THE EFFICACY OF INTERNATIONAL ENVIRONMENTAL LAW: A PERSONAL REFLECTION

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I. Introduction

Chapter 38 of the Agenda 21' adopted by the United Nations Conference on Environment and Development at Rio de Janeiro in June 1992 emphasizes the need for an enhanced and strengthened role of the

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^{1.} United Nations Conference on Environment and Development, Agenda 21, U.N. Doc. A/Conf. 151/26/Rev. 1 (vol. 1) (1993).

United Nations Environment Programme (UNEP) in the further development of international environmental law. In particular, UNEP should strengthen its role in the conventions and guidelines, the promotion of its implementation, and the coordinating of functions arising from an increasing number of international legal agreements.² Chapter 39 of the same document recognizes and affirms the contribution of UNEP towards the establishment of procedures and mechanisms to promote and review the effective, full, and prompt implementation of international agreements in the field of environment and development.³ The establishment of the procedures and mechanisms is to be done within the framework of the overall objective to evaluate and to promote the efficacy of international environmental law and "to promote the integration of environment and development policies through effective international agreements."⁴

At its seventeenth session held in May 1993, the Governing Council of UNEP adopted the Montevideo Programme II on the Development and Periodic Review of Environmental Law.⁵ The programme is a continuation of the 1981 Montevideo Programme that was adopted by the Governing Council in 1982 for the development and periodic review of environmental law for the period 1981 to 1991.⁶ Both programmes form the basis for UNEP's activities in the field of environmental law in the 1980s and 1990s respectively. The Montevideo Programme II identifies nineteen subject areas for consideration in the development of environmental agreements in the 1990s. The implementation of the Montevideo Programme II will be reviewed by the Governing Council no later than at its regular session in 1997.⁷

This article discusses three of the subject areas: dispute avoidance and settlement, implementation of international legal instruments in the field of the environment, and liability and compensation for environmental damage. Reference is made to the provisions of both treaty and "soft law" and how these provisions can be further developed within the UNEP mandate to promote the efficacy of international environmental law.

^{2.} Id. para. 38.21.

^{3.} Id. para. 39.8.

^{4.} Id. para. 39.2.

^{5.} UNEP Governing Council Decision 17/25 (May 21, 1993), U.N. Doc. UNEP/GC 17/32 [hereinafter Montevideo Programme II].

^{6.} See UNEP Governing Council Decision 10/21 (May 31, 1982).

^{7.} Montevideo Programme II, supra note 5.

II. ENVIRONMENTAL DISPUTE AVOIDANCE AND SETTLEMENT

A. Introduction

Environmental protection is a value laden field in which conflicts are ubiquitous and persistent. At both the national and international levels. the implementation of environmental protection policies and obligations more often leads to disputes arising from the encroachment upon perceived property interests and national sovereign rights. The disputes seem to multiply in number as public perception of environmental issues is heightened by the increased dissemination of knowledge and information regarding traditional issues such as air and water pollution as well as emerging issues such as the ozone depletion, decertification, global climate change, and loss of biological diversity. At the national level, the traditional right of the individual to enjoy his property is only limited by the common law obligations not to cause injury to the neighbor's property through negligence or creation of nuisance. At the international level, a state's exercise of its sovereign rights is limited by the duty not to cause injury or damage to the environment of its neighbor or "areas beyond the limits of national jurisdiction." The wide acceptance of this principle and the resultant state practice in conformity therewith has the potential of turning it into an opinio juris applicable to a wide range of environmental issues concerning the protection of the global commons.

Given that the environment is a seamless web, environmental disputes tend to be very technical and so complex that even states disagree on what should or should not be provided for in a legally binding instrument. Invariably, the end result is a compromise in general terms agreeable to all states that are parties to the particular legal instrument. Consensual resolution becomes elusive as and when disputes arise. State priorities and imperatives take the center stage where political boundaries, rather than the planet as a unit, are given priority. This reluctance to treat the environment as an issue in which all the states have equal stakes pervades the growing volume of positive international law concerning the protection of the environment and the various sectors thereof.

B. Treaty Provisions

A survey of the provisions of international agreements in the environmental field with respect to dispute settlement shows one common trend: the provisions deal with disputes between the parties about the

^{8.} Stockholm Declaration on the Human Environment: Report of the United Nations Conference on the Human Environment, June 16, 1972, U.N. Doc. A/Conf. 48/14 and Corr. 1 (1972), reprinted in 11 I.L.M. 1416, 1420 [hereinafter Stockholm Declaration].

interpretation or application of the agreements. For instance, Article 11 of the 1985 Vienna Convention for the Protection of the Ozone Layer's provides that "in the event of a dispute between Parties concerning the interpretation or application of this Convention, the parties concerned shall seek solution by negotiation." "If negotiation fails, then the parties options are: third party mediation, arbitration, submission to the International Court of Justice, or conciliation, respectively." In other words, the parties must seek solution to their dispute by peaceful means.

A similar provision is found in Article 20 of the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal.¹² "In the case of a dispute between Parties as to the interpretation or application of, or compliance with this Convention or any protocol thereto, they shall seek a settlement of the dispute through negotiation or any other peaceful means of their own choice." If negotiation fails, then by either agreement or declaration the parties may submit their dispute to the International Court of Justice (ICJ) or to the Convention for arbitration under the provisions of Annex VI.¹⁴

Furthermore, the provisions of Article 27 of the 1992 United Nations Convention on Biological Diversity¹⁵ are fairly identical to those of the Vienna Convention of the Ozone Layer. The provisions of Article 14 of the 1992 United Nations Framework Convention on Climate Change¹⁶ are also similar to those of the Vienna Convention of the Ozone Layer. In essence, the provisions of treaties in the environmental field concerning dispute settlement are restricted to the interpretation and application of the specific legal instruments. Therefore, they deal with the rights and obligations of states that are parties to the specific instruments, and with

^{9.} Vienna Convention for the Protection of the Ozone Layer, Mar. 22, 1985, art. 11, para. 1, T.I.A.S. No. 11,097, 13, 26 I.L.M. 1529, 1533 [hereinafter Vienna Convention on the Ozone Layer].

^{10.} Id. para. 2, 26 I.L.M. at 1533.

^{11.} Id. para. 2, 26 I.L.M. at 1533.

^{12.} Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Mar. 22, 1989, KAV 2634, S. Treaty Doc. No. 5, 102 Cong., 1st Sess. (1991) reprinted in 28 I.L.M. 657 [hereinafter Basel Convention].

^{13.} Id. 28 I.L.M. at 657.

^{14.} Id. paras. 2, 3, 28 I.L.M. at 675, 685.

^{15.} Rio Convention on Biological Diversity, May 22, 1992, KAV 3747, S. Treaty Doc. No. 20, 103d Cong., 1st Sess. (1993), *reprinted in* 31 I.L.M. 822 [hereinafter Biological Diversity Convention].

United Nations Framework Convention on Climate Change, May 9, 1992, KAV 3339,
 Treaty Doc. No. 38, 102d Cong., 2d Sess. (1992), reprinted in 31 I.L.M. 848, 867
 [hereinafter Climate Change Convention].

the disputes that arise out of the enjoyment and discharge of these rights and obligations. The provisions do not deal with the resolution of environmental disputes as much as those arising out of transboundary environmental damage, the use of shared natural resources, the global commons, or atmospheric interference as a result of state activities.

C. Soft Law

In contrast, provisions regarding the resolution of environmental disputes have emerged in some documents embodying what is now known as "soft law," the declarations and resolutions of intergovernmental and nongovernmental organizations involved in issues of environmental protection. Soft law provisions with respect to prior notice, environmental impact assessment, and consultations are designed to prevent disputes from arising in cases of transfrontier environmental injury. These provisions help to provide the potential victim state with pertinent information of the intended activities of its neighbor and provide a system for the amicable resolution of any potential problems.

The Montreal Rules of International Law Applicable to Transfrontier Pollution adopted by the International Law Association at its 60th Conference in 1982¹⁷ include these principles in Articles 7 and 8:

Article 7.

- 1. States planning to carry out activities which might entail a significant risk of transfrontier pollution shall give early notices to states likely to be affected. In particular, they shall on their own initiative or upon request of the potentially affected states, communicate such pertinent information as will permit the recipient to make an assessment of the probable effects of the planned activities.
- 2. In order to appraise whether a planned activity implies a significant risk of transfrontier pollution, states should make environmental assessments before carrying out such activities.

Article 8.

1. Upon request of a potentially affected state, the state furnishing the information should enter into consultations on transfrontier pollution problems connected with the planned activities and pursue such consultations in good faith over a reasonable period of time.

^{17.} International Law Association Report Of The Sixtieth Conference Held At Montreal (1982) [hereinafter International Law Association].

2. States are under an obligation to enter into consultations whenever transfrontier pollution problems arise in connection with the equitable utilization of a shared natural resource as envisaged in Article 5.18

Section 2 of the International Law Commission's 4th Report on International Liability for Injurious Consequences Arising out of Acts not Prohibited by International Law¹⁹ also addresses the need for notification of potential loss or injury likely to be suffered by third party states as a result of activities within the territory of the acting state. Section 2 provides,

[w]hen an activity taking place within its territory or control gives or may give rise to loss or injury to persons or things within the territory or control of another state, the acting state has a duty to provide the affected state with all relevant and available information, including a specific indication of the kinds and degrees of loss or injury that it considers to be foreseeable and the remedial measures it proposes.²⁰

This report has not been adopted, and so the provision still remains only a proposal.

In its report, which is attached to Our Common Future²¹ and entitled Proposed Legal Principles for Environmental Protection and Sustainable Development, the World Commission on Environment and Development Experts Group on Environmental Law proposed, *inter alia*, that: (a) "[s]tates make or require prior environmental assessments of proposed activities which may significantly affect the environment or use of a natural resource";²² (b) "[s]tates shall inform in a timely manner all persons likely to be significantly affected by a planned activity and grant them equal access and due process in administrative and judicial proceedings";²³ (c) "[s]tates of origin shall provide timely and relevant information to other concerned states regarding transboundary natural

^{18.} Id.

^{19.} Robert Quentin Baxter, Fourth Report on International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law, International Law Commission, 35th Sess., U.N. Doc. A/AC. 4/373 Annex (1983).

^{20.} Id. at 86.

^{21.} WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, OUR COMMON FUTURE, Annex 1 (1987) [hereinafter WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT].

^{22.} Id. princ. 5.

^{23.} Id. princ. 6.

resources or environmental interferences";²⁴ (d) "[s]tates shall provide prior and timely notification and relevant information to other concerned states and shall make or require an environmental assessment of planned activities which may have significant transboundary effects";²⁵ and (e) "[s]tates of origin shall consult at an early stage and in good faith with other concerned states regarding existing or potential transboundary interferences with their use of a natural resource or the environment."²⁶ Principle 26 of the Rio Declaration on Environment and Development²⁷ merely provides that "states shall all resolve their environmental disputes peacefully and by appropriate means in accordance with the Charter of the United Nations."²⁸

The above provisions are proposals for the avoidance or prevention of environmental disputes. As already noted, these provisions have no legally binding force under international law. In order for the provisions to acquire legal force, it will be necessary for states to conclude bilateral, regional, or multilateral agreements providing for notification, exchange of information, and consultation on potential environmental effects of planned activities under their jurisdiction. These agreements are likely to affect other states or areas beyond the limits of national jurisdiction and thereby give rise to environmental disputes.

D. Conflict Resolution

Where environmental conflicts or disputes have already arisen, traditional norms, principles, and rules are only useful in cases where the concerned states are neighboring, the cause of environmental damage positively identifiable, the effect of the damage limited geographically, and the damage is one that can be calculated and compensated in monetary terms.²⁹ In such cases, the judicial process is undoubtedly the most appropriate means to settle disputes.

The performance of the International Court of Justice as the principal judicial organ of the United Nations in the field of environmental conflicts has not been impressive to date. It remains to be seen whether the court's stature is likely to be enhanced and its potential maximized with

^{24.} Id. princ. 15.

^{25.} Id. princ. 16.

^{26.} World Commission on Environment and Development, supra note 21, princ. 17.

^{27.} Rio Declaration on the Environment and Development, June 13, 1992, U.N. Doc. A/Conf 151/26 (vol. I) (1992) reprinted in 31 I.L.M. 874, 880.

^{28.} Id. 31 I.L.M. at 880.

^{29.} See, e.g., Trail Smelter Arbitration (U.S. v. Can.), 3 R.I.A.A. 1903 (1938 & 1941).

the recent establishment of the Trust Fund to assist developing countries in contentious cases³⁰ and the creation of a special Environmental Chamber.³¹ Because the court lacks compulsory jurisdiction, its effectiveness in the resolution of environmental disputes may be hampered. creation of the Chamber, some commentators had recommended the strengthening of the International Court of Justice by broadening its jurisdiction to give standing to nongovernmental organizations contentious cases and by the securing of advisory opinions.32 commentators recommended the creation of an altogether separate International Environmental Tribunal³³ with compulsory jurisdiction similar to the International Tribunal for the Law of the Sea established under Part XV and Annex VI of the 1982 United Nations Convention on the Law of the Sea.³⁴ Given the reluctance of many states to entrust the resolution of their cases to the International Court of Justice even on an ad hoc basis, it is doubtful they would be willing to bring their disputes before such a tribunal or even to ratify any legal instrument accepting its compulsory jurisdiction. Ultimately, as an international institution, the International Court of Justice would exercise as much power or jurisdiction as the states are willing to grant it. Other dispute settlement techniques such as good offices, arbitration, negotiation, inquiry, mediation, and conciliation may be used to settle disputes in the environmental area.

A distinct type of situation is presented by cases of apparently normal day to day events and activities engaged in by many states that may gradually result in conflicts or disputes due to their transboundary interference with the use of global commons.³⁵ Processes that generate the chlorofluorocarbons that result in the depletion of the stratospheric ozone layer or the uses of fossil fuel energy that produces greenhouse gases are the cases on point. These are apparently common and beneficial activities that are pursued by every state. Resolution of conflicts arising out of these activities are not easily amenable to the traditional norms and rules of

^{30.} See G.A. Res. 32, U.N. GAOR, 44th Sess., Supp. No 89-64344, at 5, U.N. Doc. A/44/PV. 43 (1989); Peter H.F. Bekker, International Legal Aid in Practice: The ICJ Trust Fund, 87 AM. J. INT'L L. 659 (1993).

^{31.} See Chamber for Environmental Matters, 23 ENVTL. POL'Y L. 243 (1993).

^{32.} SIMONE BILDERBEEK, BIODIVERSITY AND INTERNATIONAL LAW: THE EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL LAW 140-43 (1992).

^{33.} See, e.g., Amedeo Postiglione, An International Court for the Environment?, 23 ENVTL. POL'Y L. 73 (1993).

^{34.} United Nations Convention on the Law of the Sea, opened for signature Dec. 10, 1982, U.N. Doc. A/CONF. 62/122 (1982), reprinted in 21 I.L.M. 1261.

^{35.} OSCAR SCHACHTER, INTERNATIONAL LAW IN THE THEORY AND PRACTICE 374-75 (1991).

dispute settlement. Who are the victims, and who are the perpetrators of the environmental damage? Can the specific sources of the damage be positively identified, and the liability therefore assigned to a particular state or group of states? Can the damage suffered be calculated and compensated in monetary terms? Even if the damage were calculable and compensable in monetary terms some of the damage may be irreversible. No amount of money could buy another ozone layer or a cooler climate in the event of global warming.

Would environmental conflicts and disputes in such cases be the subject of international and regional collaboration given the existence of the common interest at stake: human survival? These are not "either/or" There does not exist a legally identifiable interest vested in one state or group of states that would take action in the event of injury to the The resolution calls for the application of the emerging environment. principle in environmental management: a new and equitable global partnership.37 Environmental conflicts and disputes in such cases are the concern of every state and must be addressed through the concerted or joint efforts of all states. International environmental legal instruments the Biological Diversity Convention, 38 Climate Convention,39 and the declarations and resolutions of the United Nations acknowledge that the depletion of biological diversity and global climate change are issues that constitute a "common concern of humankind" to be addressed by the entire global community notwithstanding the causes and effects of these problems.40

Given that conflicts arise due to misunderstandings over certain perceived interests, rights to be enjoyed, and the corresponding obligations to be borne, the emerging principle of global partnership⁴¹ can be an effective procedure for the resolution of environmental conflicts and disputes particularly at the international or global level. States are fast in realizing that the protection of the environment requires a rethinking of the traditional concepts of sovereignty and territorial integrity which treat environmental issues as though they could be domesticated within their political territories.

^{36.} Id.

^{37.} Rio Declaration on Environment and Development, supra note 27, at 876-80.

^{38.} Biological Diversity Convention, supra note 15, 31 I.L.M. at 828.

^{39.} Climate Change Convention, supra note 16, 31 I.L.M. at 848.

^{40.} See, e.g., Biological Diversity Convention, supra note 15, 31 I.L.M. at 828; Climate Change Convention, supra note 16, 31 I.L.M. at 851.

^{41.} Rio Declaration on Environment and Development, supra note 27, at 876-80.

III. IMPLEMENTATION OF ENVIRONMENTAL TREATIES

A. Introduction

Treaties evidence the express consent of the parties to regulate their conduct in accordance with international law generally and the specific provisions thereof. The majority of international legal relationships between states are governed by treaties sometimes referred to as positive international law. Treaties seem to transcend every aspect of state relationships; their numbers are on the increase as more areas of state collaboration and cooperation are developed. For example, in the field of environment, the two decades subsequent to the 1972 Stockholm Conference produced an unprecedented number of treaties dealing with the environment in general and with specific aspects and sectors thereof.

The adoption of a treaty is only the beginning of an often long process of state interaction. The adoption of a treaty does not automatically solve the problem addressed. Unless the treaty is self-executing, it has to be implemented by the states in order to discharge the international obligations thereby assumed for the protection of the The cardinal principle governing the creation and performance of international legal obligations is pacta sunt servanda, which is the rule that treaties are binding on the parties and must be performed in good faith.⁴² The principle derives from the consent of states, and its importance is underlined by the fact that the Charter of the United Nations, undoubtedly the principal law of nations, expressly provides in Article 2(2) that members are to "fulfill in good faith the obligations assumed by them in accordance with the Charter."43 Article 26 of the 1969 Vienna Convention on the Law of Treaties4 provides that "every treaty in force is binding on the parties to it and must be performed by them in good faith."45 The article codifies existing customary law governing state relations, for there to be any significant legal regulation of the international community, the principle is required. If every state can rely on the other parties to a treaty to comply with the terms of that treaty, then that state will also constantly seek to comply with its treaty obligations.

However, pacta sunt servanda is not a practically reliable principle for implementation of certain treaty obligations. In the absence of an

^{42.} LORD MCNAIR, THE LAW OF TREATIES 493-505 (1961).

^{43.} U.N. CHARTER art. 2, ¶ 2.

^{44.} Vienna Convention on the Law of Treaties, May 23, 1969, KAV 2424, 1155 U.N.T.S. 331, 8 I.L.M. 679.

^{45.} Id. 1155 U.N.T.S. at 339, 8 I.L.M. at 690.

international enforcement agency, parties to a treaty will only take implementation measures when it is in their own interests to do so. States are represented by elected officials who answer to their local constituents rather than the international community. Therefore, the local interests and imperatives take priority. Treaties have to provide for an implementation mechanism particularly in the field of environmental protection where inaction on the part of signatories to the convention may have injurious Implementation mechanisms entail monitoring and consequences. reporting procedures that may be adopted by states. Monitoring represents the continuous observation, measurement, and gathering of information on the condition of a given ecosystem or environmental sector and its response to man-made interference. As a supervision technique, monitoring is of vital importance for the implementation of international environmental rules. "It is important for the establishment and operation of both national and international management schemes in general and for the supply of adequate information on environmental risks of planned measures as well as the prevention and abatement of accidental environmental injury in particular."46 A few examples of these procedures are discussed below.

B. Treaty Provisions on Monitoring and Reporting Procedures

An analysis of treaty provisions on monitoring and reporting procedures reveals a fundamental issue that international lawyers have grappled with for a long time. The issue with regard to the implementation of positive international law in general, as well as positive international environmental law, is who has the authority to define the obligation, to determine if it has been breached, and to demand the accomplishment of what they believe to be the legal result of that determination. Many environmental treaties do not adequately address the issue of authority. States are reluctant to create an international government that would usurp powers incidental to their sovereignty. As a consequence, the implementation of treaties lack sufficient efficacy. States do not define rules of positive law or allocate authority to determine whether the treaty has been breached by nonimplementation or what legal results should flow from such breach. The result is that the treaty

^{46.} Kamen Sachariew, Promoting Compliance with International Environmental Legal Standards: Reflections on Monitoring and Reporting Mechanisms, 2 Y.B. INT'L ENVTL. L. 31, 34 (1992)

^{47.} Alfred P. Rubin, Enforcing the Rules of International Law, 34 HARV. INT'L L.J. 149 (1993).

^{48.} Id.

provisions notwithstanding the international legal order is unable to discipline a state that refuses to enforce its environmental obligations owed to other states.

A common method adopted by state parties for the implementation of provisions of environmental treaties is a system of exchange of information relevant to the environmental problem addressed by the treaty in question. Such a system has the main advantage of advancing general and technical knowledge on various aspects of environmental protection such as combating or reducing environmental pollution. As an implementation mechanism, however, such a system is a weak check on compliance with the provisions of an environmental law treaty unless the system is supported by an elaborate protocol or series of protocols providing for detailed follow-up rules and regulations.

An example of a treaty with elaborate protocols is the 1979 European Convention on Long Range Transboundary Air Pollution. 49 The protocols are designed to meet the threat of acid rain which is a widespread and destructive form of pollution in Europe. The Convention itself mandates no precise reduction in the emissions of the injurious sulfur dioxide and nitrogen oxide. The Convention does provide for research and development, 50 exchange of information and consultation, 51 and a general commitment to limit and gradually reduce air pollution as far as Parties must provide data on emissions and on control possible.52 technologies for reduction of air pollution.53 The first protocol, the 1984 Geneva Protocol for Long-Term Financing of Monitoring, deals with financing under the pre-existing Cooperative Programme for Monitoring and Evaluation of the Long Range Transmission of Air Pollutants in Europe (EMEP).4 The 1985 Helsinki Protocol on the Reduction of Sulfur Emissions or Their Transboundary Fluxes by at Least 30 Percent⁵⁵ committed the parties to make a thirty percent across-the-board cut in

^{49.} Convention on Long Range Transboundary Air Pollution, Nov. 13, 1979, 34 U.S.T. 3043, *reprinted in* 18 I.L.M. 1442 [hereinafter Transboundary Air Pollution].

^{50.} Id. art. 7, 34, U.S.T. 3047, 18 I.L.M. at 1444-45.

^{51.} Id. art. 8, 34 U.S.T. 3047-48, 18 I.L.M. at 1445.

^{52.} Id. art. 9, 34 U.S.T. 3048-49, 18 I.L.M. at 1446.

^{53.} Id., 34 U.S.T. 3048-49, 18 I.L.M. at 1446.

^{54.} Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution, on Financing the Monitoring and Evaluation of Air Pollutants in Europe, Sept. 28, 1984, reprinted in 24 I.L.M. 484 (entered into force Jan. 28, 1988).

^{55.} Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on the Reduction of Sulfur Emissions or Their Transboundary Fluxes by at Least 30 Percent, July 8, 1985, U.N. Doc. ECE/EB.AIR/11 and ECE/EB.AIR/12, reprinted in 27 I.L.M. 699 (entered into force Sept. 2, 1987).

sulfur dioxide emissions from 1980 levels.⁵⁶ The 1988 Sofia Protocol on the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes⁵⁷ committed the parties to control and reduce their annual emissions of nitrogen oxide to their 1987 levels.⁵⁸ The 1991 Geneva Protocol on the Control of Emissions of Volatile Organic Compounds or their Transboundary Fluxes⁵⁹ committed the parties to control or reduce their national annual emissions by thirty percent by the year 1999 using the 1988 levels as a basis or any other annual level during the 1984 to 1990 period which the parties may specify upon signature of or accession to the protocol.⁶⁰ Implementation of the Convention and the Protocols is ensured through elaborate provisions for, inter alia, commercial exchange of technology,⁶¹ "direct industrial contacts and cooperation, including joint ventures,"⁶² research and monitoring,⁶³ and "exchange of information and experience."⁶⁴

Some environmental treaties require that the parties report the implementation of the treaty provisions. However, the reporting mechanism is left to the discretion of each state. These are self-monitoring and self-reporting provisions that do not provide for intervention or verification by other states parties or an independent institution. Indeed, verification of noncompliance or nonimplementation constitutes a crucial element in international legal instruments particularly those dealing with environmental protection. Environmental protection is an area in which the rapid development of science and technology as well as the growth of awareness of environmental issues make it imperative that the efficacy of

^{56.} Id. art. 2, 27 I.L.M. at 699.

^{57.} Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution Concerning the Control of Emissions of Nitrogen Oxides or Their Transboundary Fluxes, Oct. 31, 1988, reprinted in 28 I.L.M. 212.

^{58.} Id. art. 2, 28 I.L.M. at 216...

^{59.} Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution Concerning the Control of Emissions of Volatile Organic Compounds or Their Transboundary Fluxes, U.N. Doc. ECE/EB.AIR/30 (1991), reprinted in 31 I.L.M. 568.

^{60.} Id. art. 2, 31 I.L.M. at 575.

^{61.} Id. art. 4, 31 I.L.M. at 578.

^{62.} Id. art. 4, 31 I.L.M. at 578.

^{63.} Id. art. 5, 31 I.L.M. at 578.

^{64.} Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution Concerning the Control of Emissions of Volatile Organic Compounds or Their Transboundary Fluxes, Economic Commission for Europe, art. 4, at 6, U.N. Doc. ECE/EB.AIR/30 (1991), reprinted in 31 I.L.M. 568.

^{65.} See, e.g., Joseph Mbuna, Strengthening UNEP to Improve Environmental Treaty Compliance, in International Environmental Treaty Making 163, 167-68 (Lawrence E. Susskind et al. eds., 1992).

treaty provisions be verified, reviewed, and constantly updated to keep abreast with the scientific developments.

The 1985 Vienna Convention on the Ozone Layer⁶⁶ and the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol on the Ozone Layer)67 established a regime for monitoring, assessing, validating, and cooperation among the states' parties. Protocol imposed limits on ozone depleting chemicals, including a fifty percent cut in chlorofluorocarbons (CFCs).68 However, the main shortcoming with these two legal instruments was that they left the process of implementation to each party. Each party was to voluntarily implement the control measures established for the consumption of the controlled substances.69 Each party was to determine its own control levels with respect to import, export, and consumption of the controlled substances. Additionally, the parties were to provide to the Secretariat "data on its production, imports and exports of each of the controlled substances for the year 1986, or the best possible estimates of such data where actual data are not available."70

The 1990 London Amendments⁷¹ and the 1992 Copenhagen Adjustments⁷² to the Montreal Protocol on the Ozone Layer have considerably strengthened the reporting and implementation procedures. In June 1990, the Second Meeting of the Parties to the Montreal Protocol adopted procedures for determining noncompliance with the provisions of the Protocol and the institutional mechanism for the treatment of parties found to be in noncompliance. According to the decision, an Implementation Committee was to be established to receive, consider, and report on any submission made by parties who have reservations regarding another party's implementation of its obligations under the Protocol. In other words, the parties were allowed to mutually police each other under this procedure without being accused of interference in the domestic affairs

^{66.} Vienna Convention on the Ozone Layer, supra note 9, T.I.A.S. No. 11,097 at 4, 26 I.L.M. at 1529.

