INTERNATIONAL LIABILITY AND PRIMARY RULES OF OBLIGATION: AN APPLICATION TO ACID RAIN IN THE UNITED STATES AND CANADA

I. INTRODUCTION

In 1980, the United Nations International Law Commission (ILC) released its first report—"International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law" (Report on International Liability).¹ This report outlines a set of principles for the eventual codification of regimes of liability which would bind countries in the same manner that various legal liabilities now bind individuals within a country. In an arrangement to be defined by the countries themselves through actual practice as well as through negotiated principles, a national government would be liable for the acts of individuals within its borders when those acts have extraterritorial effects.² Within this framework, the term "liability" encompasses not only the duty to compensate an injured party under certain circumstances, but also the duty to take reasonable measures for the prevention of injury.³

The emerging theory of liability discussed in the Report on International Liability is especially well-suited to dealing with problems arising in the environmental context, because it focuses on internal acts which may cause damage externally. This Note will first examine the principles of international liability contained in the Report against the backdrop of existing international law, and then apply those principles to a current international environmental dispute: the conflict between the United States and Canada regarding acid rain.

II. THE EMERGENCE OF INTERNATIONAL LIABILITY

In recent years, harmful environmental consequences of human

² See Preliminary Report: Chapter 4, supra note 1, para. 60, at 6.  
³ Id. para. 26, at 14.
activities have been the object of increasing concern worldwide. One result has been mounting pressure on national legal systems to develop viable methods of bringing such potentially harmful activities under control. However, attempts to grapple with environmental problems frequently have been hindered because the harmful activity is far removed, in time and distance, from the resulting damage.

The accelerating demand for new ways to limit environmental damage promises to have a significant impact on the development of appropriate rules of liability under international law. Conflicts between countries caused by transfrontier pollution are developing with increasing frequency. In response to these conflicts, a number of international instruments have recognized that the assignment of some degree of responsibility to source countries is an essential precondition to the control of transfrontier pollution. As postulated by the ILC, "[a] State within whose jurisdiction such an injury or danger is caused is not justified in refusing its cooperation upon the ground that the cause of the danger was or is not, within its knowledge or control." Similarly, Principles 21 and 22 of the seminal Stockholm Declaration on the Human Environment affirm the responsibility of countries to take measures to ensure that conduct within their borders does not cause harm elsewhere, and to

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6 "[T]he intrinsic difficulties of the subject [of transboundary pollution] . . . will continue to have impact . . . in the political realm." Munton, Acid Rain and Basic Politics, 10 Alternatives 21, 22 (1981).


9 Preliminary Report: Chapter 4, supra note 1, para. 60, at 6.
work towards a regime of compensation where such preventive measures fail to eliminate the danger of harm.\(^\text{10}\)

While the responsibility for preventive measures alone may be gaining some measure of acceptance, countries have been reluctant to accept a "direct linkage"\(^\text{11}\) between such a duty and questions of compensatory liability. As a rule, countries have preferred to allow individual claims arising from transfrontier pollution damage to be settled at the private level.\(^\text{12}\) This cautious attitude, along with the multifaceted nature of the transfrontier pollution problem, has resulted in the widespread perception that remedies at public international law are poorly defined and "needlessly circuitous."\(^\text{13}\)

Until recently, transfrontier pollution has received attention chiefly with regard to pollutant sources which were located along international borders.\(^\text{14}\) Nevertheless, in recent times, significant harmful effects have been detected from pollutants released at distances so great as to render the source unidentifiable.\(^\text{15}\) To the ex-

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\(^{10}\) 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 other areas beyond the limits of national jurisdiction.

\(^{11}\) States shall cooperate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction.

Stockholm Declaration, supra note 8, at 1420.

\(^{12}\) See McCaffrey, Pollution of Shared Natural Resources: Legal and Trade Implications, 71 AM. SOC'Y INT'L. L. PROC. 56, 60 (1977); Hoffman, State Responsibility in International Law and Transboundary Pollution Injuries, 25 INT'L & COMP. L.Q. 509 (1976).


\(^{14}\) See, e.g., Lake Lanoux Case (Fr. v. Spain), Arbitral Tribunal, 12 R. INT'L Arb. Awards 281 (1957), reprinted in 53 AM. J. INT'L L. 156 (Covington & Burling trans. 1959); Read, The Trail Smelter Dispute, 1963 CAN. Y.B. INT'L L. 213; Handl, International Legal Perspective on the Conduct of Abnormally Dangerous Activities in Frontier Areas: The Case of Nuclear Plant Siting, 7 ECOLOGY L.Q. 1, 15-16 (1978) (noting a dispute over liability for damage in Switzerland caused by an explosion at a munitions factory in Italy, located five kilometers from the Italian-Swiss border).

tent that this phenomenon is becoming increasingly commonplace, the international community may witness the onset of a new class of legal disputes which are beyond the capacity of private law to redress. Moreover, certain requirements within national legal systems themselves may indicate that a settlement at the governmental level is the only alternative to a host of uncompensated injuries.

Mr. Robert Quentin-Baxter, Special Rapporteur to the ILC, notes that existing agreements assigning liability in advance, as well as post-hoc settlements, "are almost always silent as to their relationship with customary law." This silence would appear to result from countries' distrust of the ability of existing legal doctrine to produce a workable settlement with respect to unforeseen future circumstances, and from their fear of the potential effect which a settlement with full precedential value could have on the scope of their sovereignty. Some critics suggest that such arrangements will always be peripheral to international legal doctrine. Nevertheless, each new governmental level settlement adds to a growing body of persuasive legal authority. Since customary international law embodies the common assumptions underlying state practice, it could be argued that a country's submission to any
regime or settlement marks the implicit recognition of some legal obligation. In this respect, Mr. Quentin-Baxter asserts that "[e]ven informal guidelines . . . cannot, despite all disclaimers, be devoid of legal significance." 21

The right of sovereign countries to be protected from, or compensated for, harm occurring within their borders and caused by activity within the territory of another sovereign has been considered in a growing number of documents concerning international legal relations. 22 The more definite this international consensus becomes, the more compelling the need will be to manifest it in the form of new legal rules. 23 This right of nations has been described as a "natural prolongation of sovereignty," 24 analogous to a coastal country's partial extension of sovereignty over its continental shelf. 25 In practice, the "prolongation" of sovereignty becomes a restriction on the sovereignty of one's neighbors. Widespread uncertainty as to the boundaries of national sovereignty will continue to present a major challenge of the technological age to international law.

