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TRANSBOUNDARY POLLUTION: HARMONIZING INTERNATIONAL AND DOMESTIC LAW

Noah D. Hall*

Addressing transnational pollution requires both international and domestic law. Transnational pollution is an international problem that demands and deserves the attention of international legal mechanisms such as treaties, agreements, arbitration, and international management and governance. At the same time, transnational pollution problems can often be addressed more effectively and efficiently through the domestic legal system. An ideal approach is to harmonize transnational pollution management and dispute resolution under international and domestic law. This Article seeks to provide pragmatic, feasible, and politically realistic solutions to transnational pollution by harmonizing international and domestic law. However, given the diversity in geography, domestic legal systems, and political realities that frame transnational pollution problems around the world, a specific pragmatic solution in one region may be useless or impossible in another region. Thus, this Article focuses on transnational pollution problems and harmonizing the relevant international and domestic laws of one transnational region, the United States-Canada border, with the hope that it may provide lessons and potential models that will be valuable to policy makers and scholars elsewhere.

INTRODUCTION

Transboundary pollution, defined as “pollution whose physical origin is situated wholly or in part within the area under the jurisdiction of one [state] and which has adverse effects, other than effects of a global nature, in the area under the jurisdiction of [another state],”¹ is one of the oldest and most persistent problems in environmental law. While transboundary pollution problems can be found along political borders at any level of government, international transboundary pollution has proved particularly difficult to address. The challenge in creating and enforcing a

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1. Agreement on Air Quality, U.S.-Can., art. I(2), Mar. 13, 1991, 30 I.L.M. 676, 679 (1991) [hereinafter Air Quality Agreement] (alteration in original).

transnational pollution control regime lies in harmonizing international and domestic law. Substantively, the principles and norms regarding transboundary pollution are well-established and compatible, if not identical, under international and domestic law. However, the mechanisms for effectuating transnational pollution principles through international and domestic law are very different, and the two approaches often resemble ships passing in the night, unaware of each other's presence and the potential for both harmonious interaction and collision.

Addressing transnational pollution requires both international and domestic law. Transnational pollution is an international problem that demands and deserves the attention of international legal mechanisms such as treaties, agreements, arbitration, and international management and governance. At the same time, transnational pollution problems can often be addressed more effectively and efficiently through the domestic legal system. Legal control of domestic pollution seeks to achieve environmental protection, cost internalization, fairness, and equity. Legal control of transnational pollution shares these aims, with the additional goals of respecting state sovereignty and preserving relations between countries. These diverse and potentially conflicting goals are best served by harmonizing transnational pollution management and dispute resolution under international and domestic law.

This Article seeks to provide pragmatic, feasible, and politically realistic solutions to transnational pollution by harmonizing international and domestic law. However, given the diversity in geography, domestic legal systems, and political realities that frame transnational pollution problems around the world, a specific pragmatic solution in one region may be useless or impossible in another region. Thus, this Article focuses on transnational pollution problems and harmonizing the relevant international and domestic laws of one transnational region, the United States-Canada border, with the hope that it may provide lessons and potential models that will be valuable to policy makers and scholars elsewhere.

Using the United States and Canada to explore this topic has several advantages. First, the natural resources at stake along the United States-Canada border, most notably their shared fresh water, are globally significant and critically important to the people and economies of both countries. The United States and Canada share a 5000 mile border that includes 150 rivers and lakes, a geographic setting that has "provided ample opportunity for the

generation of international environmental disputes.”² Included in these boundary lakes and rivers are the Great Lakes and St. Lawrence River, the world’s largest surface freshwater system, containing ninety-five percent of the fresh surface water in the United States and twenty percent of the world’s supply.³ About forty million Americans and Canadians rely on the shared Great Lakes waters for their drinking supply.⁴ The boundary crosses other major river systems, perhaps most notably the Columbia River, which flows from British Columbia to Washington State and Oregon and is a critical economic and environmental resource for the Pacific Northwest region.

Second, transboundary pollution moves in both directions along the United States-Canada border in roughly equivalent proportions, with no clear “upstream” or “downwind” state. This is in part due to the physical setting of the major rivers and waterways shared by the two countries. Almost half of the waterways flow from the United States to Canada (and just over half flow from Canada to the United States), creating an almost perfect risk of reciprocity for transboundary water pollution.⁵ This reciprocal balance also exists with air pollution, according to a recent analysis of United States and Canadian pollution data in the Great Lakes region (the most heavily industrialized boundary region). According to data from Canada’s National Pollutant Release Inventory and the United States’ Toxics Release Inventory, in 2002, Canadian facilities released approximately forty-nine percent of the total air pollutants in the region, while U.S. facilities released approximately fifty-one percent.⁶

2. Catherine A. Cooper, *The Management of International Environmental Disputes in the Context of Canada-United States Relations: A Survey and Evaluation of Techniques and Mechanisms*, 24 CAN. Y.B. INT’L L. 247, 249 (1986); see also 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, 112 (1991).

3. See J. David Prince, *State Control of Great Lakes Water Diversion*, 16 WM. MITCHELL L. REV. 107, 109 (1990); see also GREAT LAKES COMM’N, TOWARD A WATER RESOURCES MANAGEMENT DECISION SUPPORT SYSTEM FOR THE GREAT LAKES-ST. LAWRENCE RIVER BASIN 9 (2003), available at <http://www.glc.org/wateruse/wtmdss/finalreport/pdf/WR-ExSum-2003.pdf>.

4. INT’L JOINT COMM’N, PROTECTION OF THE WATERS OF THE GREAT LAKES: FINAL REPORT TO THE GOVERNMENTS OF CANADA AND THE UNITED STATES 5 (2000), available at <http://www.ijc.org/php/publications/html/finalreport.html>.

5. See David G. Lemarquand, *Preconditions to Cooperation in Canada-United States Boundary Waters*, 26 NAT. RESOURCES J. 221, 223 (1986).

6. See POLLUTION WATCH, PARTNERS IN POLLUTION: AN ASSESSMENT OF CONTINUING CANADIAN AND UNITED STATES CONTRIBUTIONS TO GREAT LAKES POLLUTION 7 (2006), available at <http://www.pollutionwatch.org/pub/partners.jsp>. Of the 101,907,242 total kilograms of pollutants released into the air from reporting facilities in the Great Lakes region

Finally, in addition to the environmental setting, the United States and Canada have one of the longest and most comprehensive transboundary environmental legal relationships. The Boundary Waters Treaty of 1909⁷ and the Trail Smelter arbitration⁸ provided precedents for international environmental law that are still relevant almost a century later. In the past few decades, there has been tremendous growth in both international and domestic legal responses to transboundary pollution problems.⁹ This rich body of material allows a thorough analysis of the relative strengths and weaknesses of international and domestic law regarding transnational pollution.

Using the United States and Canada as a case study, this Article first discusses in Part I the substantive transboundary and transnational pollution principles that have been established under international and domestic law. Substantively, the basic international transboundary pollution principles, as articulated in the Boundary Waters Treaty, the Trail Smelter arbitration, and more recent international soft law declarations, essentially mirror domestic transboundary pollution law under United States Supreme Court precedents.¹⁰ This is neither a coincidence nor the result of independent evolutionary paths reaching a similar outcome. Rather, the international and domestic legal systems expressly relied on each other in arriving at the substantive principles that are now widely accepted.¹¹ This similarity of international and domestic transboundary principles makes the need for harmonizing the application and enforcement of those principles even more striking.

Part II of this Article analyzes the international law mechanisms for addressing transnational pollution between the United States and Canada. Part II also examines the binational governance and arbitration mechanisms for transnational pollution control and dispute resolution that resulted from the landmark precedents of the Boundary Waters Treaty and Trail Smelter. More recent international agreements, notably the Great Lakes Water Quality

in 2002, 49,471,016 kilograms came from Canadian facilities, while 52,436,225 came from U.S. facilities. *Id.* at 8.

7. Treaty Relating to Boundary Waters between the United States and Canada, U.S.-Gr. Brit. (for Can.), Jan. 11, 1909, 36 Stat. 2448 [hereinafter Boundary Waters Treaty].

8. Trail Smelter Arbitration Tribunal (U.S.A. v. Can.) (*Trail Smelter I*), 3 R.I.A.A. 1911 (1938); further proceedings (*Trail Smelter II*), 3 R.I.A.A. 1938 (1941).

9. See Thomas W. Merrill, *Golden Rules for Transboundary Pollution*, 46 DUKE L.J. 931, 931-35 (1997); see also Agreement on Air Quality, *supra* note 1; notes 242-243 and accompanying text.

10. See *infra* Part I.

11. See *infra* notes 79-81 and accompanying text.

Agreement¹² and the Air Quality Agreement,¹³ demonstrate the modern challenges and advantages of using international law to address transnational pollution.

Part III considers how transnational pollution plaintiffs have used the United States' domestic legal system to address transnational pollution. These plaintiffs have had success in using domestic laws and the enforceable judgments of domestic courts to prevent and remedy transboundary pollution harms. To analyze the value and limitations of domestic law, this discussion looks separately at actions brought by Canadian plaintiffs against American defendants in the United States courts, and actions brought by American plaintiffs against Canadian polluters in the United States courts, as this distinction differentiates many of the procedural barriers and political concerns.

Part IV concludes this Article with recommendations for harmonizing application and enforcement of transnational pollution principles under international and domestic law. Substantively, federal and state/provincial governments should incorporate compliance with international transboundary pollution agreements into the permitting standards for relevant domestic laws. Procedurally, federal and state/provincial governments should remove discriminatory procedural barriers to give foreign plaintiffs equal access to domestic courts for resolving transboundary pollution disputes. These modest recommendations would harmonize the international and domestic legal regimes without undermining national and state sovereignty, as domestic governance remains the primary legal authority in applying transnational pollution principles. As discussed in detail in the conclusion, these recommendations would also provide an increased role for the citizens and sub-national governments most affected by transnational pollution while minimizing the risk of disturbing international relations through a local environmental dispute.

I. SUBSTANTIVE TRANSBOUNDARY POLLUTION PRINCIPLES

Substantively, transboundary pollution principles under both international and domestic law are sufficiently similar to allow harmonization in application and enforcement. Absolutist

12. Great Lakes Water Quality Agreement, U.S.-Can., Apr. 15, 1972, 23 U.S.T. 301 [hereinafter GLWQA 1972], amended by 30 U.S.T. 1383 (Nov. 22, 1978) [hereinafter GLWQA 1978], amended by T.I.A.S. No. 11551 (Nov. 18, 1987) [hereinafter GLWQA 1987].

13. Air Quality Agreement, *supra* note 1.

approaches that either entitle the polluting state to do whatever it wants regardless of the consequences to its neighbors under the guise of absolute territorial sovereignty, or outlaw any pollution that would harm a neighboring state under the guise of absolute territorial integrity, were rejected long ago.¹⁴ Instead, the general substance of transboundary pollution law provides a more balanced approach which requires “states to undertake due diligence to prevent significant (or substantial) transboundary environmental harm from activities within their jurisdiction or control.”¹⁵ More recently, policy makers and scholars have advanced the principle of transboundary environmental impact assessment as a necessary and logical corollary to this basic transboundary pollution principle.¹⁶ This Part discusses the evolution of these principles under both international and domestic law, concluding that the historic harmonization of substantive transboundary pollution principles makes clear the need and opportunity to harmonize the legal mechanisms to effectuate these principles.

*A. The Evolution of Transboundary Pollution Principles
Under Domestic Law*

The federalist system of the United States has given rise to numerous transboundary pollution disputes resolved through litigation before the United States Supreme Court.¹⁷ In these cases, the Supreme Court is acting as an arbiter between sovereign states, not unlike an international court or arbitration panel. Over a century ago, in one of the Court’s earliest interstate environmental law decisions, it recognized the similarities between an interstate transboundary pollution dispute and an international transboundary pollution dispute, and the potential applicability of international law in resolving matters:

[B]ecause Kansas and Colorado are States sovereign and independent in local matters, the relations between them

14. STEPHEN C. McCAFFREY, *THE LAW OF INTERNATIONAL WATERCOURSES: NON-NAVIGATIONAL USES* 112–37 (2001).

15. See JOHN H. KNOX, *The Myth and Reality of Transboundary Environmental Impact Assessment*, 96 AM. J. INT’L L. 291, 294 (2002).

16. See *id.* at 292.

17. The United States Supreme Court has original jurisdiction over disputes between states. See U.S. CONST. art. III, § 2 (“In all Cases affecting Ambassadors, other public Ministers and Consuls, and those in which a State shall be Party, the supreme Court shall have original Jurisdiction.”).

depend in any respect upon principles of international law. International law is no alien in this tribunal

. . . .

“Sitting, as it were, as an international, as well as a domestic tribunal, we apply Federal law, state law, and international law, as the exigencies of the particular case may demand.”¹⁸

Numerous other commentators have provided a detailed discussion of the evolution of the United States Supreme Court’s transboundary pollution caselaw, and it is beyond the scope of this Article.¹⁹ However, a brief review of the two most prominent and significant series of cases, *Missouri v. Illinois (I and II)*²⁰ and *Georgia v. Tennessee Copper Co. & Ducktown Sulphur, Copper & Iron Co. (Ltd.) (I and II)*,²¹ provides a basic illustration of transboundary pollution principles under domestic law.

The *Missouri* cases provided the U.S. Supreme Court with its first opportunity to consider an interstate transboundary pollution case. Prior to 1900, Chicago’s considerable sewerage, stockyard, and industrial wastes were discharged into Lake Michigan via the Chicago River.²² In 1889, the State of Illinois created a Sanitary District, which, acting as an agent of the state, subsequently undertook several drainage projects involving the Chicago River.²³ One of these projects involved the construction of an artificial channel, diverting the flow of the south branch of the Chicago River away from its natural drainage into Lake Michigan and toward the Des Plaines River, which, in turn, emptied into the Mississippi River via the Illinois River.²⁴ The State of Missouri, located downriver from the point at which the Illinois River emptied into the Mississippi River, filed suit in the United States Supreme Court alleging harm to

18. *Kansas v. Colorado*, 206 U.S. 46, 97 (1906) (quoting *Kansas v. Colorado*, 185 U.S. 125, 146–47 (1902)). It should be noted that the case involved allocation of a shared boundary water resource, not transboundary pollution, although the underlying issues and legal rules are very similar.

19. See Thomas W. Merrill, *Golden Rules for Transboundary Pollution*, 46 DUKE L. J. 931 (1997); Robert V. Percival, *The Clean Water Act and the Demise of the Federal Common Law of Interstate Nuisance*, 55 ALA. L. REV. 717 (2004).

20. *Missouri v. Illinois (Missouri II)*, 200 U.S. 496 (1906); *Missouri v. Illinois (Missouri I)*, 180 U.S. 208 (1901).

21. *Georgia v. Tenn. Copper Co. (Georgia II)*, 237 U.S. 474 (1915); *Georgia v. Tenn. Copper Co. (Georgia I)*, 206 U.S. 230 (1907).

22. *Missouri I*, 180 U.S. at 212–13.

23. *Id.* at 210, 241–42.

24. *Id.* at 208, 211; *Missouri II*, 200 U.S. at 517.

Missouri towns and citizens situated on the Mississippi River, and seeking an injunction against the use of the channel for waste disposal purposes.²⁵ Missouri's suit relied primarily on a common law theory of nuisance.²⁶

Illinois' initial defense was procedural—it filed a demurrer alleging both lack of jurisdiction under Article III's "case or controversy" requirement and lack of adequate pleading.²⁷ The *Missouri I* court focused primarily on whether the United States Supreme Court could legitimately exercise jurisdiction over the states' dispute, whereas the *Missouri II* Court addressed the merits of Missouri's nuisance claim. The *Missouri I* Court engaged in a thorough review of the history, development, and interpretation of Article III of the U.S. Constitution. The Court determined that because partial relinquishment by the individual states of their sovereign powers concerning war and diplomacy was necessary for the establishment of a united and federalist nation, the U.S. Supreme Court must necessarily furnish a forum for the resolution of disputes between states:

If Missouri were an independent and sovereign State all must admit that she could seek a remedy by negotiation, and, that failing, by force. Diplomatic powers and the right to make war having been surrendered to the general government, it was to be expected that upon the latter would be devolved the duty of providing a remedy and that remedy, we think, is found in the constitutional provisions we are considering [providing for original suits in the Supreme Court in disputes between two states].²⁸

Although the *Missouri I* Court recognized that an alternative method for resolving states' disputes had previously been described in the Articles of Confederation, Article III of the Constitution both superseded and retained the Congressional role contemplated by the framers.²⁹ Under the Articles of Confedera-

25. *Missouri II*, 200 U.S. at 510; *Missouri I*, 180 U.S. at 215–16.

26. The State of Missouri buttressed its nuisance claim with allegations that the State of Illinois was not only polluting the Mississippi River with Chicago's waste, but that Illinois was also violating riparian principles by taking water out of its natural watershed. *Missouri II*, 200 U.S. at 526; *Missouri I*, 180 U.S. at 212. The *Missouri II* Court ultimately decided the case on the merits of the waste-as-nuisance claim, and did not entertain the watershed-diversion allegation as a sufficient basis for the suit. *Missouri II*, 200 U.S. at 526.

27. *Missouri I*, 180 U.S. at 216–18, 238.

28. *Id.* at 241 (alteration in original).