^{67.} Montreal Protocol on Substances that Deplete the Ozone Layer, Sept. 16, 1987, 26 I.L.M. 1541 (entered into force Jan. 1, 1989).

^{68.} Id. art. 2, 26 I.L.M. at 1552-64.

^{69.} Id. art. 3. 26 I.L.M. at 1554.

^{70.} Id. art. 7, 26 I.L.M. at 1556.

^{71.} See London Amendments to the Montreal Protocol on Substances that Deplete the Ozone Layer with Annexes, Jun. 29, 1990, U.N. Doc. UNEP/OzL.Pro.2/3, reprinted in 30 I.L.M. 537 [hereinafter London Amendment].

^{72.} See Montreal Protocol Parties: Adjustments and Amendments to the Montreal Protocol on Substances that Deplete Ozone Layer, Jun. 29, 1990, UNEP Doc. UNEP/OzL.Pro.2/L.5/Rev.1.

of another state. Thus, recognizing that the responsibility for the protection of the ozone layer is not borne by each party to the Protocol individually and separately. However, "the Committee has no powers of investigation or enforcement." Besides, "its members are not objective experts, but state representatives who may politicize the Committee's mission." Furthermore, "information submitted to the Committee is to be kept confidential, weakening the incentives for the Committee to aggressively pursue violations." The Basel Convention provides for a verification procedure:

[A]ny Party which has reason to believe that another Party is acting or has acted in breach of its obligations under this Convention may inform the Secretariat thereof, and in such an event, shall simultaneously and immediately inform, directly or through the Secretariat, the Party against whom the allegations are made. All relevant information should be submitted by the Secretariat to the Parties."

However, the fact that the Article uses discretionary rather than mandatory language is most likely the reason that the Basel Conference did not want to impose a verification obligation on the parties to the Convention. The result is a weak procedure that falls short of establishing an efficient reporting and implementation mechanism. In addition, the Secretariat lacks the power to enforce or demand implementation of the provisions of the Convention. The In fact, the ultimate authority rests with the parties to the Convention. The Secretariat's duties are purely administrative and clerical. Furthermore, the Conference of the Parties does not have the authority to enforce compliance with the Convention and institute remedial action in cases where a state has acted in breach of the Convention.

One of the objectives of the Montevideo Programme II, adopted by the Governing Council of UNEP, is promoting the implementation of the

^{73.} Elizabeth P. Barratt-Brown, Building a Monitoring and Compliance Regime Under the Montreal Protocol, 16 YALE J. INT'L L. 519, 543 (1991).

^{74.} Id.

^{75.} Id.

^{76.} Basel Convention, supra note 12, 28 I.L.M. at 649.

^{77.} Id. art. 19, 28 I.L.M. at 674.

^{78.} Id. art. 16, 28 I.L.M. at 671-72.

^{79.} Id. art. 16, 28 I.L.M. at 671-72.

^{80.} Id. art. 15, 28 I.L.M. at 670-71.

Basel Convention.⁸¹ It is hoped that this important issue will be discussed at subsequent meetings of the Conference of the Parties to the Convention. This issue was not discussed at the first meeting held in Piriapolis, Uruguay in December 1992,⁸² nor was it discussed at the second one held in Geneva in March, 1994.⁸³

Admittedly, exposure is one method of ensuring implementation of positive international law provisions by the recalcitrant parties. Theoretically, many states do not like to be the subject of discussion in international fora, where political and social pressure is brought to bear upon them for reneging on the international obligations that they assumed by consent. However, there is very little, if any, exposure under the Basel Convention as there is no follow-up mechanism once noncompliance or a breach of the Convention has been reported to the Secretariat. No organ of the Secretariat is established to investigate an alleged breach, and there is no provision for discussion of such a breach by the Conference of the Parties.

The Biological Diversity Convention is aimed at the conservation of the earth's biological diversity, promotion of the sustainable use of its components, and the equitable sharing of the benefits arising out of the utilization of genetic resources.44 The Convention gives juridical character to Principle 21 of the Stockholm Declaration on the Human Environment, 85 hitherto regarded as a nonlegally binding declaration of political consensus only. 86 The principle recognizes that nations have the right to exploit their own resources pursuant to their own environmental policies and declares that nation also have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or areas beyond the limits of their national jurisdiction. The Convention then places a duty on the parties to conserve biological diversity within and, in certain cases, beyond the limits of their national jurisdiction.87 Restating the sovereign rights of states over their natural resources including genetic resources, the Convention provides that the authority to determine access to genetic resources rests with the national governments, and it is subject to national legislation.88 Such access must

^{81.} Montevideo Programme II, supra note 5.

^{82.} See 15 Int'l Envtl. Rep. 807 (BNA) (1992).

^{83.} See 17 Int'l Envtl. Rep. 297 (BNA) (1994).

^{84.} Biological Diversity Convention, supra note 15, art. 1, 31 I.L.M. at 828.

^{85.} Stockholm Declaration, supra note 8.

^{86.} Biological Diversity Convention, supra note 15, art. 3, 31 I.L.M. at 828.

^{87.} Id. art. 4, 31 I.L.M. at 824.

^{88.} Id. art. 15, 31 I.L.M. at 828.

be on mutually agreed terms and subject to the provisions of the Convention.89

Regarding general measures for conservation and sustainable use of biological diversity, each party must, "in accordance with its particular conditions and capabilities . . . [d]evelop national strategies, plans or programmes for the conservation and sustainable use of biological diversity" and to "[i]ntegrate, as far as possible and as appropriate, such and use relevant sectoral or cross-sectoral plans, conservation" programmes, and policies."90 It is also noteworthy that the obligations stated in the Convention are to be discharged, and the provisions of the Convention are to be implemented by "each Contracting Party . . . as far as possible and as appropriate."91 There is no standard criterion for the determination of what is possible and what is appropriate. determination is left to the parties, there is bound to be wide divergence in the criteria to be adopted by each party and its appropriateness. Accordingly, implementing the provisions of the Convention, and the reporting mechanisms used, are bound to be disparate, as these will be dependent on the individual state's priorities and imperatives as well as its technological development.

The Convention establishes two institutions: The Conference of the Parties⁵² and the Secretariat.⁵³ The Conference of the Parties is designed to keep implementation of the Convention under review by, inter alia, establishing the form and the intervals for transmitting information which is furnished by the parties to the Convention regarding the measures they have taken, and the effectiveness of those measures.⁵⁴ The Conference is to consider this information as well as reports submitted by any subsidiary body.⁵⁵ When considering this information, it is not clear whether the Conference can make specific suggestions and recommendations to the parties for better implementation of the Convention. The parties are given great leeway in designing the implementation policies and actions "as far

^{89.} Id. art. 15, 31 I.L.M. at 828.

^{90.} Id. art. 6, 31 I.L.M. at 825.

^{91.} Biological Diversity Convention, *supra* note 15, arts. 5, 6(b), 7-11, 14, 31 I.L.M. at 825-28.

^{92.} Id. art. 23, 31 I.L.M. at 832-33.

^{93.} Id. art. 24, 31 I.L.M. at 833.

^{94.} Id. art. 23, 31 I.L.M. at 833.

^{95.} Id. art. 23(4)(a), 31 I.L.M. at 832.

as possible and appropriate." The Secretariat has no monitoring or reporting powers as his or her duties are only administrative.

The Climate Change Convention contains very general and vague commitments by the parties regarding the stabilization of greenhouse gas emissions.⁹² These commitments are to be discharged by all parties, "taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances." The Convention does not identify these common but differentiated responsibilities nor does it address the extent to which the parties are bound to discharge them. There is no commitment on reduction of greenhouse gases. The Convention does establish a process which is designed to improve the public information base, reduce uncertainties, encourage national planning, and produce more substantive international standards should scientific evidence continue to show that human activities are changing the earth's climate.¹⁰⁰

Article 7 of the Convention establishes the Conference of the Parties as the supreme body of the Convention with the mandate to keep implementation of the Convention and any related legal instruments that under regular review.101 adopted Promoting implementation of the Convention is to be carried out in the prescribed ways. 102 The Secretariat is assigned administrative and secretarial functions for the purpose of serving the Conference of the Parties. 103 A subsidiary body, under the guidance of the Conference of the Parties, is established to assist the Conference of the Parties in its assessment and review of the effective implementation of the Convention. 104 This body is to be "open to participation by all parties."105 The body is to be comprised of government representatives who are experts on matters related to climate change, and "shall report regularly to the Conference of the parties on all aspects of its Article 12 of the Convention provides for communication of information related to implementation of the Convention by each party.

^{96.} Biological Diversity Convention, supra note 15, arts. 23, 24.

^{97.} Id.

^{98.} Climate Change Convention, supra note 16, 31 I.L.M. at 848.

^{99.} Id. art. 4, 31 I.L.M. at 855-59.

^{100.} Id. arts. 4-6, 31 I.L.M. at 855-60.

^{101.} Id. art. 7, 31 I.L.M. at 860-62.

^{102.} Id. art. 7 para. 2, 31 I.L.M. at 860.

^{103.} Climate Change Convention, supra note 16, art. 8, 31 I.L.M. at 862-63.

^{104.} Id. art. 10, 31 I.L.M. at 863-64.

^{105.} Id. art. 10 para. 1, 31 I.L.M. at 863-64.

^{106.} Id. art. 10 para. 1, 31 I.L.M. at 863-64.

One of the elements to be included in the information is a general description of steps taken or envisaged by the parties to implement the Convention. ¹⁰⁷ Both this Article and the cross referenced Article 4(1) do not say how often this information is to be communicated by the states parties to the Convention. It may be deduced, however, that since the Conference of the Parties to which the communication is to be directed is to hold its ordinary sessions annually, ¹⁰⁸ the communication is to be made annually. It should be noted that the mandate of the Conference of the Parties is limited to the consideration and adoption of regular reports on the implementation of the Convention, and to making recommendations on any matters necessary for the implementation of the Convention. ¹⁰⁹ The Conference has no powers to make legally binding decisions in respect to implementation of the Convention.

C. Suggested Ways of Enhancement

The signature and ratification of international environmental treaties does not per se change the conduct of states and other parties thereto. Like most international legal instruments, the treaties have to be implemented at the municipal level where states are required to take legislative and/or administrative steps to bring the provisions of the treaties into force. Without such steps, the signature and ratification of treaties would end up becoming processes of international window dressing for some states. And, thereafter, the treaties would end up on the ministerial shelves to gather dust. If treaties and other instruments for environmental protection are to be efficiently implemented, they must contain elaborate provisions for follow-up mechanisms which monitor and verify state parties' actions at the municipal level. Except for the precedent setting London Amendments to the Montreal Protocol on the Ozone Layer, 110 most legal instruments on environmental protection are, at best, half-hearted attempts at verification and monitoring of state activities through their provisions for implementation. Future Conventions and protocols need to adequately address the problem of implementation. The developments in other fields could provide a guidance.

The constitutional provisions relating to the implementation of Conventions and Recommendations, adopted by the International Labour Conference, provide an excellent and successful example of

^{107.} Id. art. 12 para. 1(b), 31 I.L.M. at 865.

^{108.} Climate Change Convention, supra note 16, art. 7 para. 4, 31 I.L.M. at 862.

^{109.} Id. art. 7 para. 2(f), (g), 31 I.L.M. at 861.

^{110.} London Amendment, supra note 71.

implementation provisions which ensure that legal instruments are adopted by signatory states." The relevant provisions of the International Labour Organization Constitution are quoted as an illustration:

Article 19:

- 5. In the case of a Convention -
- (a) the Convention shall be communicated to all Members for ratification;
- (b) each of the Members undertakes that it will, within the period of one year at most from the closing of the session of the Conference, or if it is impossible owing to exceptional circumstances to do so within the period of one year, then at the earliest practicable moment and in no case later than 18 months from the closing of the session of the Conference, bring the Convention before the authority or authorities within whose competence the matter lies, for the enactment of legislation or other action;
- (c) Members shall inform the Director-General of the International Office of the measures taken in accordance with this article to bring the Convention before the said competent authority or authorities regarded as competent, and of the action taken by them;
- (d) if the Member obtains the consent of the authority or authorities within whose competence the matter lies, it will communicate the formal ratification of the Convention to the Director-General and will take such action as may be necessary to make effective the provisions of such Convention;
- (e) if the Member does not obtain the consent of the authority or authorities within whose competence the matter lies, no further obligation shall rest upon the member except that it shall report to the Director-General of the International Labour Office.

 . the position of its law and practice in regard to the matters dealt with in the Convention, showing the extent to which effect has been given, or is proposed to be given, to any of the provisions by legislation,

^{111.} See The International Labour Organization Constitution, U.K.T.S 47 (1948), Cmnd. 7452; see also Questions of International Law in the Spanish Civil War, 31 AM. J. INT'L L. Supp. 67 (1937).

administrative action . . . or otherwise and stating the difficulties which prevent or delay the ratification of such Convention.

- 6. In the case of a Recommendation -
- (a) the Recommendation will be communicated to all Members for their consideration with a view to effect being given to it by national legislation or otherwise;
- (b) each of the Members undertakes that it will, within a period of one year at most from the closing of the session of the Conference, or if it is impossible owing to exceptional circumstances to do so within the period of one year, then at the earliest practical moment and in no case later than 18 months after the closing of the Conference, bring the Recommendation before the authority or authorities within whose competence the matter lies for the enactment of legislation or other action:
- (c) the Members shall inform the Director General . . . of the measures taken in accordance with this article to bring the Recommendation before the said competent authority or authorities with particulars of the authority or authorities regarded as competent, and of the action taken by them;
- (d) apart from bringing the Recommendation before the said competent authority or authorities, no further obligation shall rest upon the Members, except that they shall report to the Director-General . . . the position of the law and practice in their country in the matters dealt with Recommendation, showing the extent to which effect has been given, or is proposed to be given, to the of the Recommendations and modifications of these provisions as it has been found or may be found necessary to make in adopting or applying them.

Article 22:

Each of the Members agree to make an annual report to the International Labour Office on the measures which it has taken to give effect to the provisions of Conventions to which it is a party. These reports shall be made in such form and shall contain such particulars as the Governing Body may request.

Article 23:

- (1) The Director-General shall lay before the next meeting of the Conference a summary of the information and report communicated to him by Members in pursuance of articles 19 and 22.
- (2) Each Member shall communicate to the representative organizations recognized for the purpose of article 3 (i.e. employers' and workers' organizations) copies of the information and reports communicated to the Director-General in pursuance of articles 19 and 22.112

The field of human rights law provides another example where the implementation of legal instruments has been successful, to some extent, with some innovative procedures which could be adopted for the implementation of environmental treaties. The protection of human rights, just like the protection of the environment, is a matter of international law which cannot be limited to the domestic jurisdictions of states. International human rights law, like international environmental law, operates beyond the municipal legal system which makes remedy and redress of breaches ineffective. Under the relevant provisions of the United Nations Charter,113 the 1966 International Covenant on Civil and Political Rights,114 the Optional Protocol,115 several resolutions of the United Nations General Assembly, and the United Nations Commission on Human Rights, several bodies and procedures have been established for purposes of monitoring and reporting on the effective and efficient implementation of international legal instruments for the protection of human rights. In addition to expert bodies under the Economic and Social Council of the United Nations, the Commission on the Status of Women, and the Commission on Human Rights are two functional commissions. The Commission on Human Rights is the United Nations most important human rights forum, it has a Sub-Commission on Prevention of Discrimination and Protection of Minorities, several working groups, special rapporteurs, representatives, and experts. The Sub-Commission, along with working groups and rapporteurs, have powers to visit member states of the United Nations for fact finding and verification purposes of the status of human rights practices in the states. Their findings and

^{112.} The International Labour Organization Constitution, supra note 111.

^{113.} U.N. CHARTER arts. 1, 55.

^{114.} International Covenant on Civil and Political Rights, Dec. 1966, at KAV 2306, 999 U.N.T.S. 171 (entered into force Mar. 23, 1976).

^{115.} Id., 999 U.N.T.S. at 171.

reports are discussed at the annual meetings of the Commission on Human Rights which then reports to the General Assembly through the Economic and Social Council.

The Commission on Human Rights also considers reports from other United Nations agencies such as: the International Labor Organization. World Health Organization. **Nations** and United Educational, Scientific and Cultural Organization. Since 1970, pursuant to Resolution 1503 of the Economic and Social Council entitled. "Procedure for Dealing with Communications Relating to Violations of Human Rights and Fundamental Freedoms,"116 the Human Rights Commission has had the mandate to investigate individual communications where they reveal a consistent pattern of gross violations of human rights set out by the 1966 International Covenant on Economic, Social, and Cultural Rights.117

In the field of environmental protection, legal instruments can be drafted in such a way that they do not only provide for states parties to make regular reports on their implementation, but also give an institution, such as the Conference of the Parties or the Secretariat, the right and duty to establish inspection teams or to appoint special rapporteurs for the purpose of actively monitoring and verifying the implementation of The instruments could also provide for the international conventions. participation of individuals and nongovernmental organizations in the implementation, monitoring, and verification procedures. Furthermore, similar to the provisions of the ILO Constitution, environmental law instruments could require all parties thereto to specify the national authority or authorities that have the competence and responsibility for implementation when signing or ratifying. A time limit could also be specified within which state parties must ratify and implement the convention. Provisions could be included in environmental treaties which oblige states to make annual reports to the Executive Director of UNEP on the status of treaty implementations. These reports could then be summarized by the Executive Director and discussed by the Governing Council during its regular sessions.

The 1975 Final Act of the Conference on Security and Cooperation in Europe [Helsinki Final Act]¹¹⁸ provides another example of a practically successful nonbinding process that has led to very close

^{116.} E.S.C. Res. 1503, U.N. Escor, 48th Sess., Supp. No. 1A at 8, P1, U.N. Doc. E/4832/Add.1 (1970).

^{117.} International Covenant on Economic, Social, and Cultural Rights, Dec. 16, 1996, KAV 2308, 993 U.N.T.S. at 3.

^{118.} Final Act of the Conference on Security and Cooperation in Europe, Aug. 1, 1975, 14 I.L.M. 1292.

interstate involvement in multilateral human rights protection in Europe. Part VII of the Helsinki Final Act affords the state parties an unrivaled opportunity to monitor the human rights performance of all the European The commitment to human rights under Helsinky the Final Act is of a political rather than a legal nature. Since 1975, a series of agreements concerning human rights has been made within this process containing procedures for monitoring compliance with human rights provisions which exchanges of information on request, bilateral meetings, and regular human rights conferences. In the field of environmental protection, a process such as the Helsinki Final Act could have been established under the Rio Declaration¹¹⁹ by providing for joint and separate state endeavors not only for protecting the environment, but also for fulfilling their obligations as set forth in the international declarations and agreements by which they may be bound to in this field. Such a provision would give the state parties to a nonbinding international agreement the right to monitor the implementation of environmental treaties and raise the of implementation for discussion relevant international at conventions.