In this regard the ILC began its effort to codify principles of international liability in 1973. The stated goal was to produce a set of principles which would "promote the construction of regimes to regulate without recourse to prohibition, the conduct of any particular activity which is perceived to entail actual or potential danger of a substantial nature and to have transnational effects." 26 Mr. Quentin-Baxter, Special Rapporteur for the international liability work group, has completed three reports on the subject. 27 The ILC,

1 Preliminary Report: Chapters 1 & 2, supra note 1, para. 8, at 4. The legal significance of such guidelines, however, obviously depends on the extent to which the country espousing the guidelines actually observes them.

2 See supra note 8. For an analysis of this "overriding proposition," see Bleicher, supra note 7, at 28-30.

3 "At some point . . . the tacit and explicit elements of State practice must harden into new legal rules." Preliminary Report: Chapters 1 & 2, supra note 1, para. 8, at 4.

4 Id. para. 27, at 14.


6 Preliminary Report: Chapters 1 & 2, supra note 1, para. 9, at 4. The Third Report's "Schematic Outline" defines the scope of the topic as covering "[a]ctivities within the territory or control of a State which give rise or may give rise to loss or injury to persons or things within the territory or control of another State." Report of the International Law Commission on the Work of its 34th Session, 37 U.N. GAOR Supp. (No. 10) at 179, U.N. Doc. A/37/10 (1982) [hereinafter cited as Int'l L. Comm'n 34th Session].

7 Preliminary Report: Chapters 1-4, supra note 1.
sitting as a whole, considered the contents of these reports during its Thirty-second, Thirty-third, and Thirty-fourth sessions. The Special Rapporteur's reports and the ILC commentary comprise a skeletal outline of the international liability theory.

Mr. Quentin-Baxter explains that the concept of liability of countries springs primarily from a duty of due care. Nevertheless, the range of remedies available within the framework of the Report on International Liability goes beyond the conventional standard of due care. As suggested by the title of the Report, "International Liability for . . . Acts Not Prohibited . . .," the theory's most innovative aspect is the notion that a country should be able to continue allowing certain activities, even though the activities prove deleterious to a neighboring country, provided that the permitting country makes arrangements to compensate the neighboring country for the damage caused. Primary rules of obligation would dictate that a source country take reasonable measures to protect the receiving country from further harm and, at the same time, that it compensate the receiving country for that damage which continues to occur. Under certain circumstances then,

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Note: Mr. Quentin-Baxter's Third Report is not available to the writer at this time. This Note's assessment of the Third Report is based on the ILC's summary of and commentary on the report contained in its 34th Session report, supra note 26.


29 Preliminary Report: Chapters 1 & 2, supra note 1, para. 16, at 8. "[T]he main purpose of the Special Rapporteur's emphasis on the duty of care was to strengthen the linkage between the present topic and the classical rules of international law." Int'l L. Comm'n 33rd Session, supra note 28, para. 174, at 341.

30 Those activities, as suggested in the Report's title, include "acts not prohibited by international law."

31 "The primary aim" of the Report on International Liability is to promote the regulation of activities which may cause transfrontier injuries, "without recourse to prohibition." Preliminary Report: Chapters 1 & 2, supra note 1, para. 9, at 5.

32 Id. para. 26, at 14. The ILC's attempts to codify international liability principles are a "direct response" to the call of Stockholm Declaration Principle 22, supra note 8, to develop the law of compensation and liability. Second Report: Chapter 4, supra note 27, para. 91, at 9.
compensation may be in order even though the compensating country's conduct, viewed as a whole, is entirely without fault.

The impetus behind international liability principles, in their most basic formulation, is summed up in the maxim "sic utere tuo ut alienum non laedas." The twin focus of the maxim illustrates the essence of the problem: the right to use one's own territory must be balanced against the obligation to respect the rights of the owners of neighboring territories. The second half of the maxim, "not to harm your neighbor," is the basis upon which the restriction on sovereignty must be measured. When applied within the modern context of due diligence, this restriction must be revised to require "not to unduly harm your neighbor." The Special Rapporteur acknowledges that a concern for equitable rights must be tempered with pragmatism; it is no more plausible for one party to have absolute safety from harm than it is for the other party to have total freedom of action. Thus, one of the most significant advantages of the Report on International Liability will be its capacity to balance all relevant interests. "Sic utere tuo . . ." can no longer be an absolute prohibition, but must contain the reciprocal warning: "Expect to be free of harm only to the extent that your safety does not unduly interfere with your neighbor's freedom."

The Report on International Liability framed the theory in terms of primary rules of obligation between countries, rather than the secondary rules of state responsibility outlined by the ILC in recent reports. This primary obligation attaches as a result of any potentially harmful activity, regardless of whether damage actually occurs, and it must be fulfilled in order to avoid liability for wrongful conduct. In contrast, secondary rules are triggered only

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88 Preliminary Report: Chapter 3, supra note 1, para. 38, at 6. The phrase means "use your own property in such a manner as not to injure that of another." BLACK'S LAW DICTIONARY 1238 (rev. 5th ed. 1979). The maxim has been characterized by the ILC as "a necessary ingredient of any legal system." Int'l L. Comm'n 32nd Session, supra note 11, para. 135, at 364.

84 "If there were an obligation to avoid all transboundary harm . . . the restriction upon a State's freedom of action could be little less than paralyzing." Second Report: Chapters 1 & 2, supra note 27, para. 36, at 11; see also Preliminary Report: Chapters 1 & 2, supra note 1, para. 27, at 14; Int'l L. Comm'n 32nd Session, supra note 11, para. 141, at 366.