29. The Ninth Article of the Articles of Confederation had provided for a tribunal method of state-state dispute resolution, whereby the offended state would petition Congress to assemble the functional equivalent of an arbitration panel to hear and decide the controversy. Articles of Confederation, art. IX. Interestingly, the methods described in the Ninth Article, although not ultimately chosen to resolve state-state disputes internal to the

tion, Congress had a direct and central role in the dispute resolution process.³⁰ By contrast, under the Article III rubric, the U.S. Supreme Court usurped Congress' direct and central role. Despite this limitation, Congress retained the ability to affect judicial operations through the exercise of its regulatory power.³¹

The language and analysis of *Missouri I* are fairly convoluted, and perhaps the best statement of the central principles governing the method of resolving domestic transboundary disputes which emerge from the case are provided by Chief Justice Fuller's dissent:

Controversies between the States of this Union are made justiciable by the Constitution because other modes of determining them were surrendered; and before that jurisdiction, which is intended to supply the place of the means usually resorted to by independent sovereignties to terminate their differences, can be invoked, it must appear that the States are in direct antagonism as States.³²

The *Missouri II* Court confirmed the *Missouri I* jurisdictional requirements of state action and direct antagonism, and added two others. First, that the antagonism be susceptible to judicial resolution, and second, that the antagonism be serious or significant enough to warrant judicial involvement: "[b]efore this court ought to intervene the case should be of serious magnitude, clearly and fully proved, and the principle to be applied should be one which the court is prepared deliberately to maintain against all considerations on the other side."³³ Absent express authorization by Congress, harm to any of a state's traditional sovereign interests (e.g., pecuniary investments and property; health, safety, and welfare of citizens; interference with boundaries or borders), provides a sufficient basis for suit against a sister state under this precedent.³⁴ Additionally, indirect action by a state or direct action by a state's entity or subdivision (e.g., the Chicago Sanitary District), satisfies the state action requirement.³⁵

Although Missouri won on the jurisdictional issue in *Missouri I*, it ultimately lost on the nuisance issue in *Missouri II*. The Court held

United States, do mirror the methods employed by international tribunals, such as the International Joint Commission. See *Missouri I*, 180 U.S. at 220–21.

30. See *id.*

31. See U.S. CONST. art. III, § 2; Judiciary Act of 1789.

32. *Missouri I*, 180 U.S. at 249 (Fuller, J., dissenting).

33. *Missouri II*, 200 U.S. at 521.

34. See *Missouri I*, 180 U.S. at 236–37, 241.

35. See *id.* at 237–38, 241.

that Missouri could not make an adequate proof of causation—that the scientific evidence presented could not establish Illinois’ discharge of sewage into the Chicago River as the sole or primary source of pollution in the Mississippi River.³⁶ The Court dismissed the suit, concluding that Missouri’s “case depends upon an inference of the unseen.”³⁷

The *Georgia I* and *Georgia II* cases followed closely on the heels of the *Missouri* cases, and added some important principles to the developing jurisprudence of transboundary pollution. In these cases, the State of Georgia, pursuant to direction from the Georgia legislature and Governor, filed suit in the U.S. Supreme Court to enjoin two copper companies located in the State of Tennessee from discharging noxious gases that were contaminating property located in Georgia.³⁸ Although the State of Georgia did not actually own much of the property that was harmed by the gases, the Court nonetheless recognized Georgia’s standing as sovereign to bring suit:

This is a suit by a State for an injury to it in its capacity of quasi-sovereign. In that capacity the State has an interest independent of and behind the titles of its citizens, in all the earth and air within its domain. It has the last word as to whether its mountains shall be stripped of their forests and its inhabitants shall breathe pure air. . . . When the States by their union made the forcible abatement of outside nuisances impossible to each, they did not thereby agree to submit to whatever might be done. They did not renounce the possibility of making reasonable demands on the ground of their still remaining quasi-sovereign interests; and the alternative to force is a suit in this court.³⁹

The fact that the defendants in *Georgia I* were private entities who were not governmentally affiliated with the State of Tennessee did not disqualify the suit because Georgia had previously petitioned the State of Tennessee for relief and because Georgia’s sovereign character was sufficient to meet the jurisdictional requirements of Article III.⁴⁰ Neither was Georgia defeated on a theory of laches, as the court found that Georgia had allowed a reasonable period of time for defendants to pursue efforts to reduce the emissions, or, alternatively, to show that their emissions

36. *Missouri II*, 200 U.S. at 522–26.

37. *Id.* at 522.

38. *Georgia v. Tenn. Copper Co. (Georgia I)*, 206 U.S. 230, 236 (1907).

39. *Id.* at 237 (emphasis added).

40. *Id.* at 236–39.

were not the source of the harm suffered.⁴¹ The Court ultimately granted injunctive relief limiting the defendants' emissions.⁴²

After these landmark cases, the U.S. Supreme Court continued to resolve transboundary pollution disputes between states, but added little to the underlying substantive principles discussed above.⁴³ In the past few decades, the Supreme Court has often declined to exercise its jurisdiction over these technical and time consuming disputes.⁴⁴ When it has exercised its jurisdiction, the Court's decisions have focused on the preemption of federal common law by federal regulatory statutes and the applicability of state common law to interstate transboundary pollution.⁴⁵ Nonetheless, the Supreme Court's early decisions continue to provide legal and policy precedents governing state liability for transboundary pollution. Further, these precedents have served not only subsequent domestic law, but also international law, most notably the historic Trail Smelter arbitration ruling.

B. The Evolution of Transboundary Pollution Principles Under International Law

Discussions of international transboundary pollution law often begin with the Trail Smelter arbitration, since it was the first (and still only) adjudicative precedent from an international tribunal that directly addressed the substantive law of transboundary pollution.⁴⁶ Before discussing the important ruling of the Trail Smelter arbitration, it is important to cover the prior international law developments that also shaped modern United States-Canada international transboundary pollution principles.

41. *Id.* at 239; *Georgia v. Tenn. Copper Co. (Georgia II)*, 237 U.S. 474, 475-76 (1915).

42. *Georgia II*, 237 U.S. at 477-78.

43. *See* *New Jersey v. New York*, 283 U.S. 336 (1931); *New Jersey v. City of New York*, 283 U.S. 473 (1931); *New York v. New Jersey*, 256 U.S. 296 (1921).

44. *See, e.g., Illinois v. City of Milwaukee*, 406 U.S. 91 (1972); *Ohio v. Wyandotte Chems. Corp.*, 401 U.S. 493 (1971).

45. *Int'l Paper Co. v. Ouellette*, 479 U.S. 481 (1987); *City of Milwaukee v. Illinois*, 451 U.S. 304 (1981).

46. Merrill, *supra* note 9, at 947.

1. The Harmon Doctrine and Subsequent Rejection of the Principle of Absolute Territorial Sovereignty.

The first step in the evolution of transboundary pollution principles in North America was an infamous misstep—the short lived and essentially ignored Harmon Doctrine. In the late nineteenth century, American farmers and ranchers in Colorado and New Mexico began diverting water from the Rio Grande for irrigation.⁴⁷ Mexico claimed that these diversions reduced the downstream supply of Rio Grande water for the Mexican city of Ciudad Juarez.⁴⁸ When Mexico formally complained to the United States Secretary of State, the Secretary of State requested a legal opinion from the United States Attorney General as to whether the diversions in the United States that potentially affect Mexican waters violated Mexico's rights under the principles of international law.⁴⁹

Attorney General Judson Harmon's resulting 1895 opinion claimed that the United States was under no international legal obligation to hinder its development to protect the environment of its downstream neighbor:

The fundamental principle of international law is the absolute sovereignty of every nation, as against all others, within its own territory. . . . No believer in the doctrine of natural servitudes has ever suggested one which would interfere with the enjoyment by a national within its own territory of whatever was necessary to the development of its resources or the comfort of its people. The immediate as well as the possible consequences of the right asserted by Mexico show that its recognition is entirely inconsistent with the sovereignty of the United States over its national domain. Apart from the sum demanded by way of indemnity for the past, the claim involves not only the arrest of further settlement and development of large regions of country, but the abandonment, in great measure at least, of what has already been accomplished.⁵⁰

While the Harmon Doctrine is the leading statement of the concept of absolute territorial sovereignty, the doctrine was never

47. McCaffrey, *supra* note 14, at 114.

48. *Id.*

49. *Id.* While the dispute was over the upstream diversion of water that allegedly affected downstream water users in another state, the nature of the problem and the applicable law is analogous to pollution of water (or any other medium) that affects downstream (or downwind) users of the resource in another state.

50. 21 Op. Att'y Gen. 274, 281–82 (1895).

actually applied by the United States in the Rio Grande water dispute with Mexico or any other international transboundary environmental dispute.⁵¹ Perhaps recognizing that Attorney General Harmon's opinion was more properly viewed as an advocacy position for a particular dispute than a statement of international law or a basis to create international policy, the United States eventually resolved the Rio Grande dispute with a treaty "providing for the *equitable* distribution of the waters of the Rio Grande."⁵² Several decades later, in testimony before the United States Senate Committee on Foreign Relations, then Assistant Secretary of State Dean Acheson put to rest the legal arguments of Harmon's opinion: "[Harmon's opinion argued] that an upstream nation by unilateral act in its own territory can impinge upon the rights of a downstream nation; this is hardly the kind of legal doctrine that can be seriously urged in these times."⁵³

Putting aside altruistic concerns of fairness, equity, and protection of international environmental resources, the United States had good reason to distance itself from its former Attorney General's opinion. While the United States is the upstream state on the Rio Grande (and most other major waterways shared with Mexico), it is the downstream state on just over half of the major waterways shared with Canada.⁵⁴ Not long after the Rio Grande dispute and Harmon's opinion, the United States began negotiations with Canada over a new treaty to govern their shared boundary waters, and given the reciprocal nature of the shared United States-Canada waterways,⁵⁵ the principle of absolute territorial sovereignty was highly undesirable.

2. The Boundary Waters Treaty of 1909: The Beginning of United States-Canada Transboundary Pollution Law

The Boundary Waters Treaty of 1909⁵⁶ has provided both a substantive and procedural foundation for addressing transboundary pollution between the United States and Canada for nearly a

51. See McCaffrey, *supra* note 14, at 76-111.

52. Convention Providing for the Equitable Distribution of the Waters of the Rio Grande for Irrigation Purposes, U.S.-Mex., May 21, 1906, 34 Stat. 2953 (emphasis added).

53. *Hearings on Treaty with Mexico Relating to Utilization of Waters of Certain Rivers Before the Comm. on Foreign Relations*, 79th Cong. 1762 (1945) (alteration in original).

54. Lemarquand, *supra* note 5, at 223.

55. *Id.*

56. Boundary Waters Treaty, *supra* note 7, at 2448.

century.⁵⁷ The origins of the Boundary Water Treaty date back to 1903, when the United States and Canada established the International Waterways Commission to address potentially conflicting rights in the countries' shared waterways.⁵⁸ The International Waterways Commission soon recommended that the United States and Canada adopt legal principles to govern uses of their shared waters and form an international body to further advance protection of boundary waters.⁵⁹ In 1907, the International Waterways Commission drafted a proposed treaty which was modified through negotiations and eventually led to the Boundary Waters Treaty of 1909.⁶⁰

According to a leading authority on the history of the Boundary Waters Treaty, navigation and access to boundary waters, not transboundary pollution, was the principle concern at the time the treaty was negotiated.⁶¹ Nonetheless, the first draft of the proposed treaty included a provision forbidding any water pollution having transboundary consequences.⁶² This position, advanced by Canada, represented the absolute territorial integrity principle. Absolute territorial integrity prevents an upstream state from allowing any transboundary pollution that affects the downstream state. This principle would in effect prevent any utilization of the environment or emissions in a region that is upwind or upstream of another state.⁶³ Absolute territorial sovereignty and absolute territorial integrity can be viewed as two sides of the same coin—absolutist approaches to transboundary pollution that do little more than advance the immediate interests of a particular state in a particular circumstance.⁶⁴

The United States Secretary of State rejected Canada's proposal, agreeing only to an anti-pollution provision limited to defined

57. This Section discusses the role of the Boundary Waters Treaty in advancing the substantive international principles regarding transboundary pollution; a thorough discussion of the Boundary Waters Treaty as an international law mechanism for managing transboundary pollution problems and resolving disputes is found in Part III.

58. Jennifer Woodward, Note, *International Pollution Control: The United States and Canada—The International Joint Commission*, 9 N.Y.L. SCH. J. INT'L & COMP. L. 325, 326 (1988) (citing INT'L JOINT COMM'N, SIXTH ANNUAL REPORT ON WATER QUALITY 10 (1978)).

59. *Id.*

60. *Id.*

61. F.J.E. Jordan, *Great Lakes Pollution: A Framework for Action*, 5 OTTAWA L. REV. 65, 67 (1971).

62. *Id.* (citing Sir George C. Gibbons Papers, Vol. 14, Fol. 3 (Public Archives of Canada)).

63. McCaffrey, *supra* note 14, at 128–29.

64. See *id.* at 128 (“While the doctrine of absolute territorial sovereignty insists upon the complete freedom of action of the upstream state, that of absolute territorial integrity maintains the opposite: that the upstream state may do nothing that might affect the natural flow of the water [or any pollution] into the downstream state.”).

boundary waters, a far more narrow approach than addressing any transboundary pollution of water.⁶⁵ “Boundary waters” are defined by the treaty as:

the waters from main shore to main shore of the lakes and rivers and connecting waterways . . . along which the international boundary between the United States and . . . Canada passes, [sic] including all bays, arms, and inlets thereof, but not including tributary waters which in their natural channels would flow into such lakes, rivers, and waterways, or waters flowing from such lakes, rivers, and waterways, or the waters of rivers flowing across the boundary.⁶⁶

Article IV of the Boundary Waters Treaty then provides: “It 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.”⁶⁷ Thus, while the Boundary Waters Treaty’s anti-pollution provision is more limited than Canada would have liked, excluding many tributaries that can carry pollution across the border, it does govern four of the five Great Lakes (Lakes Superior, Huron, Erie, and Ontario, as only Lake Michigan sits entirely within the United States⁶⁸) and many other rivers and lakes that straddle the United States-Canadian border.

65. See Jordan, *supra* note 61, at 67 (citing Sir Wilfrid Laurier Papers, Vol. 755, No. 216108–216112 (1908) and Chandler P. Anderson Papers, box 65, 197–203 (Manuscript Division, Library of Congress)).

66. Boundary Waters Treaty, *supra* note 7, Preliminary Article, 36 Stat. at 2448–49.

67. *Id.* art. IV, 36 Stat. at 2450. The treaty also protects water quantity as well as water quality, restricting the ability of either party to use or divert boundary waters “affecting the natural level or flow of boundary waters on the other side of the [border]line . . .” *Id.* art. III, 36 Stat. at 2449–50 (alteration in original).

68. While Lake Michigan is not subject to most of the treaty terms because it is not a boundary water, the Boundary Waters Treaty does extend its guarantees to the mutual right of free navigation to the waters of Lake Michigan. See *id.* art. I, 36 Stat. at 2449. The express extension of the Article I protections for navigation to Lake Michigan makes the exclusion of Lake Michigan from the rest of the Boundary Waters Treaty provisions more strikingly evident. See Daniel K. DeWitt, Note, *Great Words Needed for the Great Lakes: Reasons to Rewrite the Boundary Waters Treaty of 1909*, 69 IND. L.J. 299, 306–07 (1993).

3. The Trail Smelter Arbitration: Unique Precedent for International Transboundary Pollution Principles

The Trail Smelter arbitration⁶⁹ demands a prominent role in any discussion of transboundary pollution principles and practice.⁷⁰ The decision has been described “as having laid out the foundations of international environmental law, at least regarding transfrontier pollution.”⁷¹ It remains “the only decision of an international court or tribunal that deals specifically, and on the merits, with transfrontier pollution.”⁷²

The facts of the dispute are best told by quoting directly from the final 1941 arbitration decision:

In 1896, a smelter was started under American auspices near the locality known as Trail [in British Columbia, located on the Columbia River about seven miles north of the United States border and Washington State.] In 1906, the Consolidated Mining and Smelting Company of Canada, Limited [later known as COMINCO] . . . acquired the smelter plant at Trail Since that time, the Canadian company, without interruption, has operated the Smelter, and from time to time has greatly added to the plant until it has become one of the best and largest equipped smelting plants on the American continent. In 1925 and 1927, two stacks of the plant were erected to 409 feet in height and the Smelter greatly increased its daily smelting of zinc and lead ores. This increased production resulted in more sulphur dioxide fumes and higher concentrations being emitted into the air. In 1916, about 5,000 tons of sulphur per month were emitted; in 1924, about 4,700 tons; in 1926, about 9,000 tons—an amount which rose near to 10,000 tons per month in 1930. In other words, about 300–350 tons of sulphur were emitted daily in 1930

69. *Trail Smelter I*, 3 R.I.A.A. 1911 (1938); *Trail Smelter II*, 3 R.I.A.A. 1938 (1941).

70. As with the above discussion of the Boundary Waters Treaty, this section discusses the Trail Smelter arbitration as it relates to the substantive principles regarding transboundary pollution liability; a discussion of the procedural need and process for international arbitration to remedy transboundary pollution harms is found in Part II.

71. ALEXANDRE KISS & DINAH SHELTON, *INTERNATIONAL ENVIRONMENTAL LAW* 107 (1991).

72. EDITH BROWN WEISS ET AL., *INTERNATIONAL ENVIRONMENTAL LAW AND POLICY* 257 (1998).

From 1925, at least, to 1937, damage occurred [to private farms and timber lands] in the State of Washington resulting from the sulphur dioxide emitted from the Trail Smelter⁷³

Due to procedural barriers discussed in detail in Part II, *infra*, the Washington landowners could not seek relief through domestic litigation in the courts of either British Columbia or Washington State. After attempting to resolve the dispute through other international dispute resolution mechanisms,⁷⁴ Canada and the United States eventually agreed to refer the matter to a three-member arbitration tribunal composed of an American, a Canadian, and an independent Chairman (a Belgian national was ultimately appointed).⁷⁵ The arbitration tribunal was charged with several specific questions regarding the transboundary pollution,⁷⁶ but the most significant charge regarding substantive transboundary pollution principles was to decide whether the Canadian smelter should be required to cease causing damage in the State of Washington in the future, and what “measures or regime, if any, should be adopted or maintained” by the smelter, in addition to future indemnity and compensation.⁷⁷ To answer these questions, the tribunal was directed to “apply the law and practice followed in dealing with cognate questions in the United States of America as well as International Law and Practice, and shall give consideration to the desire of the High Contracting Parties to reach a solution just to all parties concerned.”⁷⁸

The arbitration tribunal’s ultimate 1941 decision⁷⁹ answering these questions became a historic precedent for international transboundary pollution law. The tribunal first concluded that there was no need to choose between the law of the United States or international law to decide the case, “as the law followed in the United States in dealing with the quasi-sovereign rights of the States of the Union, in the matter of [transboundary] pollution, whilst more definite, is in conformity with the general rules of

73. *Trail Smelter II*, 3 R.I.A.A. at 1945 (alteration in original).

74. *See infra* Part II.