The above mentioned innovative procedures and processes would go a long way towards ensuring adequate and effective implementation of international legal instruments for the protection of the environment. In addition, legislative institutional amendments, along with institutional reorganizations, may be required. If such amendments and reorganizations facilitate the effective implementation of international environmental treaties, they should be supported.

IV. LIABILITY AND COMPENSATION FOR ENVIRONMENTAL DAMAGE A. Introduction

The international legal order has ascribed responsibility to the states for any actions within their territorial jurisdictions or limits that cause harm to other states or the interests of the international community as a whole. This responsibility is recognized as the necessary corollary of a state's sovereignty and territorial integrity: "[A]ll rights of an international character involve international responsibility. This responsibility entails a duty to make reparation if an obligation is not satisfied..." 120

State responsibility is invoked in any case where the state violates an international obligation. The obligation can be recognized under

^{119.} Rio Declaration on Environment and Development, supra note 27.

^{120.} Spanish Zone of Morocco Claims (Spain v. U.K.), 2 R.I.A.A. 615, 641 (1923).

customary international law or assumed under a treaty. The violation of the obligation must be due to conduct attributable to the state, its organs, or its agencies. In terms of both substantive and procedural rules, ascription of liability in classic cases, such as injury to non-nationals or nationalization of their properties, poses no particular difficulties under the principles of international law. Liability for environmental damage or injury causes particular problems that need to be addressed. The problems are complex in cases of damage to areas of the environment which are beyond the limits of national jurisdiction such as the high seas and outer space, where damage to the environment may be due to the cumulative effect of diverse sources. An example of complex cases is the greenhouse effect which results from the cumulative effect of ozone depletion, global air pollution, acid rain, deforestation, and land use patterns.

B. Liability for Environmental Damage

In cases of environmental damage that result from the cumulative effect of various harmful actions engaged in by several states, it is not easy to assign responsibility in order to seek any compensation or remedial action. Common causes of the greenhouse effect are exploitative patterns that have led to unqualified economic growth, large-scale consumption and industrial pollution, carbon dioxide accumulation, poverty, and population growth. These patterns of causes have, consequently, laid stress on life support systems resulting in deforestation and the depletion of other natural No individual state can assume responsibility for the environmental damage which results from the actions of many states. Fortunately, however, the international community recognizes that environmental damage such as the depletion of the stratospheric ozone layer, global climate change, as well as depletion of biological species is a common concern of humankind. These concerns call for concerted international actions for the equitable sharing of burdens caused by environmental protection, rather than assigning responsibility and liability to individual states. 121 All states must cooperate in addressing these matters because they are equally important to all nations. The concept of common concern is intended to cover situations that fall outside the traditional categorization of state responsibility as a bilateral relationship between the state in breach of an international obligation and the state that is injured. 122

^{121.} Cf. Protection of Global Climate for Present and Future Generations of Mankind, G.A. Res. 53, U.N. GAOR, 43d Sess., Supp. No. 49 at 133, U.N. Doc. A/Res./43/53 (1988); U.N. Doc. A/Res./44/207 (1989); U.N. Doc. A/Res./45/212 (1990).

^{122.} See A. Cancado Trinidade & D.J. Attard, Report on the Proceedings of the Meeting, in UNEP, THE MEETING OF THE GROUP OF LEGAL EXPERTS TO EXAMINE THE CONCEPTS OF

The concept covers situations of multiple state responsibility such as those in which states engage in concerted conduct or those in which states engage in independent actions, whether in breach of an international obligation or not, that cause damage to the environment.¹²³

The international legal order has not yet devised rules addressing situations involving multiple-causes and multiple-state damage to the In particular, rules of compensation have not been developed to a concrete and identifiable level. The development of the rules of compensation are made more complex by the fact that these cases do not lend themselves to an easy determination of whether or not the responsibility for the damage to the environment is common or joint. How much is each individual state responsible for, and how much should its contribution towards compensation be? Another complex issue involves the determination of which state would initiate an action for compensation given that all states would be victims of, for example, ozone depletion or global climate change? Establishing a casual link between state conduct and the resultant environmental damage, which is a condition precedent to the initiation of an action for compensation, is not easy in the absence of a clear regime of rules in such situations. An international rule of several or joint state liability, in cases of multiple-cause and multiple-state damage to the environment, is not feasible.

The complexity of the issues involved in liability and compensation for environmental damage are further compounded by the fact that damage, a key concept in international environmental law, has not lent itself to an authoritative general definition. It is not every kind of transboundary environmental injury that falls within the scope of this concept. The imprecision of this concept is largely due to the interpretation given by many legal scholars to the obiter dictum of the arbitral tribunal in the *Trail Smelter Arbitration* of 1941 between Canada and the United States. The arbitral tribunal's conclusion is that under the principles of international law, as well as of the law of the United States, no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another state, or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence. This conclusion has been interpreted to mean, in the absence

THE COMMON CONCERN OF MANKIND IN RELATION TO GLOBAL ENVIRONMENTAL ISSUES (David J. Attard ed., 1991).

^{123.} Id.

^{124.} Trail Smelter Arbitration (Can. V. U.S.), 3 R.I.A.A. 1905 (1938 & 1941).

^{125.} Id. at 1965.

of serious consequences and the establishment of injury by clear and convincing evidence, no liability can flow from state conduct damaging to the environment. In other words, in the absence of substantial, legally provable damage to the environment, state responsibility does not arise. Therefore, there is no state responsibility for cumulative, synergistic, and indirect damage that arises out of state conduct. What the law apparently protects is property rights without regard to the environment, for these are the rights which are legally provable. Damage to the environment does not seem to give rise to any liability.¹²⁶

Since no state can exercise any jurisdiction over, or claim any rights to the international commons, it follows that they are the least protected under international law. Even if each state is under an obligation to take action to prevent damage to the environment of the commons, the consequence of the breach of such obligation is not clear under international law. Both customary and conventional law is not clear on the issue of the procedural right of any one state to invoke the liability of another state for damage to the environment of the commons and to seek compensation therefor. Obligations for the protection of the commons may, admittedly, be obligations erga omnes, but the absence of an actio popularis in international law that is, the right of any member of the international community to take legal action for vindication of a public interest, effectively bars an invocation by any one state of the responsibility of another for breach of the obligation to prevent damage to the environment of areas beyond the limits of its national jurisdiction and, when damage has occurred, to demand compensation. The reasoning and decisions of the International Court of Justice in the South West Africa (Second Phase) Case,127 the Barcelona Traction Light and Power Co. Ltd. Case. 128 and the Nuclear Tests Cases (Australia and New Zealand vs. France)¹²⁹ suggest that, in the absence of any bilateral aspect, no state can invoke the responsibility and liability of another for breach of a customary or treaty law obligation for the preservation of the environment of the commons. There is no evidence to suggest that the court's jurisprudence shows a progressive move towards the admission of an actio popularis to enable an individual state(s) to vindicate an international obligation.

^{126.} See Prue Taylor, The Failure of International Environmental Law, 4 OUR PLANET 14 (1992).

^{127.} South West Africa Cases (Eth. v. S. Afr.; Liber. v. S. Afr.), 1966 I.C.J. 6 (July 18) (second phase).

^{128.} Case Concerning the Barcelona Traction, Light, and Power Co., Ltd. (Belg. v. Spain), 1970 I.C.J. 3 (Feb. 5).

^{129.} Nuclear Test Cases (Austl. v. Fr.; N. Z. v. Fr.), 1974 I.C.J. 253, 457 (Dec. 20).

C. Treaty and "Soft Law" Provisions on Liability and Compensation for Environmental Damage

As previously mentioned, liability has long been recognized as an essential corollary of state sovereignty. Moreover, liability is a vital concept in cases of transboundary environmental damage. Although the 1972 Stockholm Conference on the Human Environment recognized its importance, the participating governments were unable to reach agreement on a general and acceptable formulation of the concept. Participants at the conference focused on ways "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."130 Since then, the governments have been cautiously reluctant to cement multilateral agreements prescribing principles of liability and compensation for State practice and environmental damage caused by certain activities. international adjudication remains obscure, and in its occurrence rare. Consequently, if international claims for environmental damage were to be made, it is fairly certain that the legal principles to be applied would be those derived from either the municipal law, which is common to several countries, or the Trail Smelter Arbitration, which still remains the landmark decision.

Activities in outer space entail the rare area where the subject of liability and compensation have been addressed in clear and concise terms. Specifically, the 1972 Convention on International Liability for Damage Caused by Objects Launched into Outer Space¹³¹ provides that a launching state shall be absolutely liable to pay compensation for damage caused by its space object on the surface of the earth or to aircraft in flight.¹³² Articles IV and V provide for several and joint liability in cases of joint launching of space objects by two or more states. States which suffer damages or whose natural or juridical persons suffer damage may present compensation claims for damages to the launching state(s) through diplomatic channels.¹³³ The compensation for which the launching state is liable is to be determined in accordance with international law and the principles of justice and equity. Upon determination of liability, reparation will be provided in order to restore the person, natural or juridical, the

^{130.} Stockholm Declaration, supra note 8.

^{131.} Convention on International Liability for Damage Caused by Outer Space Objects, Mar. 29, 1972, T.I.A.S. No. 7762, at 2389, 961 U.N.T.S. 187.

^{132.} Id. art. 2, T.I.A.S. No. 7762, at 2392, 961 U.N.T.S. at 189.

^{133.} Id. arts. 7, 9, T.I.A.S. No. 7762, at 2395, 96, 961 U.N.T.S. at 191.

state, or the international organization to the condition which would have existed if the damage had not occurred.¹³⁴ Where the claim for compensation is not settled within a year from the date on which the claimant state(s) notified the launching state(s) of the submission of the documentation of the claim, the parties concerned are required to establish a Claims Commission at the request of any party.¹³⁵

From the standpoint of protecting the environment, it should be noted that the provisions for liability and compensation are clearly circumscribed by the definition of the term "damage" under the Convention: loss of life, personal injury or other impairment of health, loss of or damage to property of states or of persons natural or juridical, and property of international intergovernmental organizations. 136 Convention seeks to provide protection and compensation for loss or impairment of personal and property rights in the use of the environment. Such protection and compensation extend to legally recognized and enforceable interests in which the victims can be clearly identified under the municipal and international legal regimes. It is apparent from the provisions of the Convention on Damage Caused by Outer Space Objects that liability and compensation for environmental damage is both obscure This is evidenced by the provision that claims for and not feasible. compensation for damage suffered cannot be presented more than one year after the date of the occurrence of the damage, or the identification of the launching state which is liable, or not more than one year following the date on which the claimant state learned of the occurrence of the damage and identified the launching state which is liable.137 The provision is obscure because protection of the environment is incidental only to protection of personal and property rights. It is not feasible because environmental damage may take much longer than the specified time limits specified to manifest itself. The Minamata Bay mercury poisoning in Japan and the Love Canal toxic dumping in the state of New York are examples that readily come to mind. In both cases, it took more than twenty years for a manifestation of the damage and for the causal linkages to be established.

Some conventions that provide for liability and compensation do so in respect to the private operator while others provide that the operator's state is liable on a subsidiary basis if the operator or his insurance cannot

^{134.} Id. art. 12, T.I.A.S. No. 7762, at 2397, 961 U.N.T.S. at 192.

^{135.} Id. art. 15, T.I.A.S. No. 7762, at 2398, 961 U.N.T.S. at 192.

^{136.} Convention on Damage Caused by Outer Space Objects, *supra* note 131, art. 1, T.I.A.S. No. 7762, at 2392, 961 U.N.T.S. at 189.

^{137.} Id. art. 10. T.I.A.S. No. 7762, at 2396, 961 U.N.T.S. at 191.

pay. For example, the 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy¹³⁸ imposes liability on the operator of a nuclear installation for damage to or loss of life of any person and damage to or loss of any property save those that are expressly excluded.¹³⁹ This convention also provides that compensation for damage may be claimed from the operator, insurer, or other financial guarantor.¹⁴⁰ The 1963 Vienna Convention on Civil Liability for Nuclear Damage¹⁴¹ imposes absolute liability on the operator for any nuclear damage. Damage is defined to mean loss of life and personal injury, or damage to property or such other loss or damage as may be provided for by the law of the competent court or the installation state.¹⁴²

Even in cases of what may be termed as true environmental conventions, the establishment of liability and compensation regimes for environmental damage has not been overly appreciated by states. Neither the 1979 European Convention on Long Range Transboundary Air Pollution, 143 nor any of the protocols thereunder, have any liability and compensation provisions. Liability and compensation provisions are also lacking in the Vienna Convention on the Ozone Layer¹⁴ and the Montreal Protocol on the Ozone Layer. 145 The Basel Convention 146 provides for the parties' co-operation with a view to adopting a protocol which sets out appropriate rules and procedures in the field of liability and compensation for damage resulting from the transboundary movement and disposal of hazardous and other wastes.¹⁴⁷ At the First Meeting of the Conference of the Parties held in Piriapolis, Uruguay, in December 1992, they decided to establish an ad hoc working group of legal and technical experts to consider and develop a draft protocol on liability and compensation. Also to be considered in the draft was the establishment of an international fund for the compensation for damage resulting from the transboundary

^{138.} Paris Convention on Third Party Liability in the Field of Nuclear Energy, 1968, U.K.T.S. No. 69 (Cmnd. 3755).

^{139.} Id. art. 3.

^{140.} Id. art. 6.

^{141.} Vienna Convention on Civil Liability for Nuclear Damage, May 21, 1963, 1063 U.N.T.S. 265, reprinted in 2 I.L.M. 727.

^{142.} Id. art. 1.

^{143.} Rio Declaration on Environment and Development, supra note 27.

^{144.} Vienna Convention on the Ozone Layer, supra note 9, T.I.A.S. No. 11,097, 26 I.L.M. at 1529.

^{145.} Montreal Protocol on Substances that Deplete the Ozone Layer, supra note 67.

^{146.} Basel Convention, supra note 12, 28 I.L.M. at 668.

^{147.} Id. art. 12, 28 I.L.M. at 668.

movements of hazardous wastes and their disposal. The first session of the working group was held mid-September 1993 at Geneva. There is still a lot of work to be done towards the proposed international fund. Unsettled issues include the structure and purposes of the fund, limits of the fund's obligation to pay compensation, the contributions to the fund, and the criteria for the assessment of such contributions and how they will be collected. Also to be resolved are the issues pertaining to the institution(s) with the power to assess the injury suffered and the commensurate compensation as well as the beneficiaries thereof. More importantly, questions such as the applicable law, the *locus standi* of the injured parties, and the jurisdiction of domestic courts for purposes of filing a claim for compensation will need to be addressed and agreed upon by the parties.

Ideally, the envisaged fund's purpose would be to ensure that adequate resources are available to provide full and adequate compensation for damage or loss caused by the transboundary movements of hazardous and other wastes and their disposal to the extent that the compensation payable under the liability provisions of the proposed protocol is inadequate or not available for one reason or another. In other words, the fund would provide both a supplementary and alternative cover in cases where the person liable cannot provide any or full compensation. So far the parties have not addressed the issue of liability and compensation for damage or injury to the environment *qua* environment, that is, the global commons over which no claim of any rights or jurisdiction can be had. Coincidentally, neither the Biological Diversity Convention¹⁴⁸ nor the Climate Change Convention¹⁴⁹ has any provisions on liability and compensation for environmental damage.

At the regional level, the Council of Europe adopted the Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment in June 1993. Article 12 of the Convention provides:

Each Party shall ensure that where appropriate, taking due account of the risks of the activity, operators conducting a dangerous activity on its territory be required to participate in a financial security scheme or to have and maintain a financial guarantee up to a certain limit, of such type and

^{148.} Biological Diversity Convention, supra note 15, 31 I.L.M. at 822.

^{149.} Climate Change Convention, supra note 16, 31 I.L.M. at 848.

^{150.} Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, June 21, 1993, 32 I.L.M. 1228.

terms as specified by internal law, to cover the liability under this Convention. 151

The financial guarantees to be established under the municipal laws of the member states of the Council of Europe and other states which are signatories to the Convention will be insurance funds to be drawn upon for compensation in cases of: loss of life or personal injury, loss of or damage to property, and loss or damage by impairment of the environment. The costs of reinstatement and or restoration or the costs of preventive measures to be undertaken or actually undertaken as a result of the dangerous activity may also be drawn from the fund. Member states will be obligated to enact new or amend existing legislation in order to make a provision for such insurance funds to compensate for environmental damage. Central to the Convention is the emphasis on risk management in the handling, storage, production, or discharge of dangerous substances. Additionally, risk management shall pertain to management of substances or preparations which have properties which constitute a significant risk for man, the environment, property, or substances specified in Annex 1 Part B of the Convention. 152

The International Maritime Organization, formerly the Intergovernmental Maritime Consultative Organization, has addressed the issues of liability and compensation for damage to the marine environment in several conventions adopted under its auspices. For example, under the 1969 International Convention on Civil Liability for Oil Pollution Damage,153 the owner of a ship was liable for any pollution damage caused in the territory including the territorial sea of another state unless the owner proved that the damage either resulted from an act of war. hostilities, insurrection, a natural phenomenon of an exceptional, inevitable, and irresistible character, wholly caused by an act or omission done with intent to cause damage by a third party, or the damage was wholly caused by the negligence or other wrongful act of any Government or other authority responsible for the maintenance of lights or other navigational aids in the exercise of that function.154 The owner's liability under this Convention was limited to an aggregate amount of 210 million francs. 155

^{151.} Id. art. 12.

^{152.} Id. art. 2(2).

^{153.} International Convention on Civil Liability for Oil Pollution Damage, Nov. 29, 1969, 973 U.N.T.S. 3, reprinted in 9 I.L.M. 45 [hereinafter Liability Convention].

^{154.} Id. arts. II, III, 973 U.N.T.S. at 5, 9 I.L.M. at 47, 48.

^{155.} Id. art. V(1), 973 U.N.T.S. at 5, 9 I.L.M. at 48.

The parties to the 1969 Convention adopted the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage¹⁵⁶ in 1971 in order to ensure that adequate compensation was available to persons who suffered damage caused by pollution resulting from the escape or discharge of oil from The Fund Convention was adopted because the compensation ships. regime, provided under the 1969 Liability Convention, did not afford full compensation for victims of oil pollution damage in all cases. The Fund Convention imposes an additional financial burden on ship owners. 157 It provides for compensation and indemnification and raises the aggregate amount of compensation payable to 40 billion francs subject to increases by a decision of the Assembly of the Fund. 158 Articles 10-15 inclusively provide for the mode of contributions to the Fund by each contracting state; the assessment of annual contributions is based on the amount of oil tonnage carried by sea from each contracting state. 159

The liability and compensation under the Liability Convention was limited to areas within the national jurisdiction of a state in which property rights have been prejudiced as a result of the oil pollution. The other areas such as the continental shelf, the exclusive economic zone, the high sea, and the sea bed were not covered. However, possibly influenced by the legal developments in this area and, in particular, the adoption of the 1982 U.N. Convention on the Law of the Sea; the IMO amended both the Liability Convention and the Fund Convention in order to enlarge their scopes by the adoption of protocols in 1984. For instance, under the 1984 Protocol to the Liability Convention, for "pollution damage" is defined to mean:

(a) loss or damage caused outside the ship by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, provided that compensation for impairment of the environment other than loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be

^{156.} International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, Dec. 18, 1971, KAV 2338, 1110 U.N.T.S. at 57, reprinted in 11 I.L.M. at 284.

^{157.} Id. art. 2, 1110 U.N.T.S. at 60, 11 I.L.M. at 285.

^{158.} Id. arts. 4-9, 1110 U.N.T.S. at 61-65, 11 I.L.M. at 286-90.

^{159.} Id. art. 10-15, 1110 U.N.T.S. at 65-68, 11 I.L.M. at 290-93.

^{160.} Postiglione, supra note 33.

^{161.} IMO Doc. LEG/CONF.6/67; Misc 7(1986), Cmnd. 9926.

undertaken; (b) the costs of preventive measures and further loss or damage caused by preventive measures. 162

The 1984 Convention is applicable exclusively to:

(a) . . . pollution damage caused (i) in the territory, including the territorial sea, of a Contracting state, and (ii) in the exclusive economic zone of a Contracting state, established in accordance with international law, or if a Contracting state has not established such a zone, in an area beyond and adjacent to the territorial sea of that state determined by that state in accordance with international law and extending not more than 200 nautical miles from the baseline from which the breadth of its territorial sea is measured; (b) . . . preventive measures, whenever taken to prevent or minimize such damage. ¹⁶³

Liability is limited to an aggregate amount of 50.7 million SDRs subject to the right of subrogation.¹⁶⁴ Liability and compensation therefore are expanded accordingly.

Similarly, the 1984 Protocol to the Fund Convention 1655 provides compensation for pollution to the extent that the protection afforded by the 1984 Liability Convention is inadequate. It applies to the same geographical area as the Liability Convention and raises the maximum compensation to 200 million SDR's. 1666 Liability and compensation for damage to the high seas and other sectors of the marine environment are included in the 1982 U.N. Convention on the Law of the Sea. 1677 Article 1922 of the Convention states the general obligation for the protection and preservation of the marine environment. 1689 Article 235 provides, *inter alia*, that states shall ensure the fulfillment of their international obligations concerning the protection and preservation of the marine environment. 1699 Article 235 further ensures that recourse is available in accordance with a states' legal systems for prompt and adequate compensation or other relief

^{162.} Id. art. I.

^{163.} Id. art. II.

^{164.} Id. art. V.

^{165. 1984} Protocol to Amend the International Convention on Civil Liability for Oil Pollution Damage 1969, I.M.O. Doc. LEG/CONF.6/66; Misc 8(1986), Cmnd. 9927.

^{166.} Id. arts. 3, 4.

^{167.} United Nations Convention on the Law of the Sea, Dec. 10, 1982, U.N. Doc. A/Conf.62/122, reprinted in 21 I.L.M. 1261 (entered into force Nov. 16, 1994).

^{168.} Id., 21 I.L.M. at 1308.

^{169.} Id., 21 I.L.M. at 1315.

in respect of damage caused by pollution of the marine environment.¹⁷⁰ States are under an obligation to cooperate in the further development of international law relating to responsibility and liability for the assessment of and compensation for damage as well as development of criteria and procedures for payment of adequate compensation funds.¹⁷¹ To date, the establishment of a mechanism for liability and compensation has not materialized.

An effective liability and compensation structure has not progressed beyond recommendations, resolutions, and declarations adopted by intergovernmental and nongovernmental organizations. The work of the International Law Commission and its draft articles on "International Liability for Injurious Consequences Arising out of Acts Not Prohibited by International Law" has been the most sustained effort in the establishment of a liability and compensation regime at the international level. Under the draft articles, a state of origin is liable to fully compensate an affected state for harm or damage caused by the physical consequences of activities that are internationally lawful. Reparation would be decided by negotiations between the states, and the states are to be guided by criteria of an equitable character in determining the same.¹⁷³

Principle 12 of the 1978 United Nations Environment Program Draft Principles of Conduct in the Field of Environment for the Guidance of states in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More states, 174 reiterates the principle of international responsibility for environmental damage. Principle 12 provides that states should cooperate to develop further international law regarding liability and compensation for the victims of environmental damage arising out of the utilization of a shared natural resource and damage to areas beyond national jurisdiction.

Principle 13 of the 1992 Rio Declaration on Environment and Development¹⁷⁵ addresses the issue of liability and compensation at the national and international levels. At the national level, the principle obligates states to develop their national laws regarding liability and compensation for the victims of pollution and other environmental damage.

^{170.} Id., 21 I.L.M. at 1315.

^{171.} Id., 21 I.L.M. at 1315.

^{172.} International Law Association, supra note 17.

^{173.} Id. at 6-7, 16-17.

^{174.} Co-operation in the Field of the Environment Concerning Natural Resources Shared by Two or More States, G.A. Res. 3129, 28 U.N. GAOR (2199th plen. mtg.) at 57, U.N. Doc. GC 6/CRP.2 (1978), reprinted in 17 I.L.M. 1091, 1097.

^{175.} Rio Declaration on Environment and Development, supra note 27.

At the international level, states are obligated to cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage which are caused by activities within their jurisdiction or control to areas beyond their jurisdiction. States, however, have been reluctant to move fast.

The bottom line of these principles, recommendations, and declarations regarding liability and compensation has been the identifiability of the source state and the damage suffered. The remedy of legal liability and compensation is feasible where the damage is identifiable, traceable to a state of origin, and reasonably foreseeable by that state. 176

V. Conclusion

As the United Nations Environment Programme sets to implement the relevant provisions of Agenda 21, the Montevideo Programme II needs to account for the efficacy of the treaties adopted under its aegis. UNEP should also analyze how the trend for the 1990's should be taken into account. In particular, UNEP needs to move from the adoption of framework conventions whose provisions are no more than political statements, and get to the stage of adopting more comprehensive provisions following some of the precedents referred to above. attention needs to be given to the legal empowerment of victims of environmental damage or loss by granting them locus standi to espouse their claims in the courts of the state where the source of the damage or loss is suffered. The 1974 Nordic Environmental Protection Convention provides a useful precedent.¹⁷⁷ Under the Convention, any person who is or may be affected by a nuisance caused by environmentally harmful activities in another contracting state has the right to bring before the appropriate Court or Administrative Authority of that state the questions of: the permissibility of such activities, the measures to prevent damage, and the measures to appeal against the decision of such court or authority to the same extent and on the same terms as a legal entity of the state in which the activities are being carried out.178 This right extends to of environmental compensation proceedings for the Compensation should not to be judged by rules which are less favorable to

^{176.} Trail Smelter Arbitration, supra note 29. The Corfu Channel Case (U.K. v. Alb.), 1949 I.C.J. 4 (Apr. 9).

^{177.} Convention on the Protection of the Environment Between Denmark, Finland, Norway, and Sweden, Feb. 19, 1974, 1092 U.N.T.S. 279, 296-300.

^{178.} Id. art. 3, 1092 U.N.T.S. at 296.

the injured party than the rules of compensation of the state in which the activities are being carried out.¹⁷⁹ The right established in this article is, in principle, to be regarded as including the right to demand the purchase of the claimant's real property.¹⁸⁰

Since no state can claim jurisdiction over any sovereign or property rights in the global commons, they are currently the least protected areas under international environmental law. An effective legal and policy mechanism for their protection is needed. A contingency fund needs to be considered. All nations could make contributions to the fund on the basis of their annual United Nations budgetary assessments. The fund would essentially be a trust fund to be resorted to in the event of any potential or actual damage to the environment of the commons. The money would be used to take preventive measures or undertake the reparation and restoration operations.

It should be noted, however, that whether such fund is established at the municipal, regional, or international level, its success will depend on several factors. The most important factor is a highly effective institutional system of transparency and the monitoring of actors, whether they are natural or juridical persons. International law has yet to establish such a system because governments have been reluctant to surrender their sovereignty to an international authority with power to control their conduct. However, if the common concern of humankind is to be effectively addressed, the veil of sovereignty may have to be pierced for the protection of the environment and the welfare of all. This is the task that the United Nations Environment Programme faces in implementing the Montevideo Programme II.

^{179.} Id., 1092 U.N.T.S. at 296.

^{180.} Id., 1092 U.N.T.S. at 299.

^{181.} See A.O. Adede, International Environmental Law from Stockholm to Rio: An Overview of Past Lessons and Future Challenges, 22 ENVTL. POL'Y & L. 88 (1992).