Traditionally, international law has imposed few, if any, obligations upon states in the wake of non-natural environmental disasters. In two of the worst environmental catastrophes of all time, the Chernobyl explosion in the former Soviet Union and the Sandoz spill in Switzerland, neither of the offending states were held liable for failing to protect, assist, or otherwise notify any of their neighboring states. Both of these incidents took place in 1986, and both produced devastating consequences in the international community. As a result, the past decade has witnessed a concerted effort among international declarations, scholars in international law, and states as reflected in international treaties to impose more duties upon states to assist and notify other states in the event of environmental catastrophes.
But how far do these duties extend, and do they reflect binding customary international law? Ten years after the Chernobyl and Sandoz disasters rocked the European continent, the threat of chemical and biological transboundary harm looms larger today than ever before. Nuclear reactors built thirty and forty years ago continue to deteriorate with age, while depressed economies around the world provide scant funding for the swelling costs of maintenance and repair. Third-world countries move with unchecked haste toward more industrialized modes of commerce and business, while international watercourses are forced to absorb increasing and sometimes deadly levels of chemical waste and pollution. With the potential for large-scale environmental catastrophes at an all-time high, does international law now prescribe a set of obligations for states in which the transboundary harm originates? Has international law progressed to a point where offending states can expect to be held accountable?

Using the Chernobyl and Sandoz disasters of 1986 as a starting point, this article will track the development of international law on state responsibility for international disasters. Part I will detail the factual backgrounds which surrounded the Chernobyl explosion and the Sandoz spill and will highlight the legal issues which arose in the wake of the disasters. Part II will discuss the current sources of international law which address the issue of state responsibility for international disasters, most notably 1) the International Law Commission's Draft Articles and 2) the Rio Declaration. Part III will analyze how the law as it exists today would have applied to the Chernobyl and Sandoz situations of ten years ago, and it will discuss what legal issues from the 1986 disasters still remain unresolved today in spite of the developments in international law. Finally, Part IV will conclude with the proposal that in order to more effectively resolve the problems which arise when an international disaster occurs, a greater emphasis on political cooperation and diplomacy should be pursued at the expense of the prescription of ineffective, abstract "legal" obligations.

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8 For example, deadly cyanide spilled into the Essequibo River in Guyana on August 19, 1995, causing extensive danger to the water supply and industry of Guyana. Francois Shalom, Guyana's President Lashes Out at Miners, MONTREAL GAZETTE, Sept. 2, 1995, at C1.
PART I: CHERNOBYL AND SANDOZ: A FACTUAL BACKGROUND

A. Chernobyl

On April 26, 1986, a reactor exploded at a nuclear power plant located in Chernobyl, U.S.S.R.\(^9\) As a result of the explosion, a devastating amount of radioactive emissions were released into the atmosphere, spreading quickly throughout the Soviet Republic and eventually across the entire face of Europe.\(^10\) While no one will ever know exactly how many people died as a result of the explosion at Chernobyl, the official number of thirty-one listed by Soviet authorities is almost certainly a gross misrepresentation.\(^11\) Estimates as to the number of long-term cancer deaths that resulted from the nuclear accident range from 14,000 to 475,000 worldwide.\(^12\) Scientists estimate that up to 600,000 people outside of the Soviet Union have been adversely affected by the nuclear fallout.\(^13\)

Despite the tremendous impact of the explosion, the government of the Soviet Union failed to make a public statement regarding the explosion until fifteen days after the explosion took place.\(^14\) By that time, all of Europe had been affected; even Wales was forced to halt its dairy production as a result of the nuclear fallout.\(^15\) A ban on the sale of leafy vegetables in Italy was expected to impose losses of up to $100 million on Italian farmers.\(^16\) Reindeer in Sweden that had eaten lichen contaminated with radioactive fallout were declared unfit for human consumption, and the subsequent loss of 100,000 reindeer threatened the continued survival of the country’s Lapp population.\(^17\) By June of 1987, “the West German government had paid

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\(^9\) Barron, supra note 2, at 647.

\(^10\) Id. at 648. A study conducted by the U.S. Energy Department’s Office of Health and Environmental Research found that Chernobyl’s emitted radiation equaled between one-tenth and one-sixth of the total amount of radiation ever released by nuclear explosions after 1945. Id. at 647, n.1.

\(^11\) Moynagh, supra note 2, at 739.


\(^13\) Moynagh, supra note 2, at 720.


\(^15\) Barron, supra note 2, at 647.

\(^16\) Id.