86 See infra text accompanying note 129.

86 See Int'l L. Comm'n 32nd Session, supra note 11, at 59-69 (draft articles on state responsibility).

87 See supra note 26 (definition of scope).

88 "States discharge their duty of care, and ensure that they are not exposed to charges of wrongful conduct." Int'l L. Comm'n 32nd Session, supra note 11, para. 136, at 364.
by wrongful conduct.\textsuperscript{39} Thus, a secondary obligation may be triggered regardless of the actual occurrence of harm, while the primary obligation "insists that liability be assessed with reference to [the possibility of] injurious consequences."\textsuperscript{40} The ILC set out to define the two topics on separate planes so that the primary rules do not derogate from the secondary rules of state responsibility.\textsuperscript{41} The ILC observed in 1973 that "a joint examination of the two subjects could only make both of them more difficult to grasp."\textsuperscript{42}

The limitations on a regime restricted to rules of secondary liability as a device for preventing transfrontier environmental damage are readily apparent. Activities which may not have been defined as wrongful, and consequently, are beyond the pale of a secondary regime, may nonetheless cause substantial damage.\textsuperscript{43} Thus, there would be a gap between a country's interests (including safety from harm) and its neighbors' obligations (mere redress for wrongful conduct) which would become "of great practical significance" in a technological age.\textsuperscript{44}

A number of observers have predicted the eventual use of strict liability principles in transfrontier pollution settlements.\textsuperscript{45} The


\textsuperscript{40} Preliminary Report: Chapter 3, supra note 1, para. 47, at 11. The ILC explains that "the principal [i.e., 'secondary,'] rule prohibits an activity that is wrongful; the subsidiary [i.e., 'primary,'] rule allows that activity to continue while it complies with conditions that avoid wrongfulness." Int'l L. Comm'n 33rd Session, supra note 28, para. 190, at 347. Thus, obligations under the theory of international liability are primary in that they are triggered earlier in a sequence of events, but in the sense that they are "auxiliary rules of a mainly procedural character," they could be regarded as secondary. Id. para. 171, at 340.

\textsuperscript{41} Preliminary Report: Chapters 1 & 2, supra note 1, para. 19, at 11; Int'l L. Comm'n 32nd Session, supra note 11, para. 133, at 363.

\textsuperscript{42} Int'l L. Comm'n 25th Session, supra note 39, para. 38, at 7.

\textsuperscript{43} In this respect, Mr. Quentin-Baxter notes that "[t]he equipoise of the two halves of Stockholm Principle 21 [calling for control measures and for compensatory measures where reasonable control measures fail] evokes a balancing of interests that cannot be attained in terms of the simple dichotomy between right and wrong." Second Report: Chapter 3, supra note 27, para. 67, at 18.

\textsuperscript{44} Preliminary Report: Chapter 4, supra note 1, para. 54, at 2.


Preliminary Report suggests that, with increasing awareness and articulation on the part of countries concerning the demands of an age of interdependence, "the standard of care that they owe to each other may rise." This modified standard will mandate not only protective measures by a source country, but also, in certain cases, it will require compensation for such harm that reasonable preventive measures fail to avert. The advantage of such a flexible standard is that it eschews absolute prohibitions and it avoids "the rigidity, and the exclusive focus on compensation, . . . of a regime of strict liability." The goal of countries under this standard always must be "to reconcile the widest possible freedom of action with respect for the rights of others."

The ILC's work in the area of international liability is intended primarily to aid in the formulation of regimes designed to protect against actual or potential danger, and as a secondary aim, to aid in the determination of the amount of liability after damage has occurred. The emphasis on regulating future conduct reflects the recognition that a focus on prevention may be more important in the field of environmental protection than in any other regulatory endeavor. For the purposes of exploring the applicability of international liability principles, however, an after-the-fact setting offers the advantage of a more tangible and easily circumscribed set of events.

III. CANADA'S ACID RAIN PROBLEM

The current controversy over the extent of United States responsibility for Canada's acid rain problem offers a useful testing ground for international liability principles. As will be seen, the primary obligation consists of three duties: a duty of consultation, one of prevention, and one of compensation. The application of

damage to another nation under specified circumstances.

44 Preliminary Report: Chapter 4, supra note 1, para. 55, at 2.
46 Id. para. 9, at 4-5.
47 Preliminary Report: Chapters 1 & 2, supra note 27, para. 6, at 3; see also Second Report: Chapter 3, supra note 27, para. 46, at 4-5.
48 Preliminary Report: Chapters 1 & 2, supra note 1, para. 9, at 4-5.
49 Id. para. 9, at 5.
50 One commentator has remarked that "[i]t is also becoming widely recognized that this planet is gravely endangered, and that its rapidly accelerating degradation is reaching a point of no return . . ." J. SCHNEIDER, supra note 45, at 4.
51 See id. at 153.
52 See generally Research Consultation Group Report, supra note 15.
this first duty, that of consultation, will determine the need for the latter duties. Similarly, the execution of the prevention phase will determine whether there is a need for compensation.

Since acid rain has only recently been recognized as a threat, the nature of the obligations involved is just beginning to be brought into focus. The United States-Canada issue fits into the new legal relationship envisioned by the Report on International Liability, wherein the recognition of danger triggers a mutual obligation to work towards an agreement regarding the nature of the danger and the necessary measures to be taken; in other words, to delineate the "natural prolongation of sovereignty."

Acid rain is a phenomenon which is particularly likely to cause damage on an international scale, because it is formed in the upper atmosphere, where it may be transported over continental distances. In a manner only partially understood, sulfur dioxide and nitrogen oxide emissions are dispersed into the atmosphere and transformed into sulfates and nitric acids, which return to the earth in rain and snow or by a process of dry deposition.

Acidification of a local environment is a cumulative process, and its effects may go unnoticed in its early stages. Areas such as eastern Canada, which are relatively low in natural buffering agents, are particularly vulnerable to damage. Lakes undergo gradual acidification until their buffering capacities are surpassed, and then suddenly become "biological deserts."