75. *See* Convention Relative to the Establishment of a Tribunal to Decide Questions of Indemnity and Future Regime Arising from the Operation of Smelter at Trail, British Columbia, U.S.-Can., April 15, 1935, art. II, 49 Stat. 3245, 3246 (1935) (effective Aug. 3, 1935) [hereinafter “Trail Smelter Convention”]; *Trail Smelter I*, 3 R.I.A.A. at 1911.

76. *See infra* Part II.

77. Trail Smelter Convention, *supra* note 75, art. III, 49 Stat. at 3246.

78. *Id.* art. IV, 49 Stat. at 3246.

79. *Trail Smelter II*, 3 R.I.A.A. 1911 (1938).

international law.”⁸⁰ The tribunal first cited a leading international law authority: “As Professor Eagleton puts in (*Responsibility of States in International Law*): ‘A State owes at all times a duty to protect other States against injurious acts by individuals from within its jurisdiction.’”⁸¹

The tribunal supplemented this general rule with a comprehensive summary of the United States Supreme Court’s decisions on interstate transboundary pollution, including the *Missouri v. Illinois*⁸² and *Georgia v. Tennessee Copper Company and Ducktown Sulphur, Copper & Iron Company (Limited)*⁸³ cases discussed above.⁸⁴ Taking the decisions in whole, the tribunal stated the following substantive principle for both international and domestic transboundary pollution law:

[N]o State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the cause is of serious consequence and the injury is established by clear and convincing evidence.⁸⁵

The tribunal further held “that the Dominion of Canada is responsible in international law for the conduct of the Trail Smelter.”⁸⁶ Therefore, it is “the duty of the Government of the Dominion of Canada to see to it that this conduct should be in conformity with the obligation of the Dominion under international law as herein determined.”⁸⁷

Applying these principles to the dispute at hand, the tribunal required the Trail Smelter to “refrain from causing any damage through fumes in the State of Washington.”⁸⁸ In another specific reference to harmonizing substantive transboundary pollution law principles, the tribunal specifically noted that such damage would be actionable under United States law in a suit between private individuals.⁸⁹ The tribunal ordered a detailed management regime

80. *Id.* at 1963 (alteration in original).

81. *Id.* (quoting CLYDE EAGLETON, *Responsibility of States in International Law* 80 (1928) (internal citation omitted)).

82. *Missouri II*, 200 U.S. 496 (1906); *Missouri I*, 180 U.S. 208 (1901).

83. *Georgia II*, 237 U.S. 474 (1915); *Georgia I*, 206 U.S. 230 (1907).

84. *Trail Smelter II*, 3 R.I.A.A. at 1964–65.

85. *Id.* at 1965 (alteration in original).

86. *Id.*

87. *Id.* at 1966.

88. *Id.*

89. *Id.* However, procedural barriers at the time would have prevented a court from hearing the case. *See* discussion *infra* Part II.

and regulations for the smelter to prevent sulphur dioxide emissions at levels that cause damage to property in Washington State, and allowed future claims for damages that might occur despite the imposed management regime.⁹⁰

4. Modern Customary and 'Soft Law' Transboundary Pollution Principles

While the Trail Smelter arbitration remains the only international adjudicative decision specifically addressing transboundary pollution,⁹¹ the precedent has been reaffirmed in numerous international declarations (nonbinding pronouncements known as "soft law"⁹²) in recent decades. Most significantly, the Trail Smelter arbitration ruling was incorporated into the United Nations Conference on the Human Environment Stockholm Declaration of 1972, which provides in its Principle 21 that:

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.⁹³

The Stockholm principle has since been reaffirmed in numerous other charters and declarations, most notably in Principle 2 of the United Nations Conference on Environment and Development Rio Declaration of 1992⁹⁴ and in section 601 of the Restatement (Third) of the Foreign Relations Law of the United States.⁹⁵

90. See *id.* at 1966–81.

91. This may be due, in part, to the fact that the procedural barriers which prevented resolution of the Trail Smelter dispute in domestic courts have been largely overcome, such that a similar dispute would no longer require international arbitration. See *infra* Part III.

92. See WEISS, *supra* note 72, at 189–91. Soft law declarations are not binding, but may reflect the norms and moral obligations adopted by states. See *id.*

93. United Nations Conference on the Human Environment, Stockholm, Sweden, June 5–16 1972, *Stockholm Declaration of the United Nations*, 11 I.L.M. 1416, 1420 (June 16, 1972).

94. See United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, June 3–14, 1992, *Rio Declaration on Environment and Development*, princ. 2, U.N. Doc. A/CONF.151/26, 31 I.L.M. 874, 876 (June 14, 1992).

95. RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS LAW OF THE UNITED STATES § 601(1) (1987) ("A state is obligated to take such measures as may be necessary, to the

While the principle is often declared, it has not been applied to actually prohibit all transboundary harm.⁹⁶ Instead, the principle is often considered to be limited to “*significant or substantial*” transboundary harm, and perhaps further limited to include only a duty by the source state to “undertake due diligence” to prevent significant or substantial transboundary pollution harms.⁹⁷ Some of the debate regarding the principle centers on whether it actually requires (or should require) strict liability for all transboundary pollution harms.⁹⁸ For purposes of this discussion, it is sufficient to recognize that Stockholm Principle 21 and its progeny establish some duty by states to limit transboundary pollution that causes an unreasonable level of harm to their neighbors.

*C. Transboundary Environmental Impact Assessment
Under Domestic and International Law*

Environmental impact assessment is a key component of almost every modern domestic environmental law regime, and transboundary environmental impact assessment is considered a basic element of international environmental law. The evolution of transboundary environmental impact assessment law is best viewed from two directions: as an extension of domestic environmental impact assessment laws, and as a procedural duty related to preventing transboundary pollution harms.⁹⁹ This dual evolution creates an obvious opportunity for harmonizing domestic and international transboundary pollution law, as discussed in Part IV. This brief section sets the stage by discussing the basic substantive principle of transboundary environmental impact assessment under both domestic and international law.

Environmental impact assessment was one of the first innovations of modern environmental law. In 1969, the United States Congress passed the National Environmental Policy Act (“NEPA”)¹⁰⁰ to ensure that agencies of the federal government con-

extent practicable under the circumstances, to ensure that activities within its jurisdiction or control . . . are conducted so as not to cause significant injury to the environment of another state or of areas beyond the limits of national jurisdiction.”).

96. See Knox, *supra* note 15, at 293 (“Although some scholars have still argued that all transboundary environmental harm should be presumptively unlawful, the idea that Principle 21 [of the 1972 Stockholm Declaration] prohibits all transboundary harm has generally been rejected.”) (alteration in original).

97. *Id.* at 293–94.

98. See Merrill, *supra* note 19.

99. See Knox, *supra* note 15.

100. National Environmental Policy Act of 1969, 42 U.S.C. § 4321 (2000).

sider the environmental effects of proposed actions. NEPA was designed to “promote environmentally sensitive governmental decision-making, without prescribing any substantive standards,”¹⁰¹ and “guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision.”¹⁰² The heart of NEPA is the requirement that a federal agency prepare an Environmental Impact Statement (“EIS”) whenever a proposed major federal action will significantly affect the quality of the human environment.¹⁰³ While NEPA’s environmental impact assessment requirement is only procedural—it does not mandate a specific outcome, but only that potential harms are studied—it often results in better environmental protection.¹⁰⁴

The statutory language of NEPA is silent on transboundary environmental impact assessment, but the federal government has formally recognized the need to consider transboundary effects under NEPA. In 1997, the U.S. Council on Environmental Quality (“CEQ”)¹⁰⁵ issued Guidance on NEPA Analyses for Transboundary Impacts.¹⁰⁶ The purpose of the guidance was “to clarify the applicability of [NEPA] to proposed federal actions in the United States . . . that may have transboundary effects extending across the border and affecting another country’s environment.”¹⁰⁷ The guidance recognized that as a policy matter, NEPA’s environmental impact assessment procedures should apply to transboundary issues:

Neither NEPA nor the [CEQ] regulations implementing the procedural provisions of NEPA define agencies’ obligations to analyze effects of actions by administrative boundaries. Rather, the entire body of NEPA law directs federal agencies to analyze the effects of proposed actions to the extent they are reasonably foreseeable consequences of the proposed ac-

101. *Anderson v. Evans*, 314 F.3d 1006, 1016 (9th Cir. 2002).

102. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

103. *Sierra Club v. Peterson*, 717 F.2d 1409, 1412 (D.C. Cir. 1983); *see also* 42 U.S.C. § 4332(2)(C).

104. For various evaluations of the effects of NEPA on agency decision-making, *see* DANIEL R. MANDELKER, *NEPA LAW AND LITIGATION* 11–1 to 11–22 (Lisa M. Belopotosky & Nicole D’Alessandro eds., 2d ed., Thomson/West 1992) (1984).

105. The CEQ was established by NEPA as an agency within the Executive Office of the President charged with the task of ensuring that federal agencies meet their obligations under NEPA. *See* 42 U.S.C. §§ 4342, 4344.

106. Council on Environmental Quality Guidance on NEPA Analyses for Transboundary Impacts (July 1, 1997), *available at* <http://ceq.eh.doe.gov/nepa/regs/transguide.html>.

107. *Id.* at *1 (alteration in original).

tion, regardless of where those impacts might occur. Agencies must analyze indirect effects, which are caused by the action, are later in time or farther removed in distance, but are still reasonably foreseeable, including growth-inducing effects and related effects on the ecosystem, as well as cumulative effects.¹⁰⁸

Based on these policy considerations and legal interpretation of NEPA,¹⁰⁹ the CEQ “determined that agencies must include analysis of reasonably foreseeable transboundary effects of proposed actions in their analysis of proposed actions in the United States.”¹¹⁰

For over twenty years, environmental impact assessment has been a broadly accepted practice at both the federal and provincial levels in Canada.¹¹¹ The development of environmental impact assessment in Canada was heavily influenced by NEPA in the United States.¹¹² As with the CEQ guidance, Canadian law does not provide additional procedural requirements for projects with potential transboundary effects, but it does include such projects as those subject to environmental impact assessment, and specifies that environmental impact assessments consider transboundary effects.¹¹³

The concept of environmental impact assessment has been widely adopted around the world, as over one hundred countries (including Canada as discussed below) have since enacted domestic environmental assessment laws.¹¹⁴ From an international law perspective, transboundary environmental impact assessment is logically required as a first step to prevent international transboundary pollution, since addressing a harm requires knowing something about it.¹¹⁵ The United Nations Conference on Environment and Development Rio Declaration of 1992 expressly provided for the critical role of transboundary environmental impact assessment:

108. *Id.* at *2 (alteration in original) (footnotes omitted).

109. *See* discussion *infra* Part IV.

110. *Id.* at *3.

111. Constance D. Hunt, *A Note on Environmental Impact Assessment in Canada*, 20 ENVTL. L. 789, 790 (1990); *see, e.g.*, Government Organization Act, 1979 S.C., ch. 13 (Can.); Environmental Assessment Act, R.S.O., ch. 140 (1980); Environmental Assessment Act, S.S., ch. E-10.1 (1979–80); Environmental Assessment Act, NFLD. R.S., ch. 3 (1980); Environmental Quality Act, R.S.Q., ch. Q-2 (1979); Environmental Management Act, R.S.B.C., ch. 14 (1981).

112. *See* Hunt, *supra* note 111, at 790–92.

113. *See* Canadian Environmental Assessment Act, ch. 37, §§ 2(1), 47, 49, 1992 S.C. 938, 966, 971.

114. *See* Lois J. Schiffer, *The National Environmental Policy Act Today, with an Emphasis on its Application Across U.S. Borders*, 14 DUKE ENVTL. L. & POL'Y F. 325, 327 (2004).

115. *See* Knox, *supra* note 15, at 295–96.

States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith.¹¹⁶

Recognizing the obvious necessity of transboundary environmental impact assessment, the United States and Canada were signatories to the Convention on Environmental Impact in a Transboundary Context,¹¹⁷ known as the Espoo Convention. However, while Canada ratified the agreement in 1998, the United States has failed to do so.¹¹⁸ The United States and Canada (with Mexico) again committed to negotiating an agreement on transboundary environmental impact assessment under the North American Agreement on Environmental Cooperation,¹¹⁹ but while a draft agreement was released to the public in 1997, this commitment has not yet been fulfilled.¹²⁰ Despite these setbacks, the principle of transboundary environmental impact assessment is widely recognized in domestic and international law, and coupled with the long tradition of domestic environmental impact assessment in the United States and Canada, presents an opportunity to better harmonize domestic and international law.

II. ADDRESSING TRANSNATIONAL POLLUTION UNDER INTERNATIONAL LAW

Transnational pollution obviously poses international problems, and for over a century the United States and Canada have used a broad range of international law mechanisms to find solutions. The international legal mechanisms used by the United States and Canada to address transboundary pollution cover nearly the full spectrum of tools in the international legal system, including

116. See *Rio Declaration on Environment and Development*, *supra* note 94, princ. 19, at 879.

117. Convention on Environmental Impact Assessment in a Transboundary Context, Feb. 25, 1991, 30 I.L.M. 800. For a detailed discussion of the Espoo Convention, see Knox, *supra* note 15, at 301-05.

118. See UNECE, List of Participants for Convention on Environmental Impact Assessment in a Transboundary Context, <http://www.unece.org/env/eia/convratif.html> (last visited Mar. 11, 2007).

119. See North American Agreement on Environmental Cooperation art. 10(7), Sept. 14, 1993, 32 I.L.M. 1480, 1486-87 [hereinafter NAAEC].

120. For a thorough discussion of the North American draft agreement on transboundary environmental impact assessment, see Knox, *supra* note 15, at 305-08.

treaties, international adjudication, regional governance institutions, and soft law agreements. These efforts have produced valuable results, both in terms of the quality of the transnational environment, and in the continuing good relations between the two countries. However, a review of the international law mechanisms also serves to demonstrate the inherent limitations and weaknesses of international environmental law, especially the lack of enforcement rights for the citizens most directly affected by transnational pollution.

This Part begins with the foundation of international environmental law between the United States and Canada, the Boundary Waters Treaty of 1909.¹²¹ As the treaty's substantive legal standard for transboundary pollution is discussed in Part I, *supra*, this Part focuses on the binational governance and dispute resolution mechanisms created by the treaty, most notably the International Joint Commission. The International Joint Commission has been commended for its objective and scientific work, but has also been limited in its ultimate power and effectiveness. The Trail Smelter arbitration¹²² is then discussed, again not for its substantive holding (discussed in Part I, *supra*), but for the need and process to employ international adjudication to resolve a relatively local transboundary pollution dispute. While some scholars have celebrated the holding of the Trail Smelter arbitration,¹²³ the procedural process was far from ideal for the plaintiffs seeking relief from transboundary pollution. It is perhaps a good thing that international adjudications for similar disputes have not been used again.

This Part then looks at more modern attempts to use international law to address transboundary pollution. Environmental advocates celebrated both the Great Lakes Water Quality Agreement of 1972 (revised in 1978 and 1987)¹²⁴ and the 1991 Air Quality Agreement¹²⁵ for the agreements' binational approach to transboundary pollution. The agreements recognize the international implications of pollution and the important role of citizens in addressing transnational pollution in a binational forum. However, the agreements suffer from a lack of enforceability and do little to improve pollution control beyond the requirements of domestic law.

121. Boundary Waters Treaty, *supra* note 7.

122. *Trail Smelter II*, 3 R.I.A.A. 1938 (1941); *Trail Smelter I*, 3 R.I.A.A. 1911 (1938).

123. See TRANSBOUNDARY HARM IN INTERNATIONAL LAW: LESSONS FROM THE *Trail Smelter* ARBITRATION (Rebecca M. Bratspies & Russell A. Miller eds., 2006).

124. GLWQA 1972, GLWQA 1978, and GLWQA 1987, *supra* note 12.

125. Air Quality Agreement, *supra* note 1.

This Part concludes with a detailed look at a recent attempt by citizens to use the newest international environmental law mechanism in North America, the citizen submission procedure of the North American Agreement on Environmental Cooperation,¹²⁶ to address a controversial transboundary pollution problem regarding Devils Lake in North Dakota under the terms of the Boundary Waters Treaty. Professor Raustiala views the North American Agreement on Environmental Cooperation's citizen submission procedure as a new model for international environmental law that uses "sunshine" to encourage better environmental enforcement.¹²⁷ However, the rejection of the Devils Lake citizen submission provides a clear demonstration of the ultimate limitations and weaknesses of relying exclusively on international law to address transnational pollution and the need to instead harmonize domestic and international transboundary pollution law.

*A. The Boundary Waters Treaty of 1909 and the
International Joint Commission*

The foundation of United States-Canadian international environmental law, the Boundary Waters Treaty of 1909 was intended to "prevent disputes regarding the use of boundary waters . . . and to make provision for the adjustment and settlement of all such questions as may hereafter arise."¹²⁸ The key substantive provisions of the treaty are the anti-pollution standard, discussed in Part I, *supra*, and the limitation on diversions or uses of boundary waters "affecting the natural level or flow of boundary waters on the other side of the [border]line . . ."¹²⁹

From the outset, administration of these standards presented a difficult conflict between interests of international governance and preservation of state sovereignty. Canada initially proposed an international commission to administer the treaty that would have been vested with "such police powers" to enforce the legal standards.¹³⁰ The United States opposed any enforcement jurisdiction for the international commission, preferring an approach that only

126. NAAEC, *supra* note 119, arts. 14 & 15, 32 I.L.M. at 1488-89.

127. Kal Raustiala, *Citizen Submissions and Treaty Review in NAAEC*, in GREENING NAFTA: THE NORTH AMERICAN COMMISSION FOR ENVIRONMENTAL COOPERATION 256, 261 (David L. Markell & John H. Knox eds., 2003).

128. Boundary Waters Treaty, *supra* note 7, at 2448.

129. *Id.* art. III, 36 Stat. at 2449 (alteration in original).

130. See Jordan, *supra* note 61, at 67 (citing Sir George C. Gibbons Papers, Vol. 14, Fol. 3 (Public Archives of Canada)).

allowed international adjudication with its express consent for a specific dispute.¹³¹ The countries eventually agreed to the formation of the International Joint Commission, a six-member investigative and adjudicative body with the United States and Canada equally represented by political appointees.¹³²

The International Joint Commission created by the Boundary Waters Treaty has been commended for its objectivity and leadership on environmental issues,¹³³ but it is severely limited in its ultimate enforcement power. For a dispute to be submitted to the International Joint Commission for a binding arbitral decision, a reference is required by both countries.¹³⁴ The Boundary Waters Treaty specifies that the consent of the U.S. Senate is required for such action.¹³⁵ Thus, if Canada alleges that industries in the United States are polluting boundary waters and injuring the health or property of Canadian interests, both Canada and the U.S. Senate (with a two-thirds majority) must agree to submit the matter to the International Joint Commission.