\(^17\) Id.
291 million West German marks for injuries to German nationals resulting from the Chernobyl incident.18

Scholars have speculated why no countries brought claims against the Soviet Union. Several countries indicated that they did not initiate any proceedings against the Soviet Union because they did not believe there was any legal basis for securing damages from the Soviet Government.19 Other factors might have also contributed to the reluctance of states to bring claims, such as the difficulty in quantifying the damages, the problem of identifying a direct causal link between the fallout and the harm, and the potential for negative political implications.20

B. Sandoz

In the same year as the Chernobyl incident, the “Sandoz Spill” caused even more damage for a number of European states. On November 1, 1986, a fire broke out in a chemical warehouse owned and operated by the Sandoz Corporation in Schweizerhalle, near Basel, Switzerland.21 The fire spread rapidly, and approximately 160 firefighters were required to put out the powerful blaze.22 In part because of all the water used by the fire departments to combat the fire, between 10,000 and 15,000 cubic meters of chemically-infested water seeped into the Rhine River through the Sandoz sewer system.23 A large toxic plume developed in and above the Rhine, and the chemicals destroyed virtually all of the flora and fauna living in the river at the time.24 Only a minuscule percentage of fish and eels remained alive, and even most of these had “their eyes popped out, gills collapsed and

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18 Schwabach, supra note 3, at 476 n.275.
19 See Gunther Handl, International Responsibility for Manmade Disasters, 81 AM. SOC'Y INT'L. L. proc. 320, 331 (1987) (“Indeed, some countries like Sweden and Switzerland have denied publicly the existence of an international legal basis [by which the Soviet Union could be held liable].”).
20 “[D]iplomatic insistence on Soviet liability and compensation might well have endangered prospects for Soviet concessions at the International Atomic Energy Agency (IAEA) conferences and meetings called to address the multilateral legislative agenda after Chernobyl.” Id.
21 Schwabach, supra note 3, at 450.
22 Id. at 445.
23 Id.
24 Id.
skin covered with wounds and sores.”

Scientists estimated that “the ecological rejuvenation of the river was set back by many years, perhaps decades.” In addition, all water supply plants along the Rhine in France, the Netherlands, Switzerland, and West Germany were shut down, and livestock in France and Germany died as a result of exposure to the river.

Despite the tremendous danger of the spill, Switzerland failed to notify any of its neighboring riparian states of the disaster for over twenty-four hours. It was clear that had some of the states, particularly the Netherlands, been notified of the spill, they could have initiated measures that would have drastically reduced the damages. Nevertheless, no states brought claims against Switzerland. Again, several factors might have contributed to the injured states’ decisions to not hold Switzerland responsible. First, all of the states along the Rhine River had worse environmental records than Switzerland, so an “unclean hands” idea might have influenced their decision. Second, the Sandoz Company paid a number of claims to parties that were injured from the spill, providing redress that Switzerland might have faced had Sandoz not agreed to pay. Third, states might not have wanted to pursue claims against Switzerland because legal action might have generated stricter, more costly environmental regulations for their own industries.

Under a traditional tort analysis, liability would seem to have been a foregone conclusion for both countries, especially for the Soviet Union. Because of its negligent maintenance of the Chernobyl nuclear power plant, the Soviet government caused significant, quantifiable damage to a number of European states. However, the international legal community had not yet

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26 Schwabach, supra note 3, at 447.
27 Id.
28 With earlier notification the Dutch authorities could have closed a series of floodgates along the Ijssel River, thereby directing the chemicals to the North Sea. J. Hull, A River Runs Red, TIME, Nov. 24, 1986, at 36, 37.
29 Schwabach, supra note 3, at 467.
30 Id.
31 Id.
32 “Polluting industries have reason to be wary of their governments pursuing an international law remedy against Switzerland. Such efforts might focus unwelcome public attention on domestic polluters and might be accompanied by a demand for stricter domestic pollution controls.” Id. at 469.
articulated any specific duties which were incumbent upon states in the event of an international disaster, and accordingly the Soviet government ducked under this prong of the liability equation in denying liability for the radioactive fallout. Thus, when the Soviet Union claimed that it owed no legal obligations to other affected states as a result of the accident at Chernobyl, it arguably was not incorrect in its interpretation of international law as it existed in 1986.

Additionally, in failing to notify downstream nations of the chemical spill for over twenty-four hours, Switzerland seemed to be the appropriate entity from whom to seek recovery, particularly for countries like the Netherlands who could have avoided significant damage if earlier notification had been given. Nevertheless, no claims were brought against Switzerland, due in part because of 1) the deficiencies which existed in international law regarding state responsibility, and 2) the deficiencies which existed in treaties which governed the Rhine, particularly a lack of enforcement mechanisms.

While international law spoke unauthoritatively in 1986 on the issue of state responsibility for international disasters, a handful of international cases and conventions did exist by that time which provided a basic blueprint for the shaping of customary, or binding, law which eventually evolved in the area of state responsibility after 1986. First, in the famous Corfu Channel case decided by the International Court of Justice in 1949, the Court held that every state has a duty “not to allow knowingly its territory to be used for acts contrary to the rights of other states.” The case focused on whether Albania was liable for damages when two British ships exploded after running into mines that were planted in Albanian waters. The Court devoted most of its opinion to the issue of whether Albania either planted the mines or knew about the existence of the mines, and the majority of the Court held that Albania should have known about the existence of the mines. Thus, Albania was held liable for failing to warn the British ships about the mines in its territory.