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55 Preliminary Report: Chapter 4, supra note 1, para. 60, at 5.
56 See Preliminary Report: Chapters 1 & 2, supra note 1, para. 27, at 14.
58 Wetstone, supra note 57; Research Consultation Group Report, supra note 15.
59 One of the major obstacles to the rapid advance of scientific knowledge about [acid rain] has been the need to integrate theory, data, and methods from diverse areas of physics, chemistry, engineering, meteorology, limnology, agricultural science, and numerous more specialized fields." Munton, supra note 6, at 21-22.
60 Sulfur dioxide is currently recognized as the more significant component. Since the acid formation process for sulfur is better understood, most proposed remedial measures have focused on this component. See Wetstone, supra note 57, at 50,019.
61 For the purposes of this Note, all three phenomena will be referred to as "acid rain." See id. at 50,002.
62 Wetstone, supra note 57, at 50,001-05.
64 Munton, supra note 6, at 23. The actual level of acidity of the water may be less damaging to an ecosystem than the resultant chemical release of other toxic agents. Wetstone,
soil eventually leaches out nutrients, resulting in reduced productivity for forests and crops. Most researchers have concluded that efforts to repair the damage cannot realistically hope to restore the original chemical balance. In view of these problems, the only solution appears to be a reduction in sulfur and nitrogen emissions at the source. Nevertheless, the poor understanding of the process by which acid precipitation is formed, along with the great distances over which it may be carried, has hampered efforts to address the problem at all organizational levels.

The long range transport of pollutants which cause acid rain has made the problem one of continental dimensions. A joint United States-Canadian research group has found that emissions in the United States cause approximately one half of the acid rain in eastern Canada, while emissions in Canada add negligible amounts to the problem in the United States. To the extent that the dispersion of acid rain flows in a single direction, the dispute between the United States and Canada will be brought within the Report on International Liability's "new legal relationship."

A. The Duty of Consultation

"The regime of reasonable care . . . might . . . include obligations to collect and furnish information, to seek agreement upon methods of construction or operating procedures or tolerable levels of contamination, and to provide guarantees of reparation . . . ." During the period of uncertainty preceding some agreement, the


44 I. VAN LIER, supra note 63, at 15-30.

45 The liming of lakes and forests has met with little, if any, success in restoring lost productivity. Wetstone, supra note 57, at 50,002-03; I. VAN LIER, supra note 63, at 30-32.


It should be noted that a large part of acid-causing emissions in the United States is produced by electrical power plants, which are subject to a high degree of government control at the state and regional levels. A reduction in emissions, then, is a matter particularly suited to a broad response at the governmental level. See supra text accompanying note 19.

47 See generally Wetstone, supra note 57, at 50,003-15.

48 Acid rain has been called "the worst environmental problem [Canada has] ever had to face." Munton, supra note 6, at 21.


50 As the Special Rapporteur explains: "[w]here a State . . . reasonably believes that it is exposed to a substantial danger, arising beyond its own borders from the acts or omissions of other States, there is a new legal relationship which obliges the States concerned to attempt in good faith to arrive at an agreed conclusion . . . ." Preliminary Report: Chapter 4, supra note 1, para. 60, at 5.

primary obligation first must be concerned with bringing disparate views into a unified focus.\textsuperscript{72} As stated by the ILC: "[t]he criterion of 'harm' could be regarded as a variable which States have a duty to define or quantify . . . ."\textsuperscript{73} In view of the sparse documentation of long-range environmental damage by acid rain, this inquiry should focus at the outset on the amount of time which will be necessary, and that which will be available, in which to respond to the threat of environmental damage.\textsuperscript{74} As between the United States and Canada, the risk of a costly over-reaction posed by the lack of understanding regarding acid rain must be weighed against the potential costs of further delay.\textsuperscript{75}

Observers of Canadian acid rain project a fifteen to twenty-year scenario during which substantial areas of the wilderness would be irreversibly damaged if acidification were allowed to continue unabated.\textsuperscript{76} Affected provinces in Canada have already enacted a number of single-source abatement programs to be completed within ten years.\textsuperscript{77} As of 1980, an Acid Precipitation Task Force was created in the United States with directions to commence a ten-year study program with annual reports to the President,\textsuperscript{78} and the only proposed legislation which has focused on the problem has also set a ten-year completion date.\textsuperscript{79} If actually put into effect,

\textsuperscript{72} Provisions governing information exchange are contained in section 2 of the Third Report's Schematic Outline. When a dangerous situation comes to light, "the acting State has a duty to provide the affected State with all relevant and available information," except for that withheld "for reasons of national or industrial security." Int'l L. Comm'n 34th Session, \textit{supra} note 26, para. 109, §§ 2(1), 2(3), at 180.

\textsuperscript{73} Int'l L. Comm'n 32nd Session, \textit{supra} note 11, para. 137, at 365.

\textsuperscript{74} This inquiry could point to the need for a source country to conduct its affairs according to an \textit{assumed} worst possible case scenario, pending a more complete understanding of the danger posed. The standard of due care may require that a source country maintain a state of preparedness, ensuring that the most drastic control option remains a feasible alternative, rather than waiting until a time when the actual need for the drastic option can be proven or disproven, by which time irreparable damage may have rendered the question moot.

\textsuperscript{75} The ILC has noted that one of the guiding principles of the topic is "a standard of care commensurate with the nature of the danger." Int'l L. Comm'n 32nd Session, \textit{supra} note 11, para. 137, at 365.

\textsuperscript{76} Wetstone, \textit{supra} note 57, at 50,002; [4 Current Report] \textit{Int'l Env't Rep.} (BNA) No. 9, at 1008-09 (Sept. 9, 1981) (comments of Canadian External Affairs Minister).


\textsuperscript{78} 42 U.S.C. § 8902 (Supp. IV 1980); \textit{see also} [5 Current Report] \textit{Int'l Env't Rep.} (BNA) No. 8, at 323-24 (Aug. 11, 1982) (implementation of 10 year study).