During the ratification debates in the U.S. Senate, some Senators opposed even this more limited provision, citing the risk of creating an international water pollution police power.¹³⁶ Canada responded by assuring the United States Senators that the provision would be utilized only in “more serious cases.”¹³⁷ This has proved to be an understatement, as Article X binding adjudication has never been invoked in the history of the treaty.¹³⁸

While binding dispute resolution under the Boundary Waters Treaty has never occurred, scores of issues have been referred to the International Joint Commission for non-binding investigative reports and studies. The Boundary Waters Treaty only requires a reference from one of the countries to invoke this process,

131. See *id.* (citing Sir Wilfrid Laurier Papers, Vol. 755, No. 216108–216112 (1908) and Chandler P. Anderson Papers, box 65, 197–203 (Manuscript Division, Library of Congress)).

132. See Boundary Waters Treaty, *supra* note 7, art. VII, 36 Stat. at 2451.

133. See Barry Sadler, *The Management of Canada-U.S. Boundary Waters: Retrospect and Prospect*, 26 NAT. RESOURCES J. 359, 370–72 (1986).

134. Boundary Waters Treaty, *supra* note 7, art. X, 36 Stat. at 2453.

135. *Id.* The consent of the U.S. Senate would require a two-thirds majority vote. U.S. CONST. art II, § 2, cl. 2. If the International Joint Commission, with its equal U.S. and Canadian representation, is unable to decide the matter with a majority vote, then an umpire is chosen in accordance with the provisions of the Hague Convention of 1907. See Boundary Waters Treaty, *supra* note 7, art. X, 36 Stat. at 2452–53.

136. See Jordan, *supra* note 61, at 67–68 (citing Letter from Senator K. Nelson to Senator S. M. Cullom, Chandler P. Anderson Papers, box 69 (January 29, 1909) (Manuscript Division, Library of Congress)).

137. See *id.* (citing Sir George C. Gibbons Papers, Vol. 8, Letterbook No. 1, 507 (Public Archives of Canada)).

138. See Noah D. Hall, *Toward a New Horizontal Federalism: Interstate Water Management in the Great Lakes Region*, 77 U. COLO. L. REV. 405, 418 (2006).

although as a matter of custom this has always been done bilaterally with the support of both countries (consent of the U.S. Senate is not required; the U.S. Secretary of State has this authority).¹³⁹ This bilateral approach has strengthened the credibility of International Joint Commission reports and recommendations, and ensured sufficient funding for its efforts. These non-binding reports and studies, along with the objective recommendations that are often requested, have proven valuable in diplomatically resolving dozens of transboundary pollution disputes and crafting new policies in both countries to prevent transboundary environmental harms from occurring.¹⁴⁰

The International Joint Commission continues to enjoy a well-deserved reputation for objective work supported by the best available science and free of political biases.¹⁴¹ In recent decades, the International Joint Commission has played a critically important role in studying potential threats to the transboundary environment and informing both the public and decision-makers in the United States and Canada.¹⁴² However, while the International Joint Commission is regarded as objective and fair, its role and work is limited to references made by the two governments.¹⁴³ Thus, if one or both of the governments does not want to use the International Joint Commission's objective, science-based approach to address a specific transboundary pollution problem, the Boundary Waters Treaty has little value. As discussed below in the context of the Devils Lakes dispute, this is exactly what has happened in a recent high profile transboundary pollution controversy.

B. *The Trail Smelter Arbitration and International Adjudication*

Almost seventy years later, the Trail Smelter arbitration¹⁴⁴ remains the most relevant application of international adjudication

139. Boundary Waters Treaty, *supra* note 7, art. IX, 36 Stat. at 2452; *see also* DeWitt, *supra* note 68, at 308–14.

140. *See* Sadler, *supra* note 133.

141. *See* Prince, *supra* note 3, at 149–51; Sadler, *supra* note 133, at 370–72.

142. Several commentators have noted the importance of the Boundary Waters Treaty and the International Joint Commission. *See* Prince, *supra* note 3, at 149–51; Sadler, *supra* note 133, at 370–72; Sharon A. Williams, *Public International Law and Water Quality Management in a Common Drainage Basin: The Great Lakes*, 18 CASE W. RES. J. INT'L L. 155, 178–79 (1986).

143. *See* DeWitt, *supra* note 68, at 313–14.

144. *Trail Smelter I*, 3 R.I.A.A. 1911 (1938); further proceedings, *Trail Smelter II*, 3 R.I.A.A. 1938 (1941).

for an environmental dispute.¹⁴⁵ To summarize, air pollution from a massive mining smelter in British Columbia was found to cause harm to private property downwind in Washington State, and the United States and Canada agreed to refer the matter to an international arbitration panel. The arbitration panel held Canada liable for the unreasonable harm to the property in the United States, and ordered Canada to “refrain from causing any damage through fumes in the State of Washington.”¹⁴⁶

While the tribunal’s substantive ruling has been often cited and discussed as a defining principle of international transboundary pollution,¹⁴⁷ it may be more important to question how and why the dispute arrived in an international adjudication forum. The facts regarding the Trail Smelter pollution dispute are not unique or even unusual—industrial pollution in one state often has transboundary impacts. But despite the obvious severity of the pollution and makings of a common law nuisance claim, the Washington landowners faced procedural obstacles to pursuing relief through domestic litigation in the courts of either British Columbia or Washington State:

Lawyers at the time were generally of the view that British Columbia courts would decline to assert jurisdiction in any action to recover for the property damage in Washington because of the rule announced by the House of Lords in *British South Africa Company v. Companhia de Moçambique*, [1893] A.C. 602. That case held that suits for damage to foreign land are local actions and must be brought in the state where the land is located. Yet the Washington property owners would fare no better in that state since at the time it had no long-arm statute that would have permitted a Washington court to assert jurisdiction over the Canadian smelter.¹⁴⁸

The British Columbia courts thus lacked jurisdiction over an action to recover damage to foreign land, and the Washington courts lacked jurisdiction over a foreign plaintiff. Further, at the time of the dispute, the state of Washington would not allow the acquisition of a smoke easement by an alien.¹⁴⁹

With no domestic litigation options, the United States intervened on behalf of the Washington State landowners under the

145. See discussion *supra* Part I for the facts of the dispute and the substantive ruling.

146. *Trail Smelter II*, 3 R.I.A.A. at 1966.

147. See *supra* Part I.

148. WEISS, *supra* note 72, at 246 (emphasis added).

149. McCAFFREY, *supra* note 14, at 204 n.86.

legal construct of espousal, in which the nation state takes on an international claim on behalf of its private citizens. In 1928, the two countries agreed to refer the matter to the International Joint Commission for a factual study of the liabilities and damages.¹⁵⁰ In 1931, the International Joint Commission determined that the United States had suffered \$350,000 (equivalent to approximately \$5,000,000 in 2006¹⁵¹) in accrued damages through January 1, 1932, and recommended pollution controls to reduce future harm.¹⁵² Despite the International Joint Commission report, in 1933 the United States was still not satisfied and again complained “to the Canadian Government that existing conditions were entirely unsatisfactory and that damage was still occurring.”¹⁵³

The subsequent diplomatic negotiations led the United States and Canada to sign and ratify a convention in 1935.¹⁵⁴ Through the convention, the two countries agreed to refer the matter to a three-member international arbitration tribunal.¹⁵⁵ The arbitration tribunal was charged with first determining whether damages caused by Trail Smelter continued to occur after January 1, 1932, and if so, what indemnity should be paid.¹⁵⁶ Under the Convention, Canada had already agreed to pay the United States \$350,000 for damages prior to 1932, based on the findings of the International Joint Commission.¹⁵⁷ The arbitration tribunal addressed this first question in its 1938 decision (Trail Smelter I), determining that the damages caused by the Canadian smelter to properties in Washington State from 1932 to 1937 amounted to \$78,000¹⁵⁸ (equivalent to approximately \$1,100,000 in 2006¹⁵⁹).

Viewed in light of Canada’s prior willingness to compensate the Washington State landowners for damage from the Trail Smelter pollution, the tribunal’s subsequent holdings regarding Canada’s liability seem less momentous. There was almost no fundamental dispute regarding liability under international or domestic law. Rather, the work of the tribunal focused on quantifying the damages

150. See *Trail Smelter I*, *supra* note 8 at 1918. This reference was made under the Boundary Waters Treaty, *supra* note 7, art. IX, 36 Stat. at 2452.

151. See Federal Reserve Bank of Minneapolis, Inflation and Consumer Price Index Calculator, available at <http://minneapolisfed.org/Research/data/us/calc/>.

152. See *Trail Smelter I*, *supra* note 8 at 1918–19.

153. *Id.* at 1919.

154. Trail Smelter Convention, *supra* note 75.

155. See *id.* art. II, 49 Stat. at 3246; *Trail Smelter I*, *supra* note 8, at 1911.

156. See Trail Smelter Convention, *supra* note 75, art. III, 49 Stat. at 3246.

157. See *id.* art. I, 49 Stat. at 3246.

158. See *Trail Smelter I*, *supra* note 8, at 1933.

159. See Federal Reserve Bank of Minneapolis, *supra* note 151.

and providing equitable relief to allow the smelter to continue operating without causing additional harm to the downwind landowners. While these are difficult issues, they are not unique to transboundary pollution disputes or international law; they are the types of issues that the domestic legal system routinely addresses in the context of pollution nuisance cases.¹⁶⁰

Instead of viewing the Trail Smelter arbitration as a precedent for international transboundary dispute resolution that should be employed more often,¹⁶¹ it may be better to ask whether international adjudication was the most fair and efficient way to resolve the dispute. As the tribunal noted, it essentially applied the same legal principles, reached the same conclusions, and provided the same remedies as a domestic court.¹⁶² But utilizing international adjudication required extensive diplomatic efforts, the preliminary work of the International Joint Commission, and the attention of the federal governments during the Great Depression and years before World War II. The entire process took over a decade, and after the Trail Smelter Convention was executed, it still took the arbitration panel nearly seven years to produce a ruling. Even if the outcome was just (or at least satisfactory), the significant time and resources required of the parties undermined the overall fairness of the process. It is likely that a similar substantive outcome could have been achieved through domestic litigation (and perhaps settlement) with far less expenditure of time and resources.

The best evidence in support of these propositions is the simple fact that the United States and Canada have not utilized international adjudication to resolve a single transboundary pollution dispute since the Trail Smelter arbitration. Instead, both countries (and their citizens and sub-national governments) have consistently turned to the domestic legal system in the past few decades to address potential and actual transboundary pollution harms.¹⁶³ In the decades after the Trail Smelter arbitration, the international and diplomatic focus of the United States and Canada regarding transboundary pollution has not been international adjudication,

160. See, e.g., *Boomer v. Atlantic Cement Co.*, 26 N.Y.2d 219, 309 N.Y.S.2d 312 (1970).

161. See Austen L. Parrish, *Trail Smelter Déjà Vu: Extraterritoriality, International Environmental Law, and the Search for Solution to Canadian-U.S. Transboundary Water Pollution Disputes*, 85 B.U. L. REV. 363, 420–23 (2003). Professor Parrish claims that the Trail Smelter arbitration is “particularly well-suited to use as a model of [United States-Canada transboundary pollution] dispute resolution.” *Id.* at 422 (alteration in original).

162. See discussion *supra* Part I.

163. See *infra* Part III. Of course, domestic litigation was not an option at the time of the dispute due to procedural and jurisdictional hurdles, many of which have since been overcome.

but more general agreements that provide for mutual cooperation and management of general transboundary pollution issues.

C. The Great Lakes Water Quality Agreement

In the years following World War II, citizens and scientists became increasingly alarmed about water pollution in the Great Lakes. In response to these concerns, the United States and Canada issued a joint reference to the International Joint Commission in 1964 regarding pollution in Lakes Erie and Ontario.¹⁶⁴ It took the International Joint Commission nearly seven years, but in 1970 it issued a report recommending new water quality control programs and the need for a new agreement for cooperative action in response to pollution.¹⁶⁵ Two years of negotiations followed, and in 1972 Prime Minister Pierre Trudeau and President Richard Nixon signed the Great Lakes Water Quality Agreement (“GLWQA”).¹⁶⁶

As stated in the 1972 GLWQA, the two countries were:

[s]eriously concerned about the grave deterioration of water quality on each side of the boundary to an extent that is causing injury to health and property on the other side, as described in the 1970 report of the International Joint Commission on Pollution of Lake Erie, Lake Ontario and the International Section of the St. Lawrence River.¹⁶⁷

The GLWQA sets forth general and specific water quality objectives, provides for programs and other measures that are directed toward the achievement of the water quality objectives, and defines the powers, responsibilities, and functions of the International Joint Commission.¹⁶⁸ However, the primary responsibility for implementation to achieve the objectives of the GLWQA lies with the two federal governments, not the International Joint Commission.¹⁶⁹

The 1972 GLWQA focused on phosphorous pollution, and as sewage treatment was improved and phosphate detergent bans were adopted through domestic laws in both countries, progress

164. See INT'L JOINT COMM'N, POLLUTION OF LAKE ERIE, LAKE ONTARIO AND THE INTERNATIONAL SECTION OF THE ST. LAWRENCE RIVER (1970).

165. See *id.*

166. GLWQA 1972, *supra* note 12.

167. *Id.* at 302.

168. *Id.*

169. *Id.*

was made towards reducing the transboundary harms from this pollutant.¹⁷⁰ This success was tempered by new scientific discoveries and resulting public pressure to address persistent organic chemicals that “were already affecting the health of wildlife and could be a threat to human health.”¹⁷¹ In response, the United States and Canada amended the GLWQA in 1978 with a new purpose:

[T]o restore and maintain the chemical, physical, and biological integrity of the waters of the Great Lakes Basin Ecosystem. In order to achieve this purpose, the Parties agree to make a maximum effort to . . . eliminate or reduce to the maximum extent practicable the discharge of pollutants into the Great Lakes System.

Consistent with the provisions of this Agreement, it is the policy of the Parties that [t]he discharge of toxic substances in toxic amounts be prohibited and the discharge of any or all persistent toxic substances be virtually eliminated¹⁷²

Nine years later the parties again revised the GLWQA after a comprehensive review and signed the 1987 Protocol.¹⁷³ The 1987 Protocol created provisions for “Remedial Action Plans” for “Areas of Concern” and “Lakewide Management Plans” which focus on critical pollutants and draw upon broad local community involvement.¹⁷⁴ While the Agreement has not been revised since 1987, the two countries and the International Joint Commission are currently in the process of conducting a comprehensive review of the GLWQA to address emerging threats to the health of the Great Lakes.

Despite the lofty goals of the GLWQA, its implementation has been undermined by its sub-treaty status (it was never subject to approval in the U.S. Senate) and its failure to contain enforcement provisions.¹⁷⁵ Attempts by citizens to enforce the GLWQA in court

170. Joseph DePinto & Thomas C. Young, *Great Lakes Quality Improvement*, 20 ENVTL. SCI. & TECH. 752 (1986) (describing reductions in phosphorous in the Great Lakes).

171. LEE BOTTS & PAUL MULDOON, *EVOLUTION OF THE GREAT LAKES WATER QUALITY AGREEMENT* 27, 27 (2005).

172. GLWQA 1978, *supra* note 12, art. II, at 1387 (alteration in original).

173. GLWQA 1987, *supra* note 12.

174. *See id.*

175. *See* Edith Brown Weiss, *Symposium on Prevention of Groundwater Contamination in the Great Lakes Region: New Directions for the Great Lakes Water Quality Agreement: A Commentary*, 65 CHI-KENT L. REV. 375, 377 (1989).

have not been successful.¹⁷⁶ Despite not being enforceable in domestic courts, the GLWQA has given citizens an increased role in shaping policy to address transboundary pollution in the Great Lakes.

For most of the International Joint Commission's history prior to the GLWQA, it conducted its business in private.¹⁷⁷ Under increased citizen pressure resulting from the growing environmental movement, the GLWQA changed this custom and opened the International Joint Commission up to the public.¹⁷⁸ One of the most important results of the GLWQA was the increased public involvement in its implementation.¹⁷⁹ The International Joint Commission affirmed its commitment to public participation in its Ninth Biennial Report:

Public support is crucial to restore and protect the environment. Active public involvement has had significant consequences for the environment. Direct public participation drives the development of regulations, conduct of cleanup actions, implementation of preventive measures and changes in societal attitudes. An informed and knowledgeable citizenry exerts a powerful influence on policy and decision-makers and allows the public to participate in policy development.

....

The public's right and ability to participate in governmental processes and environmental decisions that affect it must be sustained and nurtured.

....

The Commission urges governments to continue to effectively communicate information that the public needs and has

176. *Lake Erie Alliance for the Prot. of Coastal Corridor v. U.S. Army Corps of Eng'rs*, 526 F. Supp. 1063, 1077 (W.D. Pa. 1981); *see Am. Iron & Steel Inst. v. EPA*, 115 F.3d 979, 1001 (D.C. Cir. 1996).

177. *See* BOTTIS & MULDOON, *supra* note 171, at 39.

178. *See id.* at 39-40.

179. *See id.* at 39; *see also* THOMAS PRINCEN & MATTHIAS FINGER, ENVIRONMENTAL NGOS IN WORLD POLITICS 71 (1994) (noting public and NGO involvement under the GLWQA).

come to expect, and to provide opportunities to be held publicly accountable for their work under the Agreement.¹⁸⁰

The increased opportunity for public participation in decision-making compensates, to some extent, for the GLWQA's failure to contain specific enforcement provisions. With increased public participation comes increased accountability on the part of the two federal governments to comply with their joint responsibilities under the GLWQA. Equally important, the GLWQA has helped create an informed and engaged citizenry on both sides of the border, which has led to the increased role for citizen enforcement discussed in Part III. These advances are meaningful and important, but fall short of giving citizens the power to enforce transboundary water pollution violations.

D. The Air Quality Agreement

The 1991 Air Quality Agreement between the United States and Canada¹⁸¹ was executed primarily in response to growing concerns over acid rain from sulfur dioxide air pollution, although the agreement covers all forms of transboundary air pollution between the two countries.¹⁸² The Air Quality Agreement was the product of a decade of diplomatic negotiations, commitments, and studies, formally originating with a 1980 Memorandum of Intent Concerning Transboundary Air Pollution.¹⁸³ When the United States aggressively addressed its acid rain pollution in the 1990 amendments to Clean Air Act,¹⁸⁴ it laid the foundation for a bilateral agreement with Canada.¹⁸⁵

180. INT'L JOINT COMM'N, NINTH BIENNIAL REPORT ON GREAT LAKES WATER QUALITY—PERSPECTIVE AND ORIENTATION (1998), available at <http://www.ijc.org/php/publications/html/9br/cover.html>.

181. Air Quality Agreement, *supra* note 1.

182. *Id.* art I(2), at 679.

183. Memorandum of Intent Concerning Transboundary Air Pollution, U.S.-Can., Aug. 5, 1980, 20 I.L.M. 690.

184. 1990 Clean Air Act Amendments, Pub. L. No. 101-549, 104 Stat. 2399. The 1990 Clean Air Act Amendments recognized that acid rain "represents a threat to natural resources, ecosystems, materials, visibility, and public health," that it is a problem of "international significance," that reductions in sulphur dioxide and nitrogen dioxide emissions would curb acid rain, that technology is currently available to control these emissions, and that delaying such remedies would adversely affect current and future generations. *Id.* § 401(a), 104 Stat. at 2584-85.

185. See Jeffery L. Roelofs, *United States-Canada Air Quality Agreement: A Framework for Addressing Transboundary Air Pollution Problems*, 26 CORNELL INT'L L.J. 421, 443-44 (1993) ("By recognizing the intricate problems of acid rain, [the 1990 Clean Air Act] amendments

The Air Quality Agreement begins with the two countries stating their mutual desire "that emissions of air pollutants from sources within their countries not result in significant transboundary air pollution."¹⁸⁶ The countries reaffirmed their commitment to Principle 21 of the Stockholm Declaration¹⁸⁷ and:

their tradition of environmental cooperation as reflected in the Boundary Waters Treaty of 1909, the Trail Smelter Arbitration of 1941, the Great Lakes Water Quality Agreement of 1978, as amended, the Memorandum of Intent Concerning Transboundary Air Pollution of 1980 . . . [and the Economic Commission for Europe] Convention on Long-Range Transboundary Air Pollution of 1979¹⁸⁸ [to which both the United States and Canada are parties].¹⁸⁹

Although the scope of the Air Quality Agreement concerns all transboundary air pollution, it contains specific objectives for each country for sulphur dioxide and nitrogen oxide emissions limitations to address the problem of acid rain.¹⁹⁰ However, the United States only committed to the emissions limitations that the federal government had already imposed domestically under the 1990 Clean Air Act amendments, and Canada's commitments essentially followed its domestic goals.¹⁹¹ Substantively, the Air Quality Agreement does little to control transboundary air pollution beyond the standards and limitations of United States domestic law.

Within the United States, acid rain had presented a difficult political transboundary pollution problem, with pollution coming from the Midwestern states and drifting to the northeast and New England.¹⁹² While the environmental benefits of reducing sulphur dioxide emissions would be enjoyed by the northeastern and New England states, the costs would be felt in the economies of the Midwestern states. Ultimately, the competing interests reached a compromise in the 1990 Clean Air Act Amendments using tradable

became the foundation for a bilateral agreement with Canada on transboundary air pollution.") (alteration in original).

186. Air Quality Agreement, *supra* note 1, at 678.

187. See Stockholm Declaration, *supra* note 93, and accompanying text.

188. Convention on Long-Range Transboundary Air Pollution, Nov. 13, 1979, T.I.A.S. No. 10541.

189. Air Quality Agreement, *supra* note 1, at 678 (alteration in original).

190. See *id.* annex 1, 30 I.L.M. at 685-90.

191. See *id.*

192. See JAMES L. REGENS & ROBERT W. RYCROFT, THE ACID RAIN CONTROVERSY (1988).

emissions allowances to reduce total sulphur dioxide emissions,¹⁹³ with the bulk of the allowances being given initially to Midwestern utilities.¹⁹⁴ Thus, the solution to the United States-Canada international acid rain controversy was essentially a piggyback on the domestic acid rain solution.

The Air Quality Agreement does add some value. It provides for assessment and notification of transboundary air pollution, cooperative scientific and technical activities and research, and the coordinated exchange of information.¹⁹⁵ Further, it builds on the advances in citizen participation established by the Great Lakes Water Quality Agreement. The Air Quality Agreement relies on both a newly established bilateral Air Quality Committee and the International Joint Commission for implementation.¹⁹⁶ Although representatives of the respective governments comprise these two bodies, the Air Quality Agreement requires both bodies to allow significant public participation in implementing their duties.¹⁹⁷ The Air Quality Committee is responsible for reviewing implementation progress and submitting biannual progress reports to the parties and the International Joint Commission.¹⁹⁸ The Air Quality Agreement specifically requires the Committee to release "each progress report to the public after its submission to the Parties."¹⁹⁹

As with the Great Lakes Water Quality Agreement, the Air Quality Agreement enlists the International Joint Commission as an implementation institution.²⁰⁰ Building on the increased role that citizens played in the International Joint Commission's work on the GLWQA, the Air Quality Agreement mandates a role for citizens in the International Joint Commission's duties. The International Joint Commission is required "to invite comments, including through public hearings as appropriate, on each progress report prepared by the Air Quality Committee pursuant to Article VIII."²⁰¹ The International Joint Commission must then submit to the two countries "a synthesis of the views" of the public.²⁰² The synthesis of public views prepared by the International

193. See 42 U.S.C. § 7651.

194. See Lisa Heinzerling, *Selling Pollution, Forcing Democracy*, 14 STAN. ENVTL. L.J. 300, 330-32 (1995).

195. Air Quality Agreement, *supra* note 1, art. V, VI, and VII, 30 I.L.M. at 680-81.

196. *Id.* arts. VIII & IX, 30 I.L.M. at 682.

197. See *id.*; Boundary Waters Treaty, *supra* note 7, art. VII, 36 Stat. at 2451.

198. Air Quality Agreement, *supra* note 1, arts. VIII & IX, 30 I.L.M. at 682.

199. *Id.* art. VIII(2)(d), 30 I.L.M. at 682.

200. *Id.* art. IX(1), 30 I.L.M. at 682.

201. *Id.* art. IX(1)(a), 30 I.L.M. at 682.

202. *Id.* art. IX(1)(b), 30 I.L.M. at 682.

Joint Commission is ultimately released to the public.²⁰³ As one commentator has noted, the mandated role for citizens “may pose some time costs, but such costs are outweighed by the benefits of public participation and oversight in the implementation of the [Air Quality] Agreement.”²⁰⁴ The agreement further requires that “the Parties shall, as appropriate, consult with State or Provincial Governments, interested organizations, and the public” in implementing the agreement.²⁰⁵ This provision “provides a means by which . . . state or provincial governments, citizens, and interest groups, can exert substantial pressure on the . . . parties to implement and effectuate the objectives of the agreement.”²⁰⁶

As the Air Quality Agreement breaks little substantive new ground beyond domestic law for controlling transboundary air pollution, this engagement of citizens through its structure may be its greatest significance, as none of the previous transboundary pollution agreements and treaties between the United States and Canada required public participation in reviewing and assessing implementation progress.²⁰⁷ However, as with the Great Lakes Water Quality Agreement, the Air Quality Agreement falls short of giving citizens a direct enforcement mechanism to address transboundary pollution violations. Taken together, the two agreements offer little in the way of substantive transboundary pollution controls or enforcement mechanisms. However, both agreements create an atmosphere of cooperation on transboundary pollution problems, and give citizens a role in addressing these problems. These advances have facilitated other more direct enforcement efforts, notably domestic litigation, by informing and engaging citizens affected by transboundary pollution.

E. The North American Agreement on Environmental Cooperation

The North American Agreement on Environmental Cooperation (“NAAEC”) is a trilateral agreement between the United States, Canada, and Mexico.²⁰⁸ It was intended to address environmental concerns related to the North America Free Trade

203. *See id.* art. IX(1)(c), 30 I.L.M. at 682.

204. Roelofs, *supra* note 185, at 449 (alteration in original).

205. Air Quality Agreement, *supra* note 1, art. XIV, 30 I.L.M. at 684.

206. Roelofs, *supra* note 185, at 449.

207. *See id.* at 448 n.239.

208. NAAEC, *supra* note 119.

Agreement (“NAFTA”) between the same three countries.²⁰⁹ Environmentalists were concerned that increased trade under NAFTA would “overwhelm environmental infrastructure, especially along the U.S.-Mexico border.”²¹⁰ They were further concerned that:

by removing barriers to foreign investment in Mexico, NAFTA would lure companies to move there in search of a “pollution haven,” and thereby contribute to the pollution of the Mexican environment, take jobs from U.S. workers, and put pressure on all three North American countries to lower their environmental standards in a “race to the bottom.”²¹¹

Mexico’s environmental laws were theoretically equivalent to those of the United States, but environmentalists lacked confidence in Mexico’s compliance and enforcement.²¹²

To address these concerns, the NAAEC requires each party to “effectively enforce its environmental laws.”²¹³ The agreement established the North American Commission for Environmental Cooperation (“NACEC”), composed of a Council of representatives of the three parties, a Secretariat with professional staff, and a Joint Public Advisory Committee.²¹⁴ The Joint Public Advisory Committee is just one mechanism for public participation under the NAAEC, which states an explicit objective to “promote transparency and public participation in the development of environmental laws, regulations and policies.”²¹⁵ While the NAAEC has numerous provisions on a variety of transboundary environmental issues,²¹⁶ this discussion focuses on the key mechanism for achieving transboundary pollution enforcement—the citizen submission procedure.²¹⁷

The NAAEC’s citizen submission procedure gives members of the public a direct means for addressing a specific concern related to environmental enforcement (transboundary or domestic) in one of the three NAFTA countries. Submissions may be made to

209. John H. Knox, *A New Approach to Compliance with International Environmental Law: The Submissions Procedure of the NAFTA Environmental Commission*, 28 *ECOLOGY L.Q.* 1, 53 (2001).

210. *Id.*

211. *Id.* at 54 (citing Daniel Magraw, *NAFTA & the Environment: Substance and Process*, in *NAFTA & THE ENVIRONMENT: SUBSTANCE AND PROCESS* 3–6 (Daniel Magraw ed., 1995)) (footnote omitted).

212. *Id.*

213. NAAEC, *supra* note 119, art. 5(1), 32 I.L.M. at 1483–84.

214. *Id.* arts. 8, 9(1), 11(1)–(2), and 16, 32 I.L.M. at 1485, 1487, and 1489.

215. *Id.* art. 1(h), 32 I.L.M. at 1483.

216. See DAVID L. MARKELL & JOHN H. KNOX, *supra* note 127.

217. NAAEC, *supra* note 119, arts. 14 & 15, 32 I.L.M. 1488–89.

the NACEC Secretariat by “any non-governmental organization or person asserting that a Party is failing to effectively enforce its environmental law.”²¹⁸ For the Secretariat to consider a submission, the submission must first meet some basic requirements regarding format and sufficiency of information, “be aimed at promoting enforcement rather than at harassing industry,” and “indicate . . . that the matter has been communicated in writing to the relevant authorities of the Party and indicate . . . the Party’s response, if any.”²¹⁹

Assuming these requirements are met, the Secretariat may then request a response from the government Party concerned, taking into account whether “private remedies available under the [respective government’s] law have been pursued.”²²⁰ The respective government must then promptly (within thirty days) advise the Secretariat if “the matter is the subject of a pending judicial or administrative proceeding, in which case the Secretariat shall proceed no further.”²²¹ The respective government may also reply with any other information, including information relating to whether the matter was the subject of previous judicial or administrative proceedings, and whether private remedies are available and have been pursued.²²² The Secretariat then considers both the citizen submission and the respective government’s response, and recommends to the Council (essentially the three parties) whether a “factual record” should be prepared.²²³ While the NAAEC offers no additional guidance for the Secretariat’s recommendation as to whether a factual record should be prepared, the type of information suggested for the response suggests that the Secretariat and NACEC will only take a matter if available domestic remedies have been pursued. This would be both efficient and respectful of state sovereignty and domestic legal process.

The ultimate decision on whether to prepare a factual record on submission rests not with the Secretariat but with the Council, which must authorize the factual record with a two-thirds vote. Requiring a two-thirds vote, rather than a unanimous vote, allows the Council to authorize preparation of a factual record over the objections of the Party against whom the complaint is made. However, the decision to prepare factual records ultimately rests with the same governments that may be failing to effectively

218. *Id.* art. 14(1), 32 I.L.M. at 1488.

219. *Id.* art. 14(1)(a)–(f), 32 I.L.M. at 1488 (alteration in original).

220. *Id.* art. 14(2)(c), 32 I.L.M. at 1488 (alteration in original).

221. *Id.* art. 14(3)(a), 32 I.L.M. at 1488.

222. *Id.* art. 14(3)(b), 32 I.L.M. at 1488.

223. *Id.* art. 15(1), 32 I.L.M. at 1488.

enforce the underlying laws.²²⁴ The federal government parties (acting as the Council) have kept for themselves the final decision as to whether a factual record should be prepared. Recognizing this potential conflict, the Joint Public Advisory Committee (JPAC) has suggested that the Council could “‘re-establish public confidence’ in the citizen submissions process . . . by making ‘every effort to ensure that the independence of the Secretariat is maintained.’”²²⁵

If the Council authorizes preparation of a factual record, the Secretariat conducts an investigation, gathering information from the public, the Joint Public Advisory Committee, the Party, and independent experts.²²⁶ The Secretariat then produces a draft factual record for the Council’s comments.²²⁷ Once finalized, the factual record may be made public by a two-thirds majority of the Council.²²⁸ As the name implies, factual records are neither conclusory nor legally enforceable. However, they provide documented and credible information regarding an alleged failure to effectively enforce environmental law, and are open to citizens of any Party country. Professor Kal Raustiala describes this as “primarily an information-forcing mechanism. There are no direct sanctions employed; rather, the NAAEC employs a regulatory strategy of ‘sunshine.’”²²⁹

While most of the citizen submissions have involved primarily domestic environmental issues, three have focused on transboundary pollution between the United States and Canada. The Secretariat determined that factual records were not warranted for two of these submissions. The first was regarding the United States’ enforcement of its Clean Air Act provisions regulating emissions from municipal and medical waste incinerators with transboundary air impacts in the Great Lakes region.²³⁰ The second was regarding Canada’s enforcement of provisions of the Canadian Environmental Protections Act with respect to emissions from Ontario

224. See David L. Markell, *Governance of International Institutions: A Review of the North American Commission for Environmental Cooperation’s Citizen Submissions Process*, 30 N.C. J. INT’L L. & COM. REG. 759, 783–93 (2005).

225. *Id.* at 790 (quoting JPAC, Advice to Council 04–03, August 23, 2004, available at http://www.cec.org/files/pdf/JPAC/Advice-04-03_en.pdf).

226. See NAAEC, *supra* note 119, arts. 15(4) & 21(1), 32 I.L.M. at 1489–90.

227. *Id.* art. 15(5), 32 I.L.M. at 1489.

228. *Id.* art. 15(7), 32 I.L.M. at 1489.

229. Raustiala, *supra* note 127, at 261 (footnote omitted).

230. See Secretariat of the Commission for Environmental Cooperation of North America, Great Lakes Case, *Secretariat Determination under Article 15(1) that Development of a Factual Record is Not Warranted*, SEM-98-003 (Oct. 5, 2001), at 1–4 available at <http://www.cec.org/files/pdf/sem/98-3-DETE3.pdf>.

Power Generation's coal-fired power plants.²³¹ The Secretariat's determinations were based primarily on the responses from the Party states, including information regarding commitments that the governments had made and concrete steps they had taken to address the matters raised in the submissions.²³²

The third submission, made on March 24, 2006, concerns both the United States' and Canada's enforcement of their obligations to prevent transboundary pollution under the Boundary Waters Treaty in connection with the diversion of water from Devils Lake in North Dakota (U.S.) into Lake Winnipeg and other Canadian waters.²³³ The submission was made by both Canadian and U.S. environmental NGOs and citizens:

This is a cross-border issue that arises out of the construction and operation by the state of North Dakota of an outlet to drain water from Devils Lake into the Sheyenne River, the Red River Basin, Lake Winnipeg, and ultimately the broader Hudson Bay drainage system. The project will likely have direct and negative environmental impacts on Canadian waters, including the introduction of biological pollutants such as invasive species The construction of the artificial outlet from Devils Lake is an unlawful cause of transboundary pollution, contrary to [Boundary Waters] Treaty obligations. Both the U.S. and Canadian governments have a duty to resolve the dispute at the International Joint Commission (the "IJC").²³⁴

The Secretariat responded by first issuing a determination that the submission did not satisfy the requirements of Article 14(1).²³⁵ The Secretariat determined that the Boundary Waters Treaty provisions on which the submission was based (Articles IX and X) do not impose a specific, enforceable legal mandate to address

231. See Secretariat of the Commission for Environmental Cooperation of North American, Ontario Power Generation Case, *Determination in accordance with Article 15(1) of the North American Agreement for Environmental Cooperation*, SEM-03-001 (May 28, 2004), at 1-4, available at http://www.cec.org/files/pdf/sem/03-1-DET15_1_en.pdf.

232. See *id.* at 4-12.

233. See Submission to the Commission for Environmental Cooperation pursuant to: Article 14 of the *North American Agreement on Environmental Cooperation*, Devils Lake Case, SEM-06-002 (Mar. 24, 2006), available at http://www.cec.org/files/pdf/sem/06-2-SUB_en.pdf.

234. *Id.* at 1 (alteration in original).