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35 See supra note 28 and accompanying text.
36 Schwabach, supra note 3, at 471.
38 Id. at 22.
39 Id. at 40.
Many scholars have concluded that the Court espoused a general "duty to warn" in this case. Other scholars have pointed out that the Court was careful not to pronounce an all-encompassing duty, but rather only a duty to warn when the danger was located within the negligent state's own territory. International law has never recognized the common law principle of stare decisis so the Corfu Channel case could not be considered, in and of itself, binding customary international law. Nevertheless, this decision continues to be cited today as a source for state responsibility, and it has undoubtedly served as a building block for documents such as the International Law Commission's Draft Articles and the Rio Declaration, which both include a general duty to warn.

While the Corfu Channel case involved the issue of whether a state has a duty to warn another state in the event of impending harm, the Torrey Canyon case dealt more specifically with the issue of whether a state owes any obligations to another state in the event of a transboundary disaster. In that case, one of Great Britain's ships leaked considerable amounts of crude oil onto the shores of Ireland. In an effort to minimize the leakage, Great Britain bombed its own tanker and sank it. The Court absolved Great Britain of liability because of its affirmative action, thereby intimating that Great Britain owed a duty to Ireland to mitigate the damages.

In another case of transboundary harm, the well-known Trail Smelter Arbitration, the governing tribunal found Canada liable for damages which a private smelting company in British Columbia had caused to property in the United States. In granting an injunction against Canada, the tribunal

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40 See generally Patricia Birnie and Alan Boyle, INTERNATIONAL LAW AND THE ENVIRONMENT 141-144 (1992) (discussing a number of scholars’ interpretations of the holding in the Corfu Channel case).
41 Id.
42 See Article 38 of the Statute of the International Court of Justice which lists as authority for customary international law: 1) bilateral treaties, 2) state practice in the international community, 3) general principles of law, and 4) the opinion of learned scholars. Statute of the International Court of Justice, Article 38, para. 1(c), 1978 I.C.J. Acts & Docs. 77.
44 Id.
45 Trail Smelter Arbitration (United States v. Canada), 3 R.I.A.A. 1911 (1941) [hereinafter Trail Smelter].
stated in dicta, "Under the principles of international law, ... no state has the right to use or permit the use of its territory in such a manner as to cause [environmental] injury ... in or to the territory of another or the properties of persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence."46 This sentence has provided the basis for a number of scholars' opinion that after the Trail Smelter decision, states were under an affirmative duty to prevent any type of harm occurring within their borders from crossing into the territory of another country.47

While these cases commanded considerable attention among the international legal community prior to 1986, and while they inspired, along with sources like the Stockholm Convention of 1972, no small degree of academic banter, Chernobyl and Sandoz revealed the relative inability of these cases and conventions to shape state practice and customary international law. The fact remained that prior to the Chernobyl and Sandoz disasters of 1986, no regulatory procedures for notification, cooperation, or dissemination of information had been uniformly established which could govern the duties of states in relation to neighboring states in the event of a transnational disaster.

The Chernobyl explosion and the Sandoz spill brought to the forefront a number of legal issues which had not been previously addressed in international law. While the issue of transboundary harm had been discussed among scholars for decades, it too was lacking a definitive standard within the international legal community, and Chernobyl and Sandoz exposed the disharmony among international tribunals and scholarly works regarding standards of liability for transboundary harm. Thus, while the 1986 disasters wreaked devastating consequences upon a number of European states, they also served the purpose of kickstarting a campaign within the international community to establish more clearly defined procedures and standards which could govern state responsibility in the event of an international disaster.

**PART II: THE INTERNATIONAL LAW COMMISSION'S DRAFT ARTICLES AND THE RIO DECLARATION ON STATE RESPONSIBILITY FOR INTERNATIONAL DISASTERS**

Two of the most influential bodies of work which have addressed the issue of state responsibility for international disasters since the Chernobyl and

46 *Id.*

47 *See* Birnie and Boyle, *supra* note 40, at 145.
Sandoz incidents have been 1) the International Law Commission’s (ILC) Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, submitted to the General Assembly in 1994, and 2) the Rio Declaration on Environment and Development, issued at the United Nations Conference on Environment and Development (UNCED) in 1992. These two documents embody a decade of work among numerous eminent scholars in the field of international environmental law, and both documents contain provisions which specifically respond to the type of international emergency situations which Chernobyl and Sandoz first brought into the spotlight.