\textsuperscript{79} Senate Bill 1706, 97th Cong., 1st Sess., 127 CONG. REC. 11,117 (1981) would halt sulfur emissions at 1981 levels over the eastern United States. Senate Bill 1709, 97th Cong., 1st
a ten-year abatement program would seem to be a reasonable compromise between costly control measures and the cumulative threat of harm. On the other hand, a ten-year study program, without any other interim measures, might be assessed at the end of the decade as a violation of the duty of due care. It should be noted that damage projections and abatement deadlines, and the question of available reaction time in general, suffer from the same uncertainty which pervades initial attempts to delineate the standards of conduct mandated by the primary obligation.

The necessity of calculating available reaction time falls within the scope of a broader obligation borne by each country to work towards a mutually acceptable set of assumptions upon which to base further negotiations. In this respect, the United States and Canada in 1978 formed a joint Research Consultation Group to lay out a factual basis for further negotiations in response to mounting concern in the scientific community over acid rain. The second report of the Research Consultation Group confirms that the threat appears to be serious and that the flow of pollution is largely in a single direction. This finding supplied the basis for


The extent of a duty of prevention under international liability would be more difficult to define when the harmful nature of the activity only came to light after many years of conducting the activity under the assumption of its harmlessness. In such a situation, maintaining the status quo is more similar to passive conduct, and therefore, arguably is less reprehensible. With respect to an even more extreme situation, Mr. Quentin-Baxter queries: "[s]hould ‘activity’ also include a lack of activity to remove a natural danger which . . . may give rise to loss . . . ?" Int'l L. Comm'n 34th Session, supra note 26, para. 109, § 1(2), at 180.

This concept illustrates the manner in which a firmly established obligation may give rise to a subsidiary obligation which attaches at an earlier point in the sequence of events. The duty to work towards mutual assumptions arises out of the duty to negotiate in good faith, which in turn arises out of the duty to fulfill one's contractual obligations. See, e.g., Int'l L. Comm'n 34th Session, supra note 26, para. 109, § 4(1), at 182; W. GORMLEY, HUMAN RIGHTS AND ENVIRONMENT 232 (1976); Stockholm Declaration, supra note 8, at 1420-21 (Principle 24); see also Int'l L. Comm'n 34th Session, supra note 26, para. 116, at 188, where it is suggested that the balance of interests test exists primarily "as an aid to interested States in pursuance of their duty to negotiate in good faith."

When the established obligation is pursued within the context of due diligence, the subsidiary obligation arises in order to prevent the established obligation from being thwarted in its essential purpose. "The topic [in the Report on International Liability] is founded in the substantive obligation to develop the law by making the existing law work." Second Report: Chapter 4, supra note 27, para. 82, at 7.

See generally Research Consultation Group Report, supra note 15.

"Transboundary pollution is serious, and deposition in eastern Canada originates about equally from Canada and the United States, whereas the bulk of sulfur deposition in the United States originates there." Id. at 1.
more extensive bilateral investigation.

In 1979, the two governments issued a Joint Statement which outlined the "substantial basis of obligation, commitment and co-operative practice in existing environmental relations." This includes a number of government-level settlements of past environmental disputes and mutual support of principle 21 of the Stockholm Declaration, although, significantly, principle 22 (referring to compensatory liability) was not mentioned. In defining this pre-existing basis, the Joint Statement was considered a necessary first step towards tailoring an agreement to the present dispute.

The second step, in the form of a Memorandum of Intent, was completed in 1980. The Memorandum asserts the mutual intent of the two countries to "develop a bilateral agreement which will reflect and further the development of . . . measures to combat transboundary air pollution," and pending formation of this agreement, to take available interim actions. In order to speed the attainment of both objectives, it outlines the structure of five Work Groups, each of which is to clarify a particular aspect of the

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*4* External Affairs Canada, Joint Statement on Transboundary Air Quality, United States-Canada (July 26, 1979) (Communiqué) [hereinafter cited as Canadian Embassy Communiqué].


*6* Preface to Canadian Embassy Communiqué, supra note 84.


The agreement process has consisted of a series of steps towards stronger mutual commitment, from Joint Statement to Memorandum of Intent, aiming for an eventual binding agreement. In a similar vein, a bifurcated agreement has been suggested. Wetstone, supra note 57, at 50,019. The agreement might be modeled after the United States-Canadian Great Lakes Water Quality Agreements of 1972 and 1978. See supra note 85. Within this framework, a preliminary regime would impose such control measures as were currently feasible, and a more comprehensive program would be enacted following an extended study period. Wetstone, supra note 57, at 50,019, suggests an initial focus on the better understood sulfur deposition process, with a nitrogen reduction program to be devised at a later time.

On the other hand, a division between amelioration of damage in the first agreement and prevention in the second, as has been suggested in other environmental contexts, would be less appropriate with acid rain since damage is largely non-ameliorable. See J. SCHNEIDER, supra note 45, at 154.

*8* Memorandum of Intent, supra note 87, at 392.

*9* Id.
United States-Canada transfrontier pollution problem.90

The Memorandum contains a skeletal outline of the primary obligation as currently perceived: to continue to seek a better understanding of the problem, to take such interim measures as due diligence would require, and to work towards an agreement with respect to the future.91 Perceptions of what interim measures are appropriate may vary considerably, however, between an affected country and a source country. Canada, as previously noted,92 has taken significant steps to reduce sulfur emissions, while the United States has been more inclined to wait until all the facts are known.93 Canada's more favorable disposition towards the use of interim measures results in part from the greater ease with which they can be effected in a nation where emission controls have been more lenient in the past,94 and where much pollution comes from large individual sources.95 Some critics have charged that the more cautious attitude of the United States towards interim steps indicates a disposition to preserve the status quo, which would be economically advantageous to a source country.96 This tension between dilatory conduct and what may be a legitimate concern for clarification, highlights the current need to formulate primary rules of obligation concerning acts which are beyond the reach of conventional international legal doctrine—acts which are "not prohibited" but in need of control.

Observers suggest that the agreement between the United States

90 Id. at 392-93.
91 See supra notes 83-85.
92 See supra note 72.
95 "[N]on-ferrous smelting currently accounts for about 45 percent of Canada's sulfur emissions." Wetstone, supra note 57, at 50,012.
96 "A new strategy . . . based, very simply, on the demonstrable imperfection of the scientific data base . . . proposes that, in the absence of some unspecified and therefore easily adjustable degree of scientific precision, . . . all the risks and all the costs of long range pollution damage must be borne by the recipients." Statement by G. Rejhon, Environment Counsellor, Canadian Embassy, Washington, D.C., to the National Conference of State Legislatures (July 27, 1981) (copy available in Georgia Journal of International and Comparative Law Offices); see also [5 Current Report] Int'l Env't Rep. (BNA) No. 7, at 280-81 (July 14, 1982) (Canadian accusations of intentional delays by United States officials in acid rain negotiations).
and Canada is likely to consist of a set of mutually acceptable principles which will leave substantial discretion to the national and constituent agencies charged with their execution.\textsuperscript{7} The probable format is the result, first, of the federal nature of each government\textsuperscript{8} and second, of the awkwardness of using costly and ill-defined control measures as bargaining chips.\textsuperscript{9} Some commentators fear that an agreement whose terms are limited to generalities will be ineffective to spur efforts to solve the acid rain problem.\textsuperscript{10} This view depends on the questionable assumption that the legal authority of the pact would be the only factor pushing the parties towards abatement measures. Actually, it seems probable that the same force which pushes countries towards an agreement would push them towards abatement measures in the absence of an agreement containing detailed provisions.

B. \textit{The Duty of Abatement}

The search for an agreement allocating preventive or compensatory measures must begin with a mutual acceptance of the essential equality of interests between source and affected countries.\textsuperscript{11} This represents the first step in meeting the obligation to negotiate in good faith.\textsuperscript{12} Legal theory postulates the existence of an ideal compromise point at which all interests are balanced between the result of no abatement on one hand, and of total abatement on the other. Canada's contribution to its own acid rain problems represents a flaw in the source-receptor relationship and complicates the operation of the formula. Nevertheless, it can be asserted that the major factor, which would determine the amount of pollution abatement required of a source country, is the proportion of that country's contribution to the whole problem and the costs of abatement weighed against any benefit derived by the source coun-

\textsuperscript{7} Wetstone, supra note 57, at 50,019.
\textsuperscript{8} See Environmental Mediation Report, supra note 94, at 21-25; Wetstone, supra note 57, at 50,003-11.
\textsuperscript{10} "[T]he important question is not whether there will be an agreement, but whether it will be a tough and effective one, or essentially a promissory note. The signs are not good." The Crisis of Acid Rain, INT'L PERSPECTIVES, Jan.-Feb. 1981, at 9.
\textsuperscript{11} Preliminary Report: Chapter 4, supra note 1, para. 57, at 3. The matter of protective measures and that of compensatory measures will be dealt with separately in this Note. In practice, however, the two matters would probably be woven into a single agreement.
\textsuperscript{12} See supra note 80.
try at home.¹⁰³ The focus of the inquiry must always be on "the minimum [restriction on the source country’s freedom] needed to ensure the redress and abatement of the injury."¹⁰⁴

The primary obstacle will be conflicting opinions concerning "the delimitation of sovereign interests."¹⁰⁵ The Report on International Liability points out that no rule of thumb can adequately deal with the "variable concept of harm."¹⁰⁶ While damage to an ecosystem is always difficult to quantify,¹⁰⁷ Canada’s interests in agriculture, forestry, and tourism,¹⁰⁸ all of which are directly dependent on the natural environment, may make that country more inclined to seek protection despite the difficulty in measuring the value of the protected resources. Incidentally related factors, such as the potential conflict between a pollution abatement program and the emphasis of the United States on converting oil-fired power plants to coal,¹⁰⁹ may also have to be accommodated. In the long view, however, Mr. Quentin-Baxter cautions that this duty "to have regard to all interests that may be affected"¹¹⁰ must be circumscribed by the necessity "to negotiate . . . with a view to arriving at an agreement."¹¹¹

A related obstacle to the balancing of interests will be the differing capacities of the two countries to effect preventive measures. The marginal cost of reduction in acid deposition may be lower in Canada than in the United States because of the more concen-

¹⁰³ See Preliminary Report: Chapter 4, supra note 1, para. 60, at 5.

¹⁰⁴ Preliminary Report: Chapter 4, supra note 1, para. 60, at 5.

¹⁰⁵ Preliminary Report: Chapter 3, para. 39, at 7. See also Stockholm Declaration, supra note 8, at 1420 (Principle 23). Principle 23’s focus on the contrast in interests between industrial and less-developed States is reflected to some extent on a regional scale in the United States-Canadian conflict.


¹⁰⁷ "One of the major problems in assessing environmental damage caused by acidification is the lack of reference.” I. VAN LIER, supra note 63, at 39.


¹¹⁰ Preliminary Report: Chapter 3, supra note 1, para. 46, at 11.

¹¹¹ Id. para. 40, at 7 (quoting North Sea Continental Shelf Cases, 1969 I.C.J. 47).
trated nature of emission sources in Canada and the shorter distances of transport involved. On the other hand, the Canadian central government's greater reliance on the provinces in carrying out its programs may lessen that government's ability to deliver ironclad guarantees.

Observers in the affected country may disagree with the proposition that conduct in that country should have any effect on the source country's obligation to cease transporting pollutants across the border. This disagreement illustrates the central problem in creating a workable regime based on principles of international liability. Like other types of harm arising out of acts "not prohibited," the transfrontier export of pollutants occurs by fault of neither country, and consequently, any assessment of individual liability appears unjustified. The only response to this disagreement is to point out that under some circumstances, a party may act without fault and still be expected justifiably to account for certain consequences.

Accordingly, legal critics have suggested various relationships between the pollution control standards within an affected country and the standards that are to be expected from a source country. A number of observers have expressed the hope that Canada's abatement measures may serve as a model for determining what

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112 See supra notes 94-95. Environmental Mediation Report, supra note 94, at 21-29. In practice, Canada's federal system has never prevented the government from settling transfrontier pollution disputes with the United States. In the present dispute, Ontario and Quebec, the most seriously affected provinces, are active participants in the settlement seeking process. See Canadian Embassy, Aide Memoire, supra note 77.

114 See, e.g., [4 Current Report] Int'l Env't Rep. (BNA) No. 11, at 1075-76 (Nov. 11, 1981) (industry testimony before Senate panel); Editorial, Canada's Acid Rain, Pittsburgh Press, Nov. 9, 1981, at —, col. —.

116 "[S]tandards of protection should take into account . . . the standards applied in the affected State." Int'l L. Comm'n 34th Session, supra note 26, para. 109, § 5(3), at 182-83.

In a report to the Organization for Economic Cooperation and Development (OECD), one commentator suggests that "[n]o State . . . can claim a better protection against transfrontier pollution than the one it provides under its own laws against pollution of national origin." Bothe, International Legal Problems of Industrial Siting in Border Areas and National Environmental Policies, in Organization for Economic Co-operation and Development, Transfrontier Pollution and the Role of State 79 (1981).

On the other hand, it has been suggested that a country should not have to regulate transfrontier pollution to any greater degree than it regulates domestic pollution. Manner, Water Pollution in International Law, in II Conference on Water Pollution Problems in Europe 446, 464, U.N. Sales No. 61.IIE/Mim.24 (1961). These two standards are not necessarily inconsistent.
United States measures are justified. Reliance upon such a comparison, however, would have to be tempered with an awareness of the varying costs of abatement in the two countries.

Conversely, a source country may condition its protective measures on guarantees of reciprocal protection by the affected country. The right to such reciprocal protection, like any other incident of sovereign equality, could hardly be denied. Nevertheless, a country's obligations under the concept of international liability attach solely as a result of potentially injurious activity, and are not dependent on the existence of a contractual agreement. Questions of reciprocity are raised more appropriately where each country's conduct poses a danger to the other. A source country's insistence on authoritative guarantees of reciprocal protection could be justified only to the extent that such measures appear likely to be required in the future.

C. The Duty of Compensation

With a transfrontier pollution problem of the current magnitude, it appears unlikely that the full array of control measures which may be mandated by the duty of due diligence will eliminate all future United States responsibility for acid rain in Canada. Any future damage, along with damage caused by the United States brought about before formulation of a control regime, will be the concern of the most poorly defined responsibility in the Report on International Liability: the duty of compensation. In this respect, the Report outlines a pervasive "equitable principle," most easily recognized in cases of damage occurring in circumstances precluding wrongfulness; an innocent party suffering injury should

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117 See supra notes 94-95.
118 See section 115 of the Clean Air Act of 1970, 42 U.S.C. § 7415 (Supp. IV 1980), which empowers the Environmental Protection Agency to take actions to reduce transfrontier pollution on the condition that the other country provide "essentially the same rights" to the United States. Some commentary has focused on whether this requirement could prove to be an obstacle to United States abatement measures in view of the Canadian government's inability to speak for its constituent units with the same degree of assurance enjoyed by the United States government. See generally Environmental Mediation Report, supra note 94. It seems unlikely that this reciprocity requirement would obstruct United States measures, since section 115 is only the most visible of many possible avenues of response. The primary obligation attaches regardless of the availability of the legislative tools of compliance. For an analysis of section 115, see Note, Acid Rain, Canada and the United States: Enforcing the International Pollution Provision of the Clean Air Act, 1 B. U. Int’l L.J. 151 (1982).
120 See id. para. 47, at 11.
not be left to bear the loss alone, regardless of the injuring party's lack of fault. This principle of protecting the passively innocent party may give rise to an obligation to compensate that party. This duty may arise either as a result of that harm which has occurred before the countries involved were able to reach an agreement, or that harm which reasonable abatement measures fail to prevent in the future.

In the simplest case, the Report on International Liability envisions a compensatory regime that fills the gap between reasonable control measures and unprevented harm. It is suggested, however, that "depending on the actual circumstances and the elements of common disaster, it may be more equitable that the loss should be shared or lie where it falls." Nevertheless, it would be conceivable for compensation to play a reverse gap-filling role. For instance, in a case where the source country's cost of compliance is extremely high, and the affected country's need for abatement is compelling enough to justify that expenditure, the source country might be justified in expecting the affected country to share the burden. Since a source country's duty to take protective measures attaches regardless of that country's fault, the cost of complying with this duty could be viewed, to some extent, as a cost arising out of the relationship between the two countries, rather than arising out of the source country's conduct alone.

As with the burden of protection, the determination of where the compensatory burden should fall would be the product of good faith negotiations towards a balance of interests, founded on an acceptance of the fundamental equality of those interests. The extent to which an injured party has engaged itself in the potentially injurious activity has been a factor in formulations of strict liability by national legal systems; however, in the present context, such activity could only be relevant to the extent that it were continued after the risk became known.

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131 Cf. RESTATEMENT (SECOND) OF TORTS § 515(3) (1977) (assumption of the risk as defense to strict liability).
132 A division between pre-agreement and post-agreement harm will, in the present context, be difficult to draw since executing an abatement program will be a lengthy process. From an equitable standpoint, it is not clear which kind of harm would be more deserving of compensation. The chief basis for a distinction lies in the fact that blame for pre-agreement damage is excused by ignorance, while post-agreement damage is justified by a balancing of costs and equities.
133 Preliminary Report: Chapter 4, supra note 1, para. 59, at 5.
134 Id.
According to the Third Report on International Liability, a duty of reparation, unlike a duty of abatement, would have to satisfy the slightly more exacting procedural standard of falling within the “shared expectations” of the two countries.\textsuperscript{126} As an example of this duty, the ILC gives the Long-Range Transboundary Air Pollution Convention of the Economic Commission for Europe,\textsuperscript{127} which, in a footnote, disclaims questions of compensation, thereby removing that remedy from the “shared expectations” of the signatory nations expressed in the Convention.\textsuperscript{128}

As noted above,\textsuperscript{129} much of the value of the Report on International Liability as a tool for dealing with transfrontier pollution arises out of its flexibility. The interaction between protective and compensatory measures creates room for maneuvering between negotiating parties. The compensatory balance is pushed in one direction or the other in response to particular contrasts in the orientation of the parties with respect to the protective regime. For example, if based on an objective balancing of interests, it were determined that the affected country was entitled to a particular degree of abatement, then that country might arrange to compensate the source country for additional abatement in the event it desired a higher standard of environmental protection.

