I. INTRODUCTION: UNDERSTANDING THE PROBLEM

Environmental disasters are increasing. They often result from human activities, such as the disposal of toxic chemicals, the generation of power,
and the exploitation of oil. Mismanagement of natural resources has caused severe watershed erosion, desertification, and atmospheric pollution, which, in turn, have seriously impaired human life. Although the human suffering associated with environmental destruction is growing, international and regional human rights organizations and institutions have yet to clarify the obligation of governments to protect and provide remedies for these victims. This paper seeks to inspire such clarification and suggests legal and institutional reforms toward that end.

The development of large hydropower projects illustrates how resource extraction activities can displace human populations, disrupt food production, and spread disease.¹ Uprooted communities, who must leave behind age-old social organizations and enter unfamiliar societies, often lose their cultural identity. Individuals within those communities, left helpless by the loss of their communal support systems, often become migrant laborers; some turn to prostitution or alcohol; and many die from diseases previously unknown to them, such as influenza, tuberculosis, and measles.² Moreover, the people most affected by environmental damage are often excluded from their government’s development planning, leaving them powerless to control their future.

The James Bay hydroelectric project in Quebec (Hydro-Quebec) poignantly illustrates this perverse process. Hydro-Quebec has affected the lives, cultural heritage, and livelihood of tens of thousands of native Cree and Inuit. Riverflow alterations have interfered with fish spawning and have desiccated the estuarine wetlands that supported waterfowl. Riverbank erosion drowned thousands of caribou, a staple of the community’s diet. The disruptions also caused the release of the toxic metal mercury into the biotic food chain,³ making freshwater fish unsafe to eat.⁴ More than half of the James Bay Cree have absorbed unsafe levels of mercury.⁵ Although many reports have been

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1. Improper dam construction can cause the spread of disease to local populations. For example, when developers do not clear standing forests before filling a reservoir, the forest biomass provides breeding grounds for disease-carrying organisms. Common diseases resulting from such dereliction include malaria, schistosomiasis, onchocerciasis, and encephalitis. A.W.A. Brown & J.O. Doem, Health Aspects of Man-made Lakes, in MAN-MADE LAKES, THEIR PROBLEMS AND ENVIRONMENTAL EFFECTS 755, 756-61 (William C. Ackerman et al. eds., 1973).

2. See id. at 759-60. The Yanomami Indians of Brazil are a case in point. See infra text accompanying notes 39-40, 56-57.

3. Mercury is commonly found in rocks throughout the north in an insoluble form that does not affect the air and water. However, bacteria associated with decomposition of organic matter transform it into methyl mercury, which vaporizes, enters the atmosphere, and then falls back into the water, where it enters the food chain. Hydroelectric projects, like new reservoirs, induce a burst of decomposition that accelerates the release of mercury. Peter Gorrie, The James Bay Power Project, CANADIAN GEOGRAPHIC, Feb.-Mar. 1990, at 21, 27 (finding that mercury levels in fish downstream from LaGrande dams climbed to six times their normal levels within months of project’s completion).

4. According to a March 1988 study, with mercury levels remaining high for 10 to 20 years, the region’s fish may not be safe to eat for another generation. Id. at 27-28.

5. Id. at 27.
prepared on various aspects of the project, Hydro-Quebec has never committed to undertake a full and independent environmental and social impact assessment.6

The hydroelectric projects currently under way in Brazil provide another example.7 The government's electric power monopoly, Electrobras, plans to build eighty dams in Amazonia by the year 2020. In all, the dams will flood approximately one million square kilometers of land, most of it lying along the Amazonian rivers' middle and upper reaches, which are occupied by indigenous peoples. These communities have limited access to information and no real opportunity to participate in the government's planning of hydroelectric power development.8 As most of this area still lacks basic infrastructure, legal and protective agencies often do not exist. Government corruption and suppression of information have stifled the region's ability to achieve the levels of participatory democracy that have emerged in other areas of Brazil.9

Unsustainable development practices have led to another critical phenomenon. The increased desertification, flooding, and pollution worldwide, coupled with high rates of population growth, poverty, and economic polarization, have left tens of millions of people homeless. These "environmental refugees" migrate within and across borders. Left unchecked, the mass migrations will continue to increase and will, in turn, contribute to environmental degradation in the areas of refuge. Although the environmentally dispossessed comprise the fastest growing category of migrants in the world, international organizations have yet to address their plight effectively. The lack of legal protection for environmental refugees exacerbates their crisis.