Neither the Draft Articles nor the Rio Declaration can be characterized as binding, customary law. Rather these documents are rather characterized as “soft law”, i.e., recommendations or advisory statements which espouse what the drafters of the documents believe the law should be. Customarily documents such as these serve as “suggestive law” and the principles may, through time, evolve to the level of binding customary international law if enough states adopt them in their practice. Nevertheless, certain principles contained in the Draft Articles and the Rio Declaration represent, in the opinion of some scholars, a codification of pre-existing, binding customary international law.

A. The ILC Draft Articles

The International Law Commission is a United Nations-affiliated body of experts that periodically issues articles or declarations which both codify existing principles of international law and promulgate progressive ideas for the future of international law. The ILC’s most recent set of Draft Articles were submitted to the General Assembly in 1994. These Articles

48 See supra note 42 and accompanying text, discussing the sources of customary international law.

49 See generally Wirth, supra note 5, at 602-603.

50 See generally id. 603, 649.


53 For a detailed discussion of the changes that were made in the most recent Draft Articles compared to the ones that preceded them, see Stephen McCaffrey, The International Law Commission Adopts Draft Articles on International Watercourses, 89 AM. J. INT’L L. 395
deal specifically with the law of international watercourses. They are divided into six parts which contain a total of thirty-three articles. The Articles were distributed to the governments of thirty-two countries in 1991 with the expectation that the countries would respond with observations and comments within a year; by 1994 twenty-one states had submitted some type of response.

Articles 27 and 28 deal specifically with a state's responsibility for disasters occurring within its borders which might affect neighboring states. Article 27, entitled "Prevention and mitigation of harmful conditions," requires states to prevent or mitigate conditions of a disaster which might affect any other state. Article 28, entitled "Emergency situations," requires states to notify other states of an emergency originating within its territory, to prevent, mitigate and eliminate any harmful effects of an emergency, and to develop contingency plans for responding to emergencies.


54 Id. at 397 n.18.

55 Article 27 reads, "Watercourse states shall, individually or jointly, take all appropriate measures to prevent or mitigate conditions that may be harmful to other watercourse States, whether resulting from natural causes or human conduct, such as flood or ice conditions, water-borne diseases, siltation, erosion, salt-water intrusion, drought or desertification." Draft Articles, supra note 4, Article 27.

56 Article 28 reads:

1. For the purposes of this article, "emergency" means a situation that causes, or poses an imminent threat of causing, serious harm to watercourse States or other States and that results suddenly from natural causes, such as floods, the breaking up of ice, landslides or earthquakes, or from human conduct as for example in the case of industrial accidents.

2. A watercourse state shall, without delay and by the most expeditious means available, notify other potentially affected States and competent international organizations of any emergency originating within its territory.

3. A watercourse State within whose territory an emergency originates shall, in cooperation with potentially affected States, and where appropriate, competent international organizations, immediately take all practicable measures necessitated by the circumstances to prevent, mitigate and eliminate harmful effects of the emergency.

4. When necessary, watercourse States shall jointly develop contingency plans for responding to emergencies, in cooperation, where appropriate, with other potentially affected States and competent international organizations.

Draft Articles, supra note 4, Article 28.
B. The Rio Declaration

The Rio Declaration was first issued at the United Nations' Conference on Environment and Development in 1992. Over 170 nations were represented at the conference, and over 100 heads of state attended. Like its predecessor, the Stockholm Conference of 1972, a number of preparatory meetings took place prior to the conference in Brazil. At a meeting in March of 1992, representatives from seven developed and seven developing nations agreed upon the final text. This final text was accepted without alteration at the conference in Brazil.

Principles 18 and 19 of the Rio Declaration respond directly to a number of the problems that were presented in the Chernobyl and Sandoz disasters. Principle 18 requires states to "immediately notify other States of any natural disasters or other emergencies that are likely to produce sudden harmful effects on the environment of those States." Principle 19 demands, "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."

In contrast to the ill-defined, if not neo-natal status of international law regarding state responsibility for international disasters in 1986, the Draft Articles and the Rio Declaration explicitly articulate a course of conduct for states in the event of an international disaster. First, both documents expressly mandate a duty of notification. It is beyond reasonable dispute that the duty to notify potentially affected states of a transnational disaster has reached the level of customary international law. There is now "substantial support for such a duty as a matter of general international law." Notification requirements began to appear in a number of bilateral and multilateral treaties in 1986, in the wake of Chernobyl and Sandoz.

57 Wirth, supra note 5, at 604.
58 Id. at 605-606.
59 Rio Declaration, supra note 4, Principle 18.
60 Rio Declaration, supra note 4, Principle 19.
61 See Wirth, supra note 5, at 637.
62 McCaffrey, Book Review, supra note 34, at 811.
Thus, the provisions regarding notification requirements in Article 28, section 2 of the Draft Articles and Principles 18 and 19 of the Rio Declaration may be seen as codifications of pre-existing, customary international law.

Aside from the notification requirement, the Draft Articles articulate several other duties for states which the Rio Declaration does not include. First, the Draft Articles prescribe an affirmative duty on the part of a state within whose territory an emergency originates to "immediately take all practicable measures necessitated by the circumstances to prevent, mitigate, and eliminate harmful effects of the emergency." This duty to prevent and mitigate the damage of a disaster is not included in the Rio provisions. It has, however, been incorporated into a number of treaties and conventions since the catastrophes of 1986. Additionally, the Draft Articles articulate a duty to develop contingency plans with other states and international organizations in order to respond more effectively to emergencies, but again, this duty is not mentioned in the Rio Declaration. Like the duty to mitigate, a number of treaties and international conventions exist in which a duty to develop contingency plans has been included.

PART III: CURRENT STATE RESPONSIBILITY STANDARDS APPLIED TO CHERNOBYL AND SANDOZ: WOULD THEY MAKE A DIFFERENCE?

While notions of state responsibility have advanced a great deal over the course of the last ten years in terms of 1) the duties which have been delineated for states in the event of a disaster and 2) the unanimity of opinion among publications and scholars regarding state responsibility,
several important issues remain as ill-defined and uncertain as they were a
decade ago. By applying the customary international law principles of 1996
to the Chernobyl and Sandoz disasters of 1986, both the progress and the
stagnation of international law in the area of transboundary disaster standards
can be illuminated.

First, applying current customary international law to the Soviet Union’s
response to the explosion in 1986, it is clear that the Soviet government
would have violated its duty to notify potentially affected states about the
nuclear accident. As dictated by the Rio Declaration, the Soviet Union
should have informed all potentially affected states of the accident as soon
as the reactor exploded and the radioactive material was launched into the
atmosphere. Additionally, the Convention on Early Notification of a Nuclear
Accident requires that all states must “notify, directly or through the
International Atomic Energy Agency . . . those States which are or may be
physically affected.” As the Soviet government waited fifteen days before
it ever released any information to the international community, it would
almost certainly be liable under today’s notification standards.

While a duty to notify in the event of a nuclear accident has almost
certainly attained the status of customary international law, other duties
which have been articulated in various treaties and conventions have not,
even one decade after Chernobyl. For example, even today no treaty or
convention exists which requires “source states” to assist other states in the
event of a nuclear accident. Although the Soviet Union signed the
Convention on Assistance in the Case of a Nuclear Accident or Radiological
Emergency in September of 1986, the articles in this Convention never
actually obligate a state to render assistance. They merely allow Member
States to request assistance in the event of a nuclear accident. Additionally,
while certain international instruments such as the ILC Draft Articles require
offending states to assist injured states in mitigating the damages and in
developing contingency plans, duties such as these have not been specifically
articulated in relation to nuclear accidents and radioactive fallout. And
even while the duty to notify has become a firmly entrenched obligation for

68 Notification Convention, supra note 6, Article 2.
69 Reinhard Muller and Birgit Sub, Introduction, in ENVIRONMENTAL HAZARDS AND
DUTIES OF DISCLOSURE 1, 24 (Dennis Campbell ed., 1994).
70 Leigh Hancher and Peter Cameron, After Chernobyl: Has Anything Really Changed?,
in NUCLEAR ENERGY LAW AFTER CHERNOBYL 179, 186 (Cameron, Hancher, and Kuhn eds.,
1988.)
states in the event of a nuclear accident, problems remain as to the scope of the notification and the specific reporting requirements which must be followed.\textsuperscript{71} "Conventions are limited in a number of important respects. The definition of 'accident' is not precise, reporting obligations are ill-defined, and there is no generally recognized standard governing the information which is to be transmitted."\textsuperscript{72}

Thus, while the past decade has witnessed a concerted effort among scholars and international bodies to address the deficiencies in international law which Chernobyl initially revealed, the fact remains that only the duty to notify seems to have attained the status of binding customary law in relation to nuclear accidents. In other words, even if the international law standards of 1996 were applied to the 1986 Chernobyl accident, the Soviet Union would still probably be able to successfully maintain that it owed no legal obligations to any other state, aside from its duty to notify.

If the Sandoz scenario were to repeat itself today, the duties incumbent upon Switzerland in the wake of the spill would be much more clearly defined. Recalling the facts of the Sandoz accident, the Swiss government failed to notify its neighboring Rhine states of the deadly spill for over twenty-four hours, and this failure to notify precluded European governments from pursuing preventive measures which could have potentially reduced the scope of the damages. Ten years later, according to the ILC Draft Articles, Switzerland would be under an immediate duty to "notify other potentially affected States and competent international organizations of any emergency originating within its territory."\textsuperscript{73} Additionally, it would be obligated to "immediately take all practicable measures necessitated by the circumstances to prevent, mitigate and eliminate harmful effects of the emergency."\textsuperscript{74}

In addition to the ILC Draft Articles, Switzerland has entered into several other conventions and treaties which have been established since the Sandoz accident, and these instrumentalities would also play a part in determining what duties Switzerland would owe its neighboring states. For example, the Convention on Transboundary Effects of Industrial Accidents, signed by twenty-four European states, Canada and the United States in 1992, includes a lengthy list of obligations for states in the event of an industrial acci-

\textsuperscript{71} Id.
\textsuperscript{72} Id.
\textsuperscript{73} Article 28, Draft Articles, \textit{supra} note 4.
\textsuperscript{74} Id. art. 27.
dent. Among these obligations are principles of prevention, information exchange, notification, and assistance.

A. Standard of Liability

In the wake of both the Chernobyl and Sandoz disasters, one of the most pressing concerns among the European Community was how, and under what standard of liability, damages could be recovered against the Soviet Union and Switzerland. No claims were brought against the two countries because, at least in part, injured states did not believe they could recover any damages against the offending states. And ten years later, while international law concerning environmental disasters has progressed rapidly in areas such as notification, cooperation, and mitigation of damages, it has remained stubbornly static in the area of liability for transboundary harm. Indeed, in revisiting the two disasters of 1986 and comparing the legal regimes which existed at the time with the current established standards which exist one decade later, the most glaring deficiency that remains today is the lack of firmly incorporated liability standards for transboundary harm.

In 1972, Principle 22 of the Stockholm Declaration set forth a standard which has been followed over the course of the last two decades with frustrating repetition in innumerable conventions and treaties. It provides:

States shall co-operate to develop further the international law regarding liability and compensation for the victims of

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75 Convention on Transboundary Effects of Industrial Accidents, supra note 65.
76 Id. art. 3, para. 3.
77 Id. art. 9, para. 3.
78 Id. art. 10, para. 2.
79 Id. art. 12, para. 1.
81 "The solution that customary public international law provides for the problems arising in transboundary radiation suits is illusory." Id, at 178.
pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction. ³³

Even the recent Rio Declaration and the ILC Draft Articles avoid prescribing any specific standard of liability for transboundary harm. Principle 13 of the Rio Declaration copies, almost verbatim, the supplication enunciated in Stockholm 20 years earlier to "develop further international law regarding liability and compensation . . . ."³⁴ While the ILC Draft Articles mark a slight improvement over Stockholm and Rio in that they articulate a standard of care for activities which could affect other watercourse states, they nevertheless abstain from delineating any specific standard of liability for transboundary harm. Article 7 reads, "Watercourse states shall exercise due diligence to utilize an international watercourse in such a way as not to cause significant harm to other watercourse States."³⁵ It continues that if a state exercises due diligence but nevertheless causes significant harm to another state, the offending state shall consult with the harmed state regarding "(a) the extent to which such use is equitable . . . ; [and] (b) the question of ad hoc adjustments to its utilization, designed to eliminate or mitigate any such harm caused, and where appropriate, the question of compensation."³⁶

Other important conventions and treaties have also elected to circumvent the issue of liability for transboundary harm. The Convention on Transboundary Effects of Industrial Accidents sidesteps the issue when it states in Article 13, "The Parties shall support appropriate international efforts to elaborate rules, criteria and procedures in the field of responsibility and liability." Similarly, neither of the two Conventions which were created in the wake of the Chernobyl explosion, the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident, contain any provisions which specifically address the issues of compensation or standards of liability. While the International Atomic Energy Agency (IAEA) has recognized the lack of global nuclear


³⁴ "States shall also cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction." Rio Declaration, supra note 4, Principle 13.

³⁵ Draft Articles, supra note 4, Art. 7.

³⁶ Id.
liability standards and has established a Standing Committee on Liability for Nuclear Damage, the Committee has thus far made little practical progress in establishing nuclear liability standards.

Even with the application of a conventional tort cause of action, establishing the liability of a source state in the case of a nuclear accident remains extraordinarily difficult, if not impossible. The question of whom to sue, the immunity defense of the operator and the state, the hurdle of service of process, the inability of plaintiffs to obtain incriminating information, the insufficiency of public international law to address the needs of private radiation victims, and the difficulties in proving causation all contribute to make damages virtually irrecoverable against a source state in the event of a nuclear accident.

Several of these factors have played a large role in shaping the policy of the Irish government in relation to a long-standing dispute between Ireland and Great Britain over the Sellafield nuclear power installation off of the coast of Scotland. Even while daily emissions of radioactive effluent spill out of the nuclear installation at Sellafield and into the Irish Sea, the Irish government continues to abstain from initiating legal proceedings against Great Britain. Nearly 1000 accidents have purportedly taken place at the Sellafield facility in recent years, and the British installation dumps such prolific amounts of toxic discharge into the Irish Sea that various authorities

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87 Heiss, supra note 80, at 170.
88 Id.
89 The difficulty in ascertaining who the appropriate defendant was in the Chernobyl accident discouraged potential plaintiffs from bringing a claim. Was it the chief operator of the plant? The Soviet Nuclear Energy Commission? The Soviet Union itself? Id. at 171.
90 When the state is considered the "operator" it could easily invoke absolute immunity, claiming the disaster was caused by an act which would normally be entitled to absolute immunity protection. Id. at 173.
91 Id. at 175.
92 Without an obligation to exchange information, discovery on the part of a potential plaintiff might be rendered impossible. The Soviet Union refused to provide the international community with large amounts of information about the accident until several years after the explosion took place. Id. at 176.
93 Id. at 179.
94 After Chernobyl, the Soviet Union claimed that a substantial amount of the harm that was being claimed originated from unwarranted regulatory prohibitions on the part European governments rather than from the Chernobyl accident itself. Id. at 180.
95 Hall, supra note 7, at 658.
96 Id. at 647.
call the Irish Sea “the most radioactive sea on the planet.”

Nevertheless, the Irish Attorney-General recently rejected a call to sue the British government for damages sustained in Ireland as a result of the radioactive leaks because of the scientific difficulty in linking the injuries which have been suffered by the Irish with the Sellafield radioactive effluent. As one deputy observed, any evidence needed to sustain a claim remained “in the documentation of Sellafield.”

B. Strict Liability vs. Negligence

Since most of the conventions and treaties which address international disasters and transboundary harm have failed to provide any uniform standards of liability or any compensation schemes, should it be assumed that damages may never be recovered even if binding international duties are violated? While sources of international law remain vague as to the appropriate standards that should be applied in the event of a violation, damages have certainly been recovered in the past in cases of transboundary harm. In other words, the scant attention given to the issues of liability and compensation in international conventions and treaties does not preclude an injured state from recovering an award for damages. It rather suggests that publicists and governments are hesitant to commit to any uniform standards for recovery, and it requires courts and governing bodies to determine for themselves what standards of liability should be appropriate in each individual case.

One question that inevitably arises when the issue of liability is presented is the issue of whether a strict liability or a negligence standard should be applied. Many scholars point to Principle 21 of the Stockholm Declaration as evidence of strict liability for any type of transboundary harm. Principle 21 reads: “States have, in accordance with the Charter of the United Nations and the principles of international law . . . the responsibility to ensure that activities within their jurisdiction or control do not cause

Id. at 648.

In a separate request to bring an action against Great Britain for the leakage of the radioactive effluent from the British facility, the decision was made to forgo legal proceedings because of a “lack of sufficient evidence.” Id. at 674.

Id. at 675.

damage to the environment of other states or of areas beyond the limits of national jurisdiction.”

While “damage” is not qualified by words like “substantial” or “significant,” and while “activities” is not limited to activities within the state’s control, the Principle nevertheless refrains from mentioning strict liability.

Some scholars believe that the spirit of the Principle endorses a strict liability standard, while others believe that the absence of the term “strict liability” indicates that the drafters of the declaration did not intend for strict liability to apply. Regardless of what the drafters intended, states in the international community have not usually recognized strict liability as the appropriate standard for state responsibility for transboundary harm. Only a small number of treaties have recognized strict liability as the appropriate standard of liability. In addition, developing countries unequivocally disfavor a strict liability standard because they lack the technical ability to monitor and assess transboundary harm. They argue that a strict liability standard inequitably inhibits their ability to grow, as it would increase costs of industrial operations.

A negligence standard for transboundary harm seems to be the more recognized standard in international law. Several scholars advocate a traditional tort analysis to international transboundary harm, where a

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104 See, e.g., Karl Zemanek, State Responsibility and Liability in ENVIRONMENTAL PROTECTION AND INTERNATIONAL LAW 187 (W. Lang, ed. 1991); Schneider, WORLD PUBLIC ORDER OF THE ENVIRONMENT ch. 6 (1975).
105 See Developments, supra note 1, at 1499.
106 See Birnie and Boyle, supra note 40, at 147.
108 “Strict liability is anathema to developing countries . . . which do have the technical resources.” Developments, supra note 1, at 1499.
109 See Zemanek, supra note 104, at 189.
110 “International law has traditionally conditioned the imposition of state responsibility on a showing of negligence.” Developments, supra note 1, at 1499.
complaining state must prove 1) that the offending conduct is attributable to
the defendant state, 2) that the offending state breached an international duty,
3) that a causal connection exists between the conduct and the injury, and 4)
that material damages took place. Under this type of standard, the
crucial inquiries are 1) whether the offending state owed a duty to the
injured state, and 2) whether the offending state caused the harm.

The previously-mentioned Trail Smelter arbitration has been used by
scholars in both camps of the strict liability/negligence debate. Those that
endorse the strict liability standard focus on the part of the tribunal’s
decision which says, “Under the principles of international law, . . . no state
has the right to use or permit the use of its territory in such a manner as to
cause injury . . . in or to the territory of another or the properties of persons
therein . . .” These scholars hold fast to the Roman Law principle of
\textit{sic utere tuo ut alienum non laedas}, which means “One should use his own
property in such a manner as not to injure that of another.” However,
other scholars who believe that Trail Smelter stands for a negligence
standard of liability point out that both parties (the United States and
Canada) had already agreed to a \textit{compromise} which stipulated Canada’s
wrongdoing in the case, so fault was, in fact, a critical element of the
decision.

\textbf{PART IV: REALITY CHECK: THE VALUE OF INTERNATIONAL DIPLOMACY
OVER INTERNATIONAL LAW}

While international law on state responsibility has developed dramatically
over the course of the last ten years, it nevertheless remains—to a large
extent—an unenforceable, aspirational body of law. In other words,
while widespread state practice might push certain concepts toward becoming
“binding” international law principles, states will continue to act in their own

\begin{itemize}
\item \textsuperscript{111} \textit{See, e.g.}, Tamara C. Gereghian, \textit{Medzamor: Weighing the Reopening of Armenia’s
Unstable Nuclear Power Plant and the Duties of the International Community}, \textit{5 VILLA.
\item \textsuperscript{112} \textit{See, e.g.}, J. Brownlie, \textit{A Survey of Customary Rules of Environmental Protection}, \textit{13
\item \textsuperscript{113} Trail Smelter, \textit{supra} note 45.
\item \textsuperscript{114} \textit{BLACK’S LAW DICTIONARY}, \textit{6TH EDITION} 1380 (1990).
\item \textsuperscript{115} \textit{See generally}, Birnie and Boyle, \textit{supra} note 40, at 145.
\item \textsuperscript{116} \textit{See Developments, supra} note 1, at 1507.
\end{itemize}
best interests, regardless of the status of international law. This is especially true when matters of state sovereignty are concerned." 117 For example, in the dispute between Ireland and Great Britain over the Sellafield nuclear installation, Britain has informed Ireland that it will not grant jurisdiction to the International Court of Justice to settle the matter. 118 Thus, even while scores of international conventions and treaties now mandate a variety of obligations for states in the wake of transboundary harm, these duties inevitably remain subject to the governments, and more specifically the leaders, of the countries who choose to follow or reject them. 119

Because customary international law is shaped, first and foremost, by the conduct of states in international affairs, the conduct of the Soviet and Swiss governments in the aftermath of the Chernobyl and Sandoz disasters ironically may have thwarted the effectiveness of subsequent conventions and treaties. The fact that the two countries failed to promptly notify other affected countries of the accidents, coupled with the fact that no legal obligations arose for Switzerland or the Soviet Union in spite of their conduct influences, to a large degree, "state practice" and subsequently customary international law. 120 Herein lies the bane of customary international law: states do not always do what is right; they only do what is in their best interest. So as long as state practice remains the primary influence in shaping customary international law, as opposed to the other way around, progress in international law will continue to trickle along at a slow and frustrating pace.

In light of international law's questionable capacity to shape the conduct of states, scholars have recently begun to focus more on the utility of negotiation and diplomacy and less on the merits of international law in

117 "The problem is that even though the idea of an international...regime that would provide clear-cut standards for conduct and would have the authority to sanction those who violated the standards sounds appealing in theory, attempts to do so will always run into the stumbling block of state sovereignty." Moynagh, supra note 2, at 747.

118 Hall, supra note 7, at 678. Hall concludes, "International environmental law remains subject to the self-interested imperatives of the Sovereign State." Id. at 679.

119 "Ongoing attempts to make regulation of transboundary environmental harm conform to the abstract principles of international law only highlight the inapplicability of classic international legal paradigms to extraterritorial pollution." Developments, supra note 1, at 1520.

120 In neglecting to hold Switzerland responsible for its failure to protect the Rhine, the other Rhine states created "a normative expectation that riparian states will not be held legally culpable for ecological damage." Schwabach, supra note 3, at 479.
establishing workable norms for state responsibility. Chernobyl and Sandoz highlight the critical role that politics play in determining a state’s conduct in the wake of an international disaster. Because of strong diplomatic coercion from states which were harmed by the Sandoz spill, Switzerland agreed to take responsibility for the accident, and it made substantial concessions in subsequent negotiations. The Soviet Union, on the other hand, conceded nothing to the international community, in large part because of a failure on the part of the international community to exert meaningful political pressure. Diplomatic measures, rather than abstract legal principles, carry with them a much more real and effective capacity to influence the conduct of states. Scholars should therefore focus more on the shared common interests between states and the interdependent political incentives which foster meaningful international cooperation, rather than on the theoretical legal duties which the scholars themselves have created and which rarely effect the conduct of sovereign states.

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121 See generally Heiss, supra note 80.