235. See Secretariat of the Commission for Environmental Cooperation, Devils Lake Case, *Determination in accordance with Article 14(1) of the North American Agreement for Environmental Cooperation*, SEM-06-002 (June 8, 2006), available at http://www.cec.org/files/pdf/sem/06-2-DET14_1_en.pdf.

questions regarding transboundary water pollution through referral to the International Joint Commission as required by the NAAEC:

The Boundary Waters Treaty . . . does not mandate referral to the IJC whenever a government has reason to believe that transboundary water pollution is occurring Thus, even if factual information were to indicate that because of the Devils Lake outlet, “boundary waters and waters flowing across the boundary” from North Dakota into Canada are “polluted . . . to the injury or health of property” in Canada, in apparent violation of Article IV of the treaty, the mandate to refer the matter to the IJC does not automatically follow.²³⁶

The concerned Canadian and U.S. environmental NGOs and citizens resubmitted a revised petition, alleging that the transboundary pollution violates Article IV of the Boundary Waters Treaty.²³⁷ The Secretariat again determined that the submission did not satisfy the requirements of Article 14(1) and dismissed the petition.²³⁸ The Secretariat’s determination was based on the finding that the Boundary Waters Treaty is not enforceable law in the United States:

The United States has not adopted legislation that implements any provisions of the Boundary Waters Treaty in the United States. Further, as far as the Secretariat has been able to discern, the courts that have considered whether the Boundary Waters Treaty is self-executing, in the sense that either its provisions may be directly enforceable or a federal action can be challenged for non-compliance with it in United States courts, have concluded that it is not. Indeed, the treaty provides its own enforcement mechanism, by allowing the government parties to refer questions unilaterally or jointly to the IJC. Accordingly, the Secretariat cannot conclude that the anti-pollution provision in Article IV of the Boundary Waters Treaty is a provision of a “statute or regula-

236. *Id.* at 4.

237. *See* Submission to the Commission for Environmental Cooperation pursuant to: Article 14 of the *North American Agreement on Environmental Cooperation*, Devils Lake Case, SEM-06-002 (July 7, 2006), at 1, 7–9, available at http://www.ccc.org/files/pdf/sem/06-2-RSUB_en.pdf.

238. *See* Secretariat of the Commission for Environmental Cooperation, Devils Lake Case, *Determination in accordance with Article 14(1) of the North American Agreement for Environmental Cooperation*, SEM-06-002 (Aug. 21, 2006), at 7 available at http://www.ccc.org/files/pdf/sem/06-2-DETN_en.pdf.

tion” of the United States within the meaning of NAAEC Article 45(2) (a).²³⁹

The Secretariat’s determination demonstrates the inherent weakness in the Boundary Waters Treaty. While the Boundary Waters Treaty contains strong standards for transboundary water pollution, it does not provide either a role for citizen enforcement or a mandatory duty to resolve transboundary issues through the International Joint Commission. Thus, if the federal governments choose to jointly ignore a transboundary pollution problem or resolve it through other means, citizens and other affected parties have no recourse under the treaty or through new mechanisms such as the NAAEC.

Despite the setback of the Devils Lakes submission and the Secretariat’s determinations that factual records were not warranted for the other two transboundary pollution submissions, the NAAEC citizen submission may hold some promise for increasing the role of citizen enforcement. Citizens have another formal mechanism to allege enforcement failures, and the publishing of factual records could create increased pressure to motivate governmental action. Professor Raustiala describes this as a “fire alarm” function which has some value in dispersing information regarding environmental enforcement.²⁴⁰ While potentially valuable, a “fire alarm” is not equivalent to legal enforcement. The NAAEC citizen submission procedure requires similar resources and information of citizens as required for domestic litigation, without the hope of a legal judgment to force changed behavior. This may explain the relatively low number of submissions, especially regarding the United States,²⁴¹ since citizens may be more likely to use domestic litigation to present a case alleging under-enforcement of statutory environmental duties.

III. ADDRESSING TRANSNATIONAL POLLUTION UNDER DOMESTIC LAW

While numerous international law mechanisms address transboundary pollution between the United States and Canada, the international law regime still has a glaring gap. None of the treaties or agreements provide a process to obtain a legally enforceable

239. *Id.* at 5.

240. Raustiala, *supra* note 127, at 269.

241. Markell, *supra* note 224, at 790–91.

judgment to prevent transboundary pollution or obtain damages for past harms. The existing relevant international law authorities simply do not give either citizens or the federal governments the right to bring a compliance or enforcement action to address alleged harms. However, these rights are provided for under domestic law, and can be exercised through domestic litigation.

To best understand how domestic litigation can be used to address transboundary pollution, this Part discusses several leading precedents organized into a simple framework. The opportunities and challenges of domestic litigation vary considerably based on the venue of the litigation. Transboundary pollution plaintiffs can sue the polluter in either the polluter's source state or in the plaintiff's state. Bringing an action in the polluter's source state is more common historically and poses fewer procedural challenges, as shown by the decision in *Michie v. Great Lakes Steel Division*.²⁴² Also included in the category of cases brought in the pollution source state are citizen enforcement actions seeking the procedural remedy of transboundary environmental impact assessment from the responsible government, such as *Manitoba v. Norton*.²⁴³

More recently, transboundary pollution plaintiffs have been successful in using domestic litigation to bring an enforcement action in the plaintiff's state. The recent decision in *Pakootas v. Teck Cominco Metals, Ltd.*²⁴⁴ illustrates the challenges unique to this type of action. Procedural and due process issues such as jurisdiction, extraterritorial application of domestic law, and enforceability of judgments make this type of domestic litigation more controversial than the more traditional actions brought in the polluter's source state. Despite the controversies, the challenges of this type of litigation can be overcome, and it presents a new opportunity for domestic enforcement against transboundary pollution.

A. Domestic Litigation in the Pollution Source State

The simplest and least controversial type of domestic litigation against transboundary pollution is a non-resident plaintiff bringing an action to vindicate a commonly recognized right in the pollution source state's courts. The United States has long allowed nonresidents alleging transboundary pollution injuries equal ac-

242. *Michie v. Great Lakes Steel Division*, 495 F.2d 213 (6th Cir. 1974), *cert. denied*, 419 U.S. 997 (1974).

243. *Manitoba v. Norton*, 398 F. Supp. 2d 41 (D.D.C. 2005).

244. *Pakootas v. Teck Cominco Metals, Ltd.*, 452 F.3d 1066 (9th Cir. 2006).

cess to its judicial system.²⁴⁵ Historically, the major obstacle to bringing an action under common law to protect the plaintiff's property from transboundary pollution, such as trespass or nuisance actions, was the local action rule. As originally applied in the United States, the local action rule "dictates that a court has no jurisdiction over an action for invasion of the plaintiff's foreign proprietary rights."²⁴⁶ As the local action rule was abolished or limited by exemptions in most United States jurisdictions, it opened the door to private legal actions against transboundary pollution.²⁴⁷

The 1974 decision in *Michie v. Great Lakes Division* illustrates citizen enforcement against transboundary pollution using the common law in the pollution source state's court.²⁴⁸ In this dispute, thirty-seven Canadian citizens from thirteen families residing near LaSalle, Ontario, filed a complaint against three corporations which were operating seven plants in the United States immediately across the Detroit River from Canada.²⁴⁹ The Canadian citizens filed their complaint in the United States District Court for the Eastern District of Michigan, located near the polluting plants in Detroit, Michigan.²⁵⁰ The Canadian plaintiffs claimed that the noxious pollutants emitted by defendants' plants were carried by air currents onto their property in Canada, constituting a nuisance damaging their persons and property.²⁵¹

The only significant legal issue, which is not particularly relevant to this discussion, was whether the multiple defendants could be held jointly and severally liable for pollution that mixed in the air such that separate effects from each source of pollution were indistinguishable.²⁵² More importantly for purposes of this discussion, the right of the Canadian plaintiffs to bring an action against U.S. polluters in U.S. courts, and the jurisdiction of the court over a claim for damage to property in Canada, were never in dispute.

245. PAUL R. MULDOON, CROSS-BORDER LITIGATION: ENVIRONMENTAL RIGHTS IN THE GREAT LAKES ECOSYSTEM 33 (1986) (citing B.C. DAWSON & I.L. HEAD, INTERNATIONAL LAW, NATIONAL TRIBUNALS AND THE RIGHTS OF ALIENS 109 (1971); J.H. Beale, *The Jurisdiction of Courts Over Foreigners*, 26 HARV. L. REV. 283 (1913)).

246. MULDOON, *supra* note 245, at 51.

247. The local action rule remains an obstacle to transboundary pollution litigation in Canada. *See id.* at 52-60. Opportunities to remedy this, such as the Uniform Transboundary Pollution Reciprocal Access Act, are discussed in Part IV.

248. *Michie v. Great Lakes Division*, 495 F.2d 213 (6th Cir. 1974), *cert. denied*, 419 U.S. 997 (1974).

249. *Id.* at 215.

250. *Id.* at 213.

251. *Id.* at 215.

252. *Id.*

Nonetheless, the case has become a precedent for allowing such actions. As one commentator has described:

This decision has been considered to establish for the first time that Canadian residents have the right to sue in the courts of the United States for damages resulting from international pollution. Although an important precedent was established by the decision, no explicit ruling was made in this regard. In fact, the existence of such a right was never questioned by the court.²⁵³

The U.S. Supreme Court declined to review the court's decision on the underlying legal issue,²⁵⁴ and the case proceeded to trial.²⁵⁵ As is typical in civil litigation in the United States, the dispute was eventually settled before a trial verdict was reached. One of the defendants settled before the April 1975 trial for approximately \$12,500, based on damages of \$1 per ton of pollution emitted by the company in 1970.²⁵⁶ The remaining defendants settled during the trial for a payment of \$105,000 to the plaintiffs and a commitment to spend \$4,000,000 on pollution abatement equipment.²⁵⁷

After early success in using litigation to enforce domestic common law rights against transboundary pollution, the approach expanded to address domestic public law violations. In these actions, transboundary pollution plaintiffs, which can include citizens, non-governmental organizations ("NGOs") and national and sub-national governments (often in combination), are using judicial actions to enforce specific environmental statutory obligations. The most notable of these obligations is transboundary environmental impact assessment under NEPA.²⁵⁸

A recent dispute involving another water diversion in North Dakota²⁵⁹ demonstrates the opportunity for citizens to enforce transboundary environmental impact assessment through domestic litigation. Water diversions in North Dakota have created controversies and conflicts between the United States and Canada for

253. MULDOON, *supra* note 245, at 377-78.

254. *Michie v. Great Lakes Div.*, 495 F.2d 213 (6th Cir. 1974), *cert. denied*, 419 U.S. 997 (1974).

255. MULDOON, *supra* note 245, at 378.

256. *Id.*

257. *Id.*

258. *See supra* Part I.

259. Separate but somewhat related to the Devils Lake dispute discussed in Part II.

decades.²⁶⁰ Historically, much of the attention was centered on the Garrison Diversion project, which involved construction of the Garrison dam in 1955, creating Lake Sakakawea to provide both irrigation water for lands in the Hudson Bay-Souris River-Red River Basin and hydroelectric power throughout North Dakota.²⁶¹ Canada has consistently raised concerns about the impact of resulting water diversions on water quality in Hudson Bay-Souris River-Red River Basin.²⁶² To some extent, these concerns have historically been addressed under the Boundary Waters Treaty through joint references to the International Joint Commission, as well as through other diplomatic and bilateral processes.²⁶³ But when a recent dispute over a related water diversion project was not resolved through either the International Joint Commission or other diplomatic means, concerned Canadians (joined by some American allies) turned to domestic litigation in United States courts.

The case, *Manitoba v. Norton*,²⁶⁴ involves a dispute over the U.S. Bureau of Reclamation's proposed Northwest Area Water Supply ("NAWS") project in North Dakota. Congress authorized the NAWS project in the Dakota Water Resources Act of 2000.²⁶⁵ It would be the first federal project to transfer Missouri River water across the north-south continental basin divide, essentially bringing water that would eventually flow into the Gulf of Mexico to Canada's Hudson Bay.²⁶⁶ The project would divert over three and one-half billion gallons of Missouri River water annually (approximately ten million gallons per day) through a series of pipelines to eight counties in North Dakota for municipal, rural, and industrial water supply.²⁶⁷ The communities that would receive the water are north of the Continental Divide, and the water would drain into the Hudson Bay Basin, which includes large portions of North Dakota, as well as Lake Winnipeg and Hudson Bay in Canada.²⁶⁸ If completed, this \$145 million (U.S.) project would serve about 81,000 people.²⁶⁹

260. See Sheryl A. Rosenberg, *A Canadian Perspective on the Devils Lakes Outlet: Towards an Environmental Assessment Model for the Management of Transboundary Disputes*, 76 N.D. L. REV. 817, 820-40 (2000).

261. *Id.* at 822-23.

262. *Id.* at 823-24.

263. See *id.* at 824-34.

264. *Manitoba v. Norton*, 398 F. Supp. 2d 41 (D.D.C. 2005).

265. Dakota Water Resources Act of 2000, Pub. L. No. 106-554, 114 Stat. 2763A-281 (2000).

266. *Manitoba v. Norton*, 398 F. Supp. 2d at 44-45.

267. *Id.* at 46.

268. *Id.* at 44-45.

269. *Id.* at 50.

The federal government of Canada, the Province of Manitoba, and numerous citizens and NGOs from both countries have consistently objected to the project because it would biologically pollute Canadian waters (and tributaries in the United States) by introducing non-native invasive species from the Missouri River basin into Lake Winnipeg and the Hudson Bay.²⁷⁰ If pathogenic bacteria and viruses were introduced through this project it could devastate Canadian fisheries.²⁷¹ Based on these concerns, Canada claimed that the project would violate the Boundary Waters Treaty's prohibition against polluting waters flowing across the international boundary.²⁷²

The U.S. Congress was clearly aware of Canada's concerns and recognized the potential Boundary Waters Treaty implications of authorizing the project.²⁷³ However, instead of jointly referring the matter to the International Joint Commission to conduct a study and to suggest solutions, Congress directed the U.S. Secretary of the Interior, in consultation with the U.S. Secretary of State and the Administrator of the U.S. Environmental Protection Agency, to determine whether adequate treatment could be provided to meet the requirements of the Boundary Waters Treaty.²⁷⁴ By taking this approach, Congress made the question of treaty compliance a unilateral determination, ignoring nearly a century of bilateral environmental cooperation guided by the objective work of the International Joint Commission.

The U.S. Secretary of the Interior eventually determined that the project would not result in a violation of the Boundary Waters Treaty.²⁷⁵ Canada and Manitoba disagreed with both the substance of the determination and the unilateral determination process. Canada could have responded with its own unilateral reference to the International Joint Commission for a study or report pursuant to the Boundary Waters Treaty.²⁷⁶ While such a reference can be made unilaterally, customarily even non-binding references to the International Joint Commission have always been bilateral.²⁷⁷ Re-

270. *Id.* at 45–50.

271. *Id.* at 46–47.

272. *See* Boundary Waters Treaty, *supra* note 7, art. IV, 36 Stat. at 2450.

273. *See* Dakota Water Resources Act of 2000, *supra* note 265, § 602(4)(h)(1), 114 Stat. at 2763A-282.

274. *Id.* (“Prior to construction of any water systems authorized under this Act to deliver Missouri River water into the Hudson Bay basin, the Secretary, in consultation with the Secretary of State and the Administrator of the Environmental Protection Agency, must determine that adequate treatment can be provided to meet the requirements of the [Boundary Waters] Treaty.”) (alteration in original).

275. *Manitoba v. Norton*, 398 F. Supp. 2d 41, 61 (D.D.C. 2005).

276. Boundary Waters Treaty, *supra* note 7, art. IX, 36 Stat. at 2452.

277. *See id.*; *see also* DeWitt, *supra* note 68, at 308–14.

spectful of this custom, Canada declined to make a unilateral reference, essentially ending any chance of resolving the dispute under the Boundary Waters Treaty.

While the Canadian federal government was out of diplomatic and treaty options, the Province of Manitoba looked to other legal options to address the potential threat of transboundary pollution from the project. Opponents of the project eventually chose to challenge the lack of transboundary environmental impact assessment under NEPA. Despite the magnitude of the NAWS project and the potentially devastating harm from invasive species, the U.S. Department of Interior and Bureau of Reclamation (the Bureau of Reclamation is an agency within the U.S. Department of Interior) declined to prepare an EIS, instead making a Finding of No Significant Impact.²⁷⁸ The substance of the federal defendants' argument regarding the need for an EIS is not relevant to this discussion (although the court eventually rejected the federal defendants' arguments on the merits.)²⁷⁹ In effect, the Department of Interior simply made the same determination regarding lack of potential environmental impacts under NEPA as it had done unilaterally to address compliance with the Boundary Waters Treaty.

Opponents of the project seized on the U.S. federal government's failure to perform an EIS as a basis to challenge the project. The Province of Manitoba brought the civil action against the U.S. Secretary of the Interior Gale Norton and other U.S. officials (referred to as "federal defendants") pursuant to NEPA in U.S. district court.²⁸⁰ The federal government of Canada filed an amicus brief in support of Manitoba, as did the State of Missouri (concerned with downstream impacts on the Missouri River) and numerous environmental and conservation NGOs which also opposed the NAWS project.²⁸¹ The State of North Dakota intervened on behalf of the Bureau of Reclamation.²⁸² The project opponents challenged the

278. *Manitoba*, 398 F. Supp. 2d at 44.

279. *See id.* at 45 (The Missouri River and Hudson Bay "basins have distinct ecological characteristics and contain different species of fish and other aquatic organisms, as well as pathogenic species such as bacteria, viruses, protozoa, fungi, and other microscopic organisms. The co-mingling of untreated water from one basin into another can result in the introduction of biota—the various life forms of a particular region or habitat—that may be invasive and dangerous to indigenous biota. The effect upon fish of 'interbasin biota transfer' . . . can be devastating.") (citation omitted); *see also id.* at 66 ("The recognition by all parties that the interbasin transfer of biota generally can have potentially devastating consequences weighs heavily in support of the view that an EIS should be completed.") (citation omitted).

280. *Id.* at 44–45.

281. *Id.* at 45.

282. *Id.*

decision of the U.S. federal government under NEPA as arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law within the meaning of section 10 of the Administrative Procedure Act.²⁸³

The U.S. federal defendants challenged the plaintiff's attempt to use domestic litigation to address the potential harm from transboundary pollution on two jurisprudential grounds, each of which is illustrative of potential challenges to citizens seeking to enforce statutory obligations regarding transboundary pollution in U.S. courts. First, the federal defendants sought to dismiss the suit by claiming that the issue was a non-justiciable political question because it involved obligations under the Boundary Waters Treaty.²⁸⁴ The federal defendants argued that "the discussion of the biota transfer issue in the [Environmental Assessment] is part and parcel of the same determination made as part of the United States' compliance with its [Boundary Water] Treaty obligations."²⁸⁵ The federal defendants claimed that Manitoba and the other plaintiffs were "indirectly challenging compliance with the [Boundary Waters] Treaty under the guise of a NEPA claim."²⁸⁶ The court rejected this argument, stating that "[t]he fact that construction of NAWS involves political concerns or consideration of treaty obligations is not relevant to the NEPA inquiry and is not grounds for dismissal."²⁸⁷ In effect, the court recognized that the concerned parties may have multiple legal avenues available to secure rights and enforce obligations. According to the court, the existence of treaty obligations in no way precludes seeking redress under domestic law.²⁸⁸

The federal defendants also challenged the standing of the Canadian plaintiffs to bring the action. As a general matter, Article III of the U.S. Constitution requires a plaintiff seeking judicial relief to show (1) that it has suffered an "injury in fact"; (2) that the injury is caused by or fairly traceable to the challenged actions of the defendant; and (3) that it is likely that the injury will be redressed by a favorable decision.²⁸⁹ While the Constitutional test can present challenges to all environmental plaintiffs, it does not pose any unique challenges for foreign plaintiffs in transboundary pollution disputes, and was not raised as an issue in the *Manitoba v. Norton*

283. 5 U.S.C. § 706(2)(A) (2000).

284. *Manitoba v. Norton*, 398 F. Supp. 2d 41, 51 n.10 (D.D.C. 2005).

285. *Id.* (citing Fed. Defs.' Opp'n & Mot. for Summ. J. at 41) (alteration in original).

286. *Id.* (citing Fed. Defs.' Opp'n & Mot. for Summ. J. at 42).

287. *Id.*

288. *Id.*

289. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560–61 (1992).

case. However, in addition to the Constitutional test, plaintiffs must also demonstrate “prudential” standing, by showing that the alleged injury falls within the “zone of interests” protected or regulated by the relevant statute.²⁹⁰

The federal defendants argued that the Canadian plaintiffs lacked prudential standing, claiming that NEPA is not intended to protect environmental interests outside of the United States.²⁹¹ NEPA is silent regarding its application outside of the United States, and the issue has been the subject of several controversies.²⁹² The prudential standing test is not a particularly demanding one,²⁹³ and includes not only those challengers expressly mentioned by Congress, but also unmentioned potential challengers that Congress would have thought useful for the statute’s purpose.²⁹⁴ As the court noted, “NEPA speaks to the protection of the ‘welfare and development of man,’ not just residents of the United States.”²⁹⁵ The court thus found that the plaintiffs had prudential standing to bring the NEPA claim.²⁹⁶

With the justiciability and standing issues dismissed, the court addressed the case under a standard NEPA analysis and found that the federal government erred in deciding to not perform an EIS.²⁹⁷ “Without some reasonable attempt to measure [the potential invasive species] consequences instead of bypassing the issue out of indifference, fatigue, or through administrative legerdemain, the Court cannot conclude that [federal defendants] took a hard look at the problem.”²⁹⁸ The federal government eventually dropped its appeal of the court’s decision and has begun the process of performing an EIS on the NAWS project.

The litigation over the NAWS dispute is only the most recent example of the effectiveness of addressing transboundary pollution through litigation under domestic environmental impact assessment laws. Soon after NEPA was enacted, a Canadian citizen and environmental NGO were granted the right to intervene in a case

290. *Bennett v. Spear*, 520 U.S. 154, 154–55 (1997).

291. *Manitoba v. Norton*, Civil Action No. 02-cv-02057, Unpublished Order regarding Motions for Judgment on the Pleadings, November 14, 2003 at 4 (on file with the University of Michigan Journal of Law Reform).

292. *See* Schiffer, *supra* note 114, at 334–44.

293. *See* *Clarke v. Sec. Indus. Ass’n*, 479 U.S. 388, 399 (1987).

294. *See* *Hazardous Waste Treatment Council v. EPA*, 861 F.2d 277, 283 (D.C. Cir. 1988).

295. *Province of Manitoba v. Norton*, Civil Action No. 02-cv-02057, Unpublished Order regarding Motions for Judgment on the Pleadings, November 14, 2003 at 4 (on file with the University of Michigan Journal of Law Reform).

296. *See id.*

297. *Manitoba v. Norton*, 398 F. Supp. 2d 41, 65 (D.D.C. 2005).

298. *Id.* (alteration in original).

involving consideration of transboundary impacts in Canada from the trans-Alaska pipeline.²⁹⁹ The court was not persuaded that the Canadian environmental interests would be represented by the American plaintiff NGO, as the American environmentalists could prefer an alternative pipeline location that protects American lands but puts Canadian waters at risk.³⁰⁰ In another case, Canadian environmental NGOs joined with American environmental NGOs in challenging the adequacy of the U.S. Federal Energy Regulatory Commission's environmental assessment for raising a dam on the Skagit River, which flows from British Columbia into Washington State.³⁰¹ The court ultimately dismissed the challenges, finding that the environmental assessment did adequately consider transboundary impacts in Canada.³⁰²

As the above cases illustrate, domestic litigation in the pollution source state is a viable and effective method for enforcement against transboundary pollution. Transboundary pollution plaintiffs can enforce both common law rights and statutory obligations (such as environmental impact assessment) to address transboundary pollution. These domestic actions have succeeded in compensating transboundary pollution victims and forcing transboundary environmental impact assessment. By bringing an action in the pollution source state, most procedural and practical hurdles are avoided. Some obstacles remain, and potential solutions to provide increased access for citizen enforcement are discussed in Part IV. Emboldened by these successes on the domestic litigation path, transboundary pollution plaintiffs have recently attempted to go further and sue polluters in the plaintiff's state's court. As discussed below, this type of action faces additional obstacles, yet has also proved effective in achieving transboundary pollution enforcement.

B. Domestic Litigation in the Plaintiff's State

Following successes in using domestic litigation in the pollution source state, transboundary pollution plaintiffs have more recently brought legal actions against transboundary polluters in the plaintiff's state's courts. This step in the domestic litigation path raises new procedural and due process issues regarding ju-

299. See *Wilderness Soc'y v. Morton*, 463 F.2d 1261 (D.C. Cir. 1972).

300. *Id.* at 1262-63.

301. See *Swinomish Tribal Cmty. v. Fed. Energy Regulatory Comm'n*, 627 F.2d 499 (D.C. Cir. 1980).

302. *Id.* at 512.

isdiction, extraterritorial application of domestic law, and enforceability of judgments. Yet with the success of the plaintiffs in the recent *Pakootas v. Teck Cominco Metals, Ltd.*³⁰³ case, the door may be opening to bring polluter liability across the border with the offending pollution.

With some irony, the *Pakootas* case involved the same Trail Smelter that was the subject of the famous transboundary air pollution arbitration discussed in Parts I and II, *supra*. The recent dispute at issue in *Pakootas* was not over air pollution, but the hundreds of thousands of tons of slag (the waste material that comes from the metal smelting and refining process) that the Trail Smelter plant dumped into the Canadian portion of the Columbia River annually from the early 1900s until 1995, when it discontinued the dumping.³⁰⁴ The dumping occurred about ten river miles north of the international border and Washington State.³⁰⁵ The plant is now owned and operated by Teck Cominco Metals, Ltd., a Canadian corporation.³⁰⁶ It is one of the world's largest zinc and lead refining facilities.³⁰⁷ It is also a tremendous source of toxic pollution and waste. According to one report, in 1994 and 1995 the copper and zinc discharges from Trail Smelter exceeded the cumulative total for all U.S. companies, and in recent years its annual mercury discharges were equivalent to as much as fifty-seven percent of all U.S. releases into water.³⁰⁸

Not surprisingly, these toxic releases have made their way ten miles down the Columbia River and into the United States. The upper Columbia River and connected Lake Roosevelt are now seriously contaminated.³⁰⁹ Even the beaches contain toxic sediments which can blow in the wind and migrate throughout the area.³¹⁰ The area is home to the Confederated Tribes of the Colville Reservation, a federally-recognized Native American tribe.³¹¹ The Confederated Tribes petitioned the U.S. Environmental Protection Agency ("EPA") to study the area, and the EPA's investigation led

303. *Pakootas v. Teck Cominco Metals, Ltd.*, 452 F.3d 1066 (9th Cir. 2006).

304. *Pakootas*, 452 F.3d at 1069-70; Parrish, *supra* note 161, at 370-71 (citing U.S. EPA, UPPER COLUMBIA RIVER EXPANDED SITE INSPECTION REPORT NORTHEAST WASHINGTON 2-11 (2003)).

305. *Pakootas v. Teck Cominco Metals, Ltd.*, No. CV-04-256-AAM, 2004 WL 2578982, at *1 (E.D. Wash. Nov. 8, 2004).

306. *Pakootas*, 452 F.3d at 1068.

307. Parrish, *supra* note 161, at 365.

308. *Id.* at 371-72.

309. *Pakootas*, 452 F.3d at 1069-70.

310. See Parrish, *supra* note 161, at 372-73.

311. *Id.* at 374.

to the site's placement on the National Priorities List for clean-up.³¹² After negotiations between the EPA and Teck Cominco broke down, the EPA issued a Unilateral Administrative Order to Teck Cominco pursuant to the U.S. Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA")³¹³ for remedial investigation.³¹⁴ CERCLA is a domestic statutory application of the polluter-pays principle,³¹⁵ creating strict liability for generators of hazardous materials found at hazardous waste sites.³¹⁶

Teck Cominco responded to the EPA's order by disputing EPA's jurisdiction to assert U.S. law on a Canadian corporation.³¹⁷ When the EPA failed to bring an enforcement lawsuit, two members of the Confederated Tribes of the Colville Reservation sued Teck Cominco in U.S. district court in the Eastern District of Washington.³¹⁸ Invoking CERCLA's "citizen suit" provision,³¹⁹ the plaintiffs sought to enforce the EPA order.³²⁰ The State of Washington subsequently intervened on behalf of the plaintiff tribal members.³²¹

The substantive merits of the CERCLA case are not critical to this discussion, although the magnitude of the transboundary pollution at issue is staggering. Instead, the litigation focused on the applicability of CERCLA to the transboundary pollution. Teck Cominco moved to dismiss the claim for lack of jurisdiction and failure to state a claim upon which relief can be granted, essentially arguing that CERCLA does not apply to a Canadian corporation for actions that occur in Canada.³²² The district court determined that it had limited personal jurisdiction for purposes of the

312. *Pakootas*, 452 F.3d at 1069.

313. U.S. Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-9675 (2000) [hereinafter CERCLA].

314. *Pakootas*, 452 F.3d at 1070.

315. The polluter-pays principle is widely accepted, at least in theory, in international transboundary environmental law. Principle 16 of the 1992 Rio Declaration specifically endorsed the polluter-pays principle: "National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment." *Rio Declaration on Environment and Development*, *supra* note 94, princ. 16, 31 I.L.M. at 879. The polluter-pays principle could be viewed as corollary to the principle announced in the Trail Smelter Arbitration, requiring internalization of transboundary pollution costs that were unlawfully externalized in another state.

316. See CERCLA, 42 U.S.C. § 9607(a)(2) (2000); see also Michael J. Robinson-Dorn, *The Trail Smelter, Is What's Past Prologue? EPA Blazes a New Trail for CERCLA*, 14 N.Y.U. ENVTL. L.J. 233, 276 (2006).

317. Parrish, *supra* note 161, at 376-79.

318. *Pakootas*, 452 F.3d at 1070.

319. CERCLA, 42 U.S.C. § 9659 (2000).

320. *Pakootas*, 452 F.3d at 1070.

321. *Id.* at 1068.

322. *Id.* at 1070.

CERCLA claim, and that CERCLA was intended to apply extraterritorially under these facts.³²³ The district court recognized the significance of the underlying legal issue, and certified the case for immediate appeal before the Ninth Circuit.³²⁴

On appeal, Teck Cominco essentially conceded that the U.S. district court had personal and subject matter jurisdiction.³²⁵ Instead, Teck Cominco continued to argue that the plaintiff's claim was based on an impermissible extraterritorial application of CERCLA.³²⁶ The court of appeals ultimately affirmed the district court's application of CERCLA, but on very different grounds. While the district court found that CERCLA did apply extraterritorially in this dispute, the court of appeals held that the case did not even involve an extraterritorial application of CERCLA, since the polluted site at issue is located in the United States.³²⁷

CERCLA is intended to address contamination at a specific facility, defined as "any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located."³²⁸ The "facility" at issue was the contaminated portion of the Upper Columbia River located entirely within the United States.³²⁹ Thus, the court of appeals held that:

Because the CERCLA facility is within the United States, this case does not involve an extraterritorial application of CERCLA to a facility abroad. The theory of Pakootas's complaint, seeking to enforce the terms of the [EPA] Order to a "facility" within the United States, does not invoke extraterritorial application of United States law precisely because this case involves a domestic facility.³³⁰

Given the robust debate over whether CERCLA should have applied extraterritorially, many commentators and observers may be unsatisfied by the court's holding.³³¹ One argument in favor of

323. *Id.* at 1071.

324. *Id.*

325. *Id.* at 1072.

326. *Id.* Teck Cominco also argued that "it [was] not liable as a person who 'arranged for disposal' of hazardous substances under [42 U.S.C.] § 9607(a)(3)," an argument which the court of appeals rejected. *Id.* (alteration in original).

327. *Id.* at 1074.

328. CERCLA, 42 U.S.C. § 9601(9) (2000).

329. *Pakootas v. Teck Cominco Metals, Ltd.*, 452 F.3d 1066, 1074 (9th Cir. 2006).

330. *Id.* (alteration in original).

331. Several commentators and scholars have analyzed the applicability of CERCLA to transboundary pollution, and reached differing conclusions as to both the legality and the wisdom of such an approach. *Compare* Parrish, *supra* note 161 (criticizing use of CERCLA to

extraterritorial application of CERCLA to a transboundary pollution dispute with a Canadian polluter is that Canadian law would also apply the polluter-pays principle to establish liability in this case. According to Professor Robinson-Dorn, British Columbia's provincial law "reflects, in no uncertain terms, the 'polluter pays' principle, and bears an unmistakable resemblance to CERCLA. The resemblance between the two statutes is not a coincidence; the [British Columbia] drafters used CERCLA as their model."³³² While provincial law would likely control, Canadian federal environmental laws also incorporate the polluter-pays principle consistent with EPA application of CERCLA.³³³ This argument suggests that the potential for inequity and application of double standards when using domestic litigation to address an international transboundary pollution problem are overstated in this context.

The *Pakootas* dispute may not be over, as Teck Cominco could seek review in the U.S. Supreme Court. Regardless of the ultimate outcome, the decision has opened the door to an expanded use of domestic litigation to address international transboundary pollution disputes from the more conventional and accepted practice of suing in the pollution source state to suing in the victim's state. As the barriers to using domestic litigation continue to come down, it is more important than ever before to harmonize the application of the domestic and international legal system in the area of transboundary pollution in a way that furthers environmental protection while respecting state sovereignty.

IV. HARMONIZING INTERNATIONAL AND DOMESTIC TRANSBOUNDARY POLLUTION LAW

As detailed in the above discussion, there are numerous international and domestic legal mechanisms for addressing transboundary pollution between the United States and Canada. The strength of the international mechanisms is in improving transboundary pollution policy through cooperation and citizen participation. The obvious weakness of the international mecha-

address international transboundary pollution), with Robinson-Dorn, *supra* note 316, and Rachel Kastenberg, *Closing the Liability Gap in the International Transboundary Water Pollution Regime Using Domestic Law to Hold Polluters Accountable: A Case Study of Pakootas v. Teck Cominco Ltd.*, 7 OR. REV. INT'L L. 322 (2005) (supporting use of CERCLA to address international transboundary pollution).

332. Robinson-Dorn, *supra* note 316, at 310 (referring to the Environmental Management Act, R.S.B.C., ch. 53 (2003)) (alteration in original).

333. *See id.* at 312 (citing British Columbia Hydro and Power Auth., [2005] 1 S.C.R. 3; Imperial Oil Ltd. v. Quebec (Minister of Environment), [2003] 2 S.C.R. 624, 641).

nisms—a lack of enforcement powers—is offset through the domestic legal system, which gives enforcement rights to both citizens and governments. The international and domestic legal regimes seem to complement each other, producing a rough harmony that maintains the overall strong relationship between the two countries and provides protections and controls against transboundary pollution. Moreover, as detailed in Part I, the substantive transboundary pollution principles under international and domestic law are roughly equivalent. Nonetheless, additional harmonization could build on the existing legal regime and produce better results for the transboundary environment while enhancing the bilateral relationship and protecting state sovereignty.

To see the need for harmonization, one can look to the human rights field for a cautionary tale. Professor Paul Dubinsky has explained how advocates of human rights protections and private law unification initially complemented each other's efforts, bringing deeper values than nationalism to the legal field.³³⁴ However, as the movements evolved and the advocates became more bold and aggressive in their respective strategies, the potential for conflict became clear. Using the domestic legal system to address international problems can be tremendously effective in the short term, but it creates the risk of undermining the international legal system and the procedural values of predictability and fairness.³³⁵

Likewise, the victories of transboundary pollution plaintiffs in domestic courts should be viewed as a success, but with some caution about the implications for bilateral diplomacy, sovereignty, and advancing international environmental law. At its best, using the domestic legal system to address transboundary pollution problems allows citizens to effectively and efficiently protect their environmental rights while avoiding the time delays, scarce diplomatic resources, and perhaps lack of will of the federal governments. Courts would fairly and justly resolve disputes with a blind eye towards citizenship, simply enforcing common or at least compatible rights of all parties. At its worst, using the domestic legal system to address transboundary pollution problems creates potential diplomatic disasters and threatens national sovereignty by undermining the legal authority of at least one of the respective countries. Courts could apply procedural rules that discriminate against foreign parties and subject actors to conflicting legal regimes.

334. See Paul R. Dubinsky, *Human Rights Law Meets Private Harmonization: The Coming Conflict*, 30 *YALE J. INT'L L.* 211 (2005).