Under different circumstances, the notion of “quasi-wrongs,”\textsuperscript{130} within the broad scope of “acts not prohibited,” might provide a useful conceptual foothold in a balancing of the equities. A country which has engaged in certain activities which are not prohibited but nevertheless arguably are reprehensible, such as delay tactics or abuse of emission dispersion techniques, might find itself in the weaker equitable position when compensatory duties are delineated. The use of the concept of quasi-wrongs most likely would find a place in a regime of future conduct, where no country faced the immediate threat of having its conduct so labeled, and especially in a multi-lateral format where this threat would be even more remote to an individual country. The reluctance of countries to subject themselves to accusations of wrongful conduct, however,

\textsuperscript{126} Int’l L. Comm’n 34th Session, supra note 26, para. 109, § 4(2), at 182.
\textsuperscript{127} See supra note 8.
\textsuperscript{128} Int’l L. Comm’n 34th Session, supra note 26, para. 119, at 188-89.
\textsuperscript{129} See supra notes 30-35 and accompanying text.
\textsuperscript{130} This concept is to be distinguished from the related civil law notion of “quasi-delicts.” A quasi-delict is a basis for the assessment of vicarious liability; quasi-wrongs, as suggested here, concern conduct of the party against whom liability is to be assessed. See W. Buckland & A. McNair, Roman Law and Common Law 311 (rev. 2d ed. 1952).
which supplies much of the force behind the international liability concept, would make quasi-wrongs an unlikely tool for a bilateral situation, or for circumstances where damage already has occurred.

In light of contemporary legal realities, an attempt to balance all the equities between the United States and Canada in pursuit of an ideal regime of compensation would appear to be a useless exercise. The ILC has noted that countries have been reluctant to accept a direct linkage between preventive obligations and compensation. The United States and Canada, despite their history of effective dispute settlement, are not likely to agree to such a linkage with regard to the current dilemma. The expense of environmental controls on either side threatens to reach significant levels. Moreover, an agreement to compensate might be seen as carrying the taint of an admission of wrongfulness which would not be present in an agreement to take future preventive measures. Recognition of a compensatory obligation is more likely to make its appearance in a settlement where injurious conduct can be completely halted, or in a regime governing only future events, where countries perceive a reasonable opportunity to avoid triggering the compensatory obligation.

IV. CONCLUSION

While large scale acceptance of compensatory liability appears to be relegated to the future, the more passive duties of consultation and prevention are becoming established rules of customary law. In the final analysis, primary rules of obligation within the Report

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131 See supra note 38.
132 See supra text accompanying note 11.
133 See, e.g., Treaty on Boundary Waters between the United States and Canada, supra note 85; Agreements on Great Lakes Water Quality, supra note 85; Trail Smelter Arbitration, supra note 8; see also Environmental Mediation Report, supra note 94, at 30-37 (history of less publicized disputes).
134 See supra note 98. The Trail Smelter Case, which appeared to acknowledge an absolute duty to compensate for damage to land, is distinguished by its comparatively small cost scale, and by the traceability of the harm to a single identifiable source. See generally Read, supra note 14, at 213, 219-21.

On the other side of the scale, an OECD study of the damage caused by sulfur emissions in Europe, which did not attempt to include a calculation of human health effects, found that emission reductions could result in significant savings in property value, exceeding the costs of abatement. Organization for Economic Co-operation and Development, The Costs and Benefits of Sulfur Oxide Control: A Methodological Study (1981), quoted in Sub-committee on Acid Rain of the Standing Committee on Fisheries and Forestry, Still Waters: The Chilling Reality of Acid Rain 112 (1980).
on International Liability neither restrict nor expand state sovereignty, but instead modify the concept at its outer fringes, where one body of sovereign rights impinges on another. "[T]he true freedom of each national community depend[s] on preserving a balance between over-restriction of beneficial activities which might have harmful transboundary consequences, and over-exposure to such consequences when produced within other States." This exchange of restrictions on conduct for rights to protection will bring about a greater degree of interdependence between countries.

Upon the initial attachment of a primary obligation, that obligation will be characterized by uncertainty as a result of varying perceptions of legal duties, as well as a result of poor scientific understanding of the danger. From the inception of the new relationship, this obligation will be addressed to resolving uncertainty and to bringing conflicting views into focus within an agreement. To this end, the primary obligation of a source country undergoes a step-by-step evolution, each step determining the need for, and extent of, the next step, from the initial exchange of information through the final protective-compensatory regime.

Principles of international liability, then, function as a diffuse standard of tort liability. Rather than calling for the use of tort remedies, however, the Report on International Liability merely calls for the exchange of information and good faith negotiations towards an agreement concerning the use of remedies. Nevertheless, if concepts such as "good faith" are to have any meaning in international law, then the chain of events set in motion by the inception of a "new legal relationship" between countries eventually will have to culminate in a binding agreement mandating some combination of protection and compensation.

The pervasive use of the word "obligation" in the ILC's outline of the topic raises questions as to the legal force underlying these principles. Due largely to the absence of any means of enforcement, the Report on International Liability, like a number of other international declarations of principle, has been framed in general and loosely defined terms. Similarly, the dimensions of the primary obligation itself are as yet ill-defined, because of the paucity of le-

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137 However, the agreement towards which countries are directed by the Report on International Liability is, obviously, governed by principles which are analogous to contract liability.
gal precedents. Nevertheless, as more comprehensive systems of obligation evolve between countries, contributing to the growth of an international consensus concerning transfrontier pollution, the primary obligation on countries which are sources of such pollution will become more sharply defined and, as a result, be supported by greater legal force in the eyes of the international community.

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