).

368. *Id.* at 1610-11. An example of extraterritorial legislation is a federal statute requiring U.S. corporations abroad to adhere to EPA standards. *Id.* at 1611. An example of extraterritorial adjudication is allowing a U.S. court to hear private claims of foreign citizens damaged by a U.S. corporation. *Id.*

destruction of transboundary water resources at both the U.S.-Mexican and U.S.-Canadian borders.[369]

CONCLUSION

National environmental laws and international agreements have been ineffective in preserving transboundary water resources and preventing their pollution. Evolving international law, the North American Free Trade Agreement, and the Integrated Environmental Plan should give effect to existing laws and treaties through economic incentives and shared, environmentally-protective technology. The history of minimal enforcement of environmental standards at the U.S.-Mexican boundary, however, supports the additional need for specific implementation regulations, IBWC enforcement authority, and enforcement by the EPA through section 310(a) of the CWA and private citizen suits under section 505(a) of the CWA. The pollution of the Great Lakes, which may not be significantly affected by NAFTA, still suggests the need for additional IJC authority and enforcement of environmental legislation through U.S. courts. NAFTA may represent a growing commitment to the environment, which the CFTA avoided. Where government enforcement fails to maintain environmental standards, private citizen actions are more likely to succeed. The imminence of the passage of NAFTA, however, demands greater international agency authority and more effective and efficient court-based remedies to address preservation and pollution abatement of transboundary waters.

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369. *See* Kneese, *supra* note 229, at 3 (discussing environmental problems at U.S.-Mexican border); Gorrie, *supra* note 15 (discussing environmental problems at U.S.-Canadian border); 33 U.S.C. § 1365(a) (1988) (setting forth private citizen statute of CWA).

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