335. See *id.*

The challenge, then, is in building on the strengths of domestic law while protecting diplomatic relations, state sovereignty, and role of international law. Citizen enforcement, in particular, is a critical tool in addressing domestic environmental problems and deserves a central role in proposals to reform the transboundary pollution regime.³³⁶ One of the most significant innovations of environmental law in the United States is the empowering of citizens to enforce these laws against both private polluters and government. Without citizen enforcement, environmental law would not have achieved the objective successes of cleaner air and water. This lesson has been learned in the United States and is now spreading around the world.³³⁷

Citizen suits are the cornerstone of citizen enforcement in the United States.³³⁸ Professor James May has succinctly outlined the critical importance of citizen suits in environmental law enforcement. First, citizen suits establish respect for the rule of law and compel compliance with environmental protection objectives. Second, citizen suits hold unelected governmental agencies accountable. Third, citizen suits help uphold and effectuate governance policies, objectives, and commitments. Finally, citizen suit

336. The term "citizen" as used in this discussion is defined broadly to include individual persons, nongovernmental organizations (NGOs), and sub-national governments (including American states and Canadian provinces). In other words, citizens are defined as the same persons, organizations, and governments that are not party states to traditional formal international treaties and agreements.

337. See ZYGMUNT J.B. PLATER ET AL., ENVIRONMENTAL LAW AND POLICY: NATURE, LAW, AND SOCIETY 73 (3d ed. 2004) ("In a lesson that has begun to spread to the rest of the world, U.S. practice has shown that if you really want to have a public law enforced, it is sensible to provide for supplemental private enforcement by those who are personally affected and hence have a personal incentive to do so.")

338. While this Article, and this discussion in particular, focuses on United States domestic law as it relates to U.S.-Canadian transboundary pollution, it should be noted that Canada does not have the same tradition of citizen enforcement. However, to harmonize the two legal systems, the gradual expansion of citizen enforcement under Canadian domestic environmental law should continue. See Marcia Valiante, "Welcomed Participants" or "Environmental Vigilantes"? *The CEPA Environmental Protection Action and the Role of Citizen Suits in Federal Environmental Law*, 25 DALHOUSIE L.J. 81 (2002). The adoption of citizen suits under Canadian federal environmental law in the Canadian Environmental Protection Act of 1999, S.C., ch. 33 (1999), is a first step that should be continued. Various industrial and business interests are predictably opposed to expanding citizen suits in Canada. See *id.* at 96-98. However, transboundary pollution disputes may give supporters of citizen suits a politically popular argument. If American citizens can protect themselves from Canadian pollution using citizen suits under U.S. law in U.S. courts, should not the Canadian federal government also give its citizens the same opportunity to protect themselves from American pollution using Canadian domestic laws in Canadian courts? For an excellent and thorough discussion regarding the litigation of transboundary pollution disputes in Canadian courts, see Shi-Ling Hsu & Austen Parrish, *Litigating Canada-U.S. Transboundary Harm: International Environmental Lawmaking and the Threat of Extraterritorial Reciprocity*, 48 VA. J. INT'L L. (forthcoming 2007).

authority enhances public participation, shapes public opinion, and encourages responsible environmental stewardship.³³⁹ The importance of citizen suits is further evidenced empirically: over a recent ten-year period, approximately seventy-five percent of U.S. federal court opinions on civil environmental cases were based on citizen suits.³⁴⁰

Proposals to expand the role of citizen enforcement in addressing international transboundary pollution must be politically realistic, which means protection of state sovereignty is critical. This explains the political failure of proposals such as supranational adjudication, in which citizens can bring a claim against a foreign government in an international tribunal. Both state and federal governments in the United States are accustomed to having their actions reviewed in domestic court as part of the balance of powers and independence of courts, but the trial of a government in an international court raises fundamental concerns about the sovereignty and independence of a state or nation. This suggests that international law will never provide citizens with the necessary enforcement powers, so instead law reform efforts should focus on harmonizing international law principles into the domestic legal system. To put it another way, it is more likely that a state will give foreign transboundary pollution plaintiffs access to its courts to seek remedies against its polluters (or even the government itself), than subject itself as a sovereign to citizen enforcement under the jurisdiction and authority of an international environmental law regime. If the most realistic potential reforms to expand citizen enforcement against transboundary pollution are those that avoid clashes with state sovereignty, then modest reforms in domestic law will be citizens' path of least resistance.

From this perspective, this Part offers two pragmatic recommendations for harmonizing application and enforcement of transnational pollution principles under international and domestic law. Substantively, federal and state/provincial governments should incorporate compliance with international transboundary pollution agreements into the permitting standards for relevant domestic laws. Procedurally, federal and state/provincial governments should remove discriminatory procedural barriers to give foreign plaintiffs equal access to domestic courts for resolving transboundary pollution disputes. These recommendations would

339. James R. May, *Now More Than Ever: Trends in Environmental Citizen Suits at 30*, 10 WIDENER L. REV. 1, 5-7 (2003).

340. *Id.* at 8.

better harmonize the international and domestic legal regimes without undermining national and state sovereignty, as domestic governance remains the primary legal authority in applying transnational pollution principles.

A. Incorporating Compliance with International Transboundary Pollution Agreements into Permitting Standards under Domestic Law

Incorporating compliance with international transboundary pollution agreements into the permitting standards for relevant domestic laws is a relatively straightforward approach to substantively harmonizing international and domestic transboundary pollution law. None of the existing transboundary pollution treaties and agreements between the United States and Canada discussed in Part II, *supra*, are self-executing, and none have been implemented into domestic law through specific legislation. The transboundary pollution treaties and agreements thus have little legal effect and cannot be enforced through the domestic legal system.

The U.S. Supreme Court directly addressed the enforceability of international treaties under domestic law over a century ago:

A treaty is primarily a compact between independent nations. It depends for the enforcement of its provisions on the interest and the honor of the governments which are parties to it. If these fail, its infraction becomes the subject of international negotiations and reclamations, so far as the injured party chooses to seek redress, which may in the end be enforced by actual war. It is obvious that with all this the judicial courts have nothing to do and can give no redress. But a treaty may also contain provisions which confer certain rights upon the citizens or subjects of one of the nations residing in the territorial limits of the other, which partake of the nature of municipal law, and which are capable of enforcement as between private parties in the courts of the country. . . . The Constitution of the United States places such provisions as these in the same category as other laws of Congress by its declaration that 'this Constitution and the laws made in pursuance thereof, and all treaties made or which shall be made under authority of the United States, shall be the supreme law of the land.' A treaty, then, is a law of the land as an act of Congress is, whenever its provisions prescribe a rule by which the rights of the private citizen or subject may be determined.

And when such rights are of a nature to be enforced in a court of justice, that court resorts to the treaty for a rule of decision for the case before it as it would to a statute.³⁴¹

Thus, according to the U.S. Supreme Court, for a treaty provision to have the status of a statutory provision under domestic law, it must be either self-executing³⁴² or implemented through legislation,³⁴³ and the transboundary pollution treaties and agreements between the United States and Canada fail both standards. This can be explained, in part, by the desire to protect state sovereignty.

There is another way to incorporate the substantive principles of transboundary pollution treaties and agreements into domestic law. State and federal governments can, as appropriate, include compliance with the terms of relevant treaties and agreements in their permitting standards for potential sources of transboundary pollution and harm. A model for this approach is the recently proposed Great Lakes-St. Lawrence River Basin Water Resources Compact.³⁴⁴ If enacted, the Proposed Compact would require the American Great Lakes states to ensure that most new Great Lakes water withdrawals meet specified standards, including conservation and protection of natural resources.³⁴⁵ In addition to these technical standards, the Proposed Compact imposes an additional standard, requiring that new withdrawals “will be implemented so as to ensure . . . compliance with all applicable . . . international agreements, including the Boundary Waters Treaty of 1909.”³⁴⁶ Permit applicants would thus need to demonstrate compliance with the relevant provisions of the Boundary Waters Treaty and other applicable transboundary agreements, and state regulatory agencies charged with administering the Proposed Compact could only approve permits that comply with these international laws.

341. *Head Money Cases*, 112 U.S. 580, 598–99 (1884); *see also* *Valentine v. United States*, 299 U.S. 5, 10 (1936); *De Lima v. Bidwell*, 182 U.S. 1, 195 (1901).

342. *See* *Comm. of U.S. Citizens Living in Nicaragua v. Reagan*, 859 F.2d 929, 937 (D.C. Cir. 1988) (citing Stefan A. Riesenfeld, *The Doctrine of Self-Executing Treaties and U.S. v. Postal: Win At Any Price?*, 74 AM. J. INT'L L. 892, 896–97 (1980)).

343. A relevant example of legislative implementation of a treaty is the Migratory Bird Treaty Act of 1918, 40 Stat. 755 (codified as amended at 16 U.S.C. §§ 703–715 (2000)), enacted to implement the Convention for the Protection of Migratory Birds, U.S.-Gr. Brit. (for Can.), Aug. 16, 1916, 39 Stat. 1702.

344. Council of Great Lake Governors, Great Lakes-St. Lawrence River Basin Water Resources Compact (Dec. 13, 2005) *available at* http://www.cglg.org/projects/water/docs/12-13-05/Great_Lakes-St_Lawrence_River_Basin_Water_Resources_Compact.pdf [hereinafter Proposed Compact].

345. *Id.* § 4.11, at 18–19; *see also* Hall, *supra* note 138, at 435–37.

346. Proposed Compact, *supra* note 344, § 4.11(4), at 18.

Further, as the Proposed Compact provides for judicial review of state decisions³⁴⁷ and citizen enforcement against violators of the standards,³⁴⁸ this approach allows the substantive terms of the Boundary Waters Treaty and other relevant international agreements to be enforced in domestic courts. This accomplishes the goal of citizen enforcement of international law without the need for self-executing treaties or even implementing legislation. But because administration and enforcement of the treaty standards would be left to state agencies and courts, concerns about subjecting states and their private businesses to international regulation or supranational adjudication are minimized.

The value of this approach can be demonstrated by reviewing the Devils Lake dispute, discussed in Part II, *supra*. In that dispute, both U.S. and Canadian NGOs and citizens alleged that a proposed water diversion from Devils Lake would violate Article IV of the Boundary Waters Treaty (the anti-pollution provision). Even assuming that the allegations could be proved, the NGOs and citizens have no forum or mechanism to enforce the violation of the Boundary Waters Treaty. However, as is often the case, the proposed diversion is subject to state law and permits. If those laws and permits incorporated compliance with the Boundary Waters Treaty as a substantive standard, then the citizens would be able to challenge the issuance of the permit through state administrative and judicial processes. The dispute would not need to reach an international forum such as the North American Commission for Environmental Cooperation or the International Joint Commission, as the substantive issues would be heard in the local jurisdiction. This preserves state sovereignty while effectively harmonizing substantive international transboundary pollution standards into domestic law.

*B. Equal Access to Domestic Courts for Foreign
Transboundary Pollution Plaintiffs*

Incorporating substantive international transboundary pollution standards into domestic law will be of limited value if foreign plaintiffs lack access to state administrative processes and courts. To achieve this procedural harmonization, states must provide equal access to domestic administrative proceedings and courts to

347. *Id.* § 7.3(1), at 23.

348. *Id.* § 7.3(3), at 24.

address transboundary pollution. This is not a new idea, but an idea whose time has come.

The concept of equal access under domestic law for foreign transboundary plaintiffs was first incorporated into Article II of the Boundary Waters Treaty.³⁴⁹ Article II of the treaty recognized the continuing importance of domestic law in addressing transboundary environmental disputes, and first provides that the use of waters in each country that eventually flow into the other country are not governed by the treaty, but are instead left to the “exclusive jurisdiction and control” of the federal governments and respective states and provinces.³⁵⁰ But while the substantive control of the federal and state/provincial governments was preserved, Article II also provided that foreign plaintiffs would not be procedurally discriminated against in transboundary water diversion disputes:

[A]ny 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 occurs³⁵¹

While Article II and this provision are only applicable to transboundary water diversions and not pollution,³⁵² it provided a theoretical precedent³⁵³ for subsequent efforts to more comprehensively provide uniform access to transboundary pollution plaintiffs.

The concept of equal access for transboundary pollution plaintiffs was revived in 1974 through the Organisation for Economic Co-operation and Development (“OECD”) Council Recommendations on Principles Concerning Transfrontier Pollution.³⁵⁴ The OECD Council urged states to afford the same procedural rights in

349. Boundary Waters Treaty, *supra* note 7, art. II, 36 Stat. at 2449.

350. *Id.*

351. *Id.*

352. For a thorough analysis of the applicability of Article II of the Boundary Waters Treaty, see Stephen C. McCaffrey, *Trans-Boundary Pollution Injuries: Jurisdictional Considerations in Private Litigation Between Canada and the United States*, 3 CAL. W. INT'L L.J. 191 (1973).

353. Article II of the Boundary Water Treaty has never been invoked in a reported decision regarding a transboundary water diversion dispute, and has only been referenced in two cases brought against the United States government. See *Soucheray v. Corps of Eng'rs of U.S. Army*, 483 F. Supp. 352 (W.D. Wis. 1979); *Miller v. United States*, 410 F. Supp. 425, 427 (E.D. Mich. 1976), *rev'd on other grounds*, 583 F.2d 857 (6th Cir. 1978).

354. Org. for Econ. Co-operation and Dev. [OECD], *Council Recommendation on Principles Concerning Transfrontier Pollution*, 14 I.L.M. 242 (Nov. 14, 1974).

judicial and administrative proceedings to persons in an affected state as to persons in the source state.³⁵⁵ The OECD further advanced the concept in its Recommendation for Implementation of a Regime of Equal Right of Access and Non-Discrimination in Relation to Transfrontier Pollution, which again would generally require states to give nonresidents equal access to all administrative and judicial procedures concerning environmental harm.³⁵⁶

The OECD recommendations were advanced in the United States-Canada forum in a 1979 Draft Treaty for Equal Access and Remedy ("Draft Treaty") prepared by "a joint working group of the American and Canadian Bar Associations."³⁵⁷ The Draft Treaty would provide citizens with equal access to the two countries' judicial and administrative systems to address transboundary pollution.³⁵⁸ Despite being endorsed by both bar associations, the federal governments have not taken any steps to implement the Draft Treaty. The principles of the Draft Treaty have been implemented in a more limited way. The Draft Treaty was rewritten as the Uniform Transboundary Pollution Reciprocal Access Act,³⁵⁹ which has been enacted by eight American states and four Canadian provinces.³⁶⁰ It provides in relevant part that:

An action or other proceeding for injury or threatened injury to property or person in a reciprocating jurisdiction³⁶¹ caused by pollution originating, or that may originate, in this jurisdiction may be brought in this jurisdiction.

....

355. See *id.* at Annex Tits. C & D, 14 I.L.M. at 244-45.

356. See OECD, *Equal Right of Access in Relation to Transfrontier Pollution*, 15 I.L.M. 1218 (May 11, 1976); OECD, *Implementation of a Regime of Equal Right of Access and Non-Discrimination in Relation to Transfrontier Pollution*, 16 I.L.M. 977 (May 17, 1977).

357. 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, 85 (1991).

358. See *id.* at 92-94.

359. Uniform Transboundary Pollution Reciprocal Access Act, 9C U.L.A. 392-98 (1982), available at <http://www.ulcc.ca/en/us/index.cfm?sec=1&sub=1t4>.

360. See Unif. Law Conf. of Can., Table of Uniform Statutes Listed by Statute, <http://www.ulcc.ca/en/us/index.cfm?sec=3>. The states and provinces are Connecticut, Colorado, Manitoba, Michigan, Minnesota, Montana, New Jersey, Ontario, Oregon, Prince Edward Island, Nova Scotia, and Wisconsin.

361. "Reciprocating jurisdiction" is defined by the Uniform Transboundary Pollution Reciprocal Access Act as any American state or Canadian province which has enacted the Uniform Transboundary Pollution Reciprocal Access Act or "provides substantially equivalent access to its courts and administrative agencies." Uniform Transboundary Pollution Reciprocal Access Act, *supra* note 359, § 1(1).

A person who suffers or is threatened with injury to his person or property in a reciprocating jurisdiction caused by pollution originating, or that may originate, in this jurisdiction has the same rights to relief with respect to the injury or threatened injury, and may enforce those rights in this jurisdiction, as if the injury or threatened injury occurred in this jurisdiction.³⁶²

At a minimum, states and provinces that have not done so should consider enacting the Uniform Transboundary Pollution Reciprocal Access Act.³⁶³ Further, the federal governments may wish to revisit the issue, as they committed to doing in the North American Agreement on Environmental Cooperation (discussed in Part II, *supra*). The NAAEC directs the North American Commission for Environmental Cooperation to:

[C]onsider and, as appropriate, develop recommendations on the provision by a Party, on a reciprocal basis, of access to and rights and remedies before its courts and administrative agencies for persons in another Party's territory who have suffered or are likely to suffer damage or injury caused by pollution originating in its territory as if the damage or injury were suffered in its territory.³⁶⁴

Reciprocal access facilitates non-discriminatory citizen enforcement while protecting state sovereignty. Instead of subjecting nations to a supranational adjudication, it leaves pollution disputes in the hands of domestic courts and administrative agencies. As pollution ignores political boundaries, citizens affected by pollution should not be deterred by political boundaries, but rather should enjoy the same rights of access as the citizens of the polluting state. Reciprocal access thus brings procedural harmonization to transboundary pollution disputes, utilizing the strengths of the domestic legal system. Combined with incorporating substantive international transboundary pollution standards into domestic law, reciprocal access is a pragmatic step in transboundary pollution law harmonization.

362. *Id.* §§ 2, 3.

363. Some commentators and advocates have asserted that the Uniform Transboundary Pollution Reciprocal Access Act does not go far enough in removing barriers to transboundary pollution litigation. *See* MULDOON, *supra* note 245.

364. NAAEC, *supra* note 119, art. 10(9), 32 I.L.M. at 1487.

CONCLUSION

Environmental law is burdened with the desperate goal of protecting our natural environment from the human economy, for ourselves, our future generations, and nature itself. International environmental law shares these burdens, with the additional challenge of providing a peaceful and lawful means for resolving international disputes. History has shown that people and nations will go to war over environmental and natural resource disputes, and global environmental pressures are only increasing. Yet solving these conflicts with international governance creates potential conflicts with state sovereignty, a recipe for disaster on its own. Harmonizing accepted international environmental law principles with respected and independent domestic legal mechanisms could create a system that prevents and peacefully resolves transboundary environmental disputes, without threatening state sovereignty.