Traditional norms of international law offer individuals no meaningful protection from these threats.10 International law addresses responsibility for environmental harm only in cases of transfrontier pollution. In that context, international duty arises from the principle that one should use one's own property in a manner that does not harm others. Commonly referred to as sic utere, this principle is supported by the decisions of international tribunals,11

6. Id. at 22-23. Project planning has occurred with no public hearings and very little questioning. Id. at 31. Therefore, as Alan Penn, a geographer appointed by the Cree to Hydro-Quebec's environmental review committee, noted, "[t]he kind of data collection that is going on is not designed to focus on problems, but to provide general reassurance." Id. at 27.


8. See Fearnside, supra note 7, at 401, 403.

9. CUMMINGS, supra note 7, at 90.

10. National laws are not discussed in this paper. While many national constitutions espouse a right to protection of the environment, that right is rarely justiciable. See infra note 101 and accompanying text. Furthermore, many countries have not developed laws like those in U.S. jurisprudence to remedy personal injuries caused by environmental harm.

11. See, e.g., Trail Smelter Case (U.S. v. Can.) 3 R.I.A.A. 1905 (1938 & 1941). The Trail Smelter arbitration tribunal was responsible for introducing the principle of sic utere into international
the declarations of governments,\textsuperscript{12} and the codification of customary international law by publicists.\textsuperscript{13}

For several reasons, however, individuals harmed by environmental mismanagement cannot rely on \textit{sic utere} to remedy their injuries. First, a violation of \textit{sic utere} occurs only to the extent that a state can be viewed as directly or indirectly responsible for the action: liability for extraterritorial environmental degradation is predicated upon the complainant’s ability to attribute the offending act or omission to the defendant state; show that the state breached an international duty; demonstrate that a causal relationship existed between the state’s conduct and the injury claimed; and prove material damage.\textsuperscript{14} Furthermore, even if complainants could establish all the above elements, they really have no truly workable and accessible international mechanism for the adjudication and settlement of their claims. International tribunals, as presently constituted, are severely limited in their ability to contribute to the development of an operational international liability regime.\textsuperscript{15} Because only \textit{states} have standing to appear as parties to proceedings before the International Court of Justice (ICJ),\textsuperscript{16} individuals or associations of individuals must attempt to prevail upon their national governments to espouse their claims. Seldom, however, do their governments acquiesce: states are generally reluctant to risk relinquishing even a small quantum of their sovereignty by submitting to binding third-party adjudication.\textsuperscript{17} Moreover, potential state complainants may decline to bring actions against offending states for fear that they will be called to task for their own polluting environmental law, holding that "no State has the right to use or permit the use of its territory in such a manner as to cause [environmental] injury . . . in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence." \textit{Id.} at 1965; \textit{see also} Corfu Channel (U.K. v. Alb.), 1949 I.C.J. 4, 22 (Judgment of Apr. 9) (confirming "every State’s obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States").


\textsuperscript{13} \textit{See}, e.g., \textit{Restatement (Third) of the Foreign Relations Law of the United States}, §§ 601(1), 601(2)(b) (affirming a state’s responsibility for any significant injury its activities cause to environment beyond limits of its jurisdiction).

\textsuperscript{14} \textit{Developments in the Law — International Environmental Law}, 104 HARV. L. REV. 1484, 1494 (1991) [hereinafter Developments]. \textit{But see} BRIAN D. SMITH, \textit{STATE RESPONSIBILITY AND THE MARINE ENVIRONMENT: THE RULES OF DECISION 6-7} (1988) (contending that "material damage" may not need to be proved once offending act and breach have been attributed to state).

\textsuperscript{15} \textit{See generally Developments, supra} note 14, at 1498-1504.

\textsuperscript{16} U.N. CHARTER art. 34 (Statute of the International Court of Justice).

\textsuperscript{17} \textit{See} Abram Chayes & Antonia Chayes, \textit{Adjustment and Compliance Processes in International Regulatory Regimes, in PRESERVING THE GLOBAL ENVIRONMENT 280, 287} (Jessica Tuchman Mathews ed., 1991) (noting that standard provisions in international environmental agreements for voluntary arbitration or settlement before International Court of Justice are seldom invoked and commenting that "[t]he characteristic distaste for judicial settlement is likely to prevail in future international regimes").
conduct in other situations. Finally, the source and content of the law that is to be applied by international tribunals remain unclear.

On the other hand, existing human rights mechanisms (or those which could be established under a progressive human rights regime) present a much more promising vehicle for the protection of environmental victims. Several international human rights tribunals and other bodies may hear, and in some cases provide redress for, the complaints of individuals. Furthermore, existing jurisprudence evidences a trend within the international community to recognize responsibility for the environment as a governmental obligation to protect human rights. Nevertheless, there is little jurisprudence on the rights that are implicated by environmental problems or the standards by which states will be held accountable for violating those rights.

This paper advocates the further development of human rights doctrine to protect environmental victims. Thus, part II discusses prevailing international legal standards that govern states' conduct toward individuals in environmental matters, as well as standards evolving through treaty and customary international law. Part III considers the case of environmental refugees, highlighting the current international legal system's failure to provide them with adequate protection and humanitarian assistance. Finally, part IV identifies the reforms that international human rights bodies should consider in order to provide effective remedies for violations of human and environmental rights. Specifically, it recommends the clarification of international human rights doctrine to protect environmental victims and the adoption of an international convention with standards for preventing human rights abuses associated with environmental harm. The paper concludes by arguing that such an instrument must specify procedures for remedying these abuses.

II. THE USE OF HUMAN RIGHTS DOCTRINE TO PROTECT VICTIMS OF ENVIRONMENTAL ABUSE

Several theories support the contention that government action violates international human rights law if it causes environmental damage that results in harm to an individual or group. One theory holds that environmental damage is actionable whenever a victim can link it to an established or fundamental human right, such as the right to life. A more expansive

18. Developments, supra note 14, at 1502 & n.63. Additional standing requirements further circumscribe the efficacy of the ICJ in the area of international environmental protection. For example, a state must show injury to one of its own legally protected interests, precluding it from seeking to bring action for injuries to shared or global resources. See South West Africa (Eth. v. S. Afr.; Liber. v. S. Afr.), 1966 I.C.J. 4, 47 (July 18) (Second Phase) (holding that no state had standing before the ICJ to charge South Africa's responsibility for breaches of obligations to international community and stating that doctrine of actio popularis "is not known to international law as it stands at present").

19. Developments, supra note 14, at 1504-06.

20. See infra notes 140-147 and accompanying text.

theory holds that environmental damage, at some as yet undefined threshold, is actionable because everyone has the right to live in a healthy environment. The existence of this latter right and its precise content and nature have stirred much debate. A third theory argues for intergenerational equity, based on the notion that each generation is a planetary trustee for succeeding generations. Under this theory, each generation has a moral obligation to protect the environment for immediate benefit and for the benefit of future generations. It is unclear whether this concept conveys an enforceable right.

All three theories yield the conclusion that states have a fundamental duty to refrain from environmentally destructive acts which could injure human beings (again, the threshold for violation is uncertain), and to take affirmative action to prevent environmental harm where possible. Some proponents of these theories argue that, in fulfilling their human rights obligations, states may be obliged to promulgate standards to regulate environmental quality, especially to prevent and control pollution to the air, water, and soil.

These theories are undergoing analysis by the Sub-commission on the Prevention of Discrimination and Protection of Minorities under the mandate of the U.N. Commission on Human Rights. The Sub-commission's investigation has found that international, regional, and national bodies have adopted many instruments that could be used to strengthen environmental protection. Still, whether potential victims can use these documents to
prevent an environmental threat to their lives, health, livelihood, and culture, or to seek redress for injuries, remains uncertain.

Other U.N. bodies have only begun to consider the relationship between human rights and the environment. Although state participants at the U.N. Conference on Environment and Development (UNCED) agreed on the need to protect victims of environmental destruction, the UNCED failed to address environmental human rights in any meaningful way, to develop any programs for U.N. or regional bodies, or to set a future agenda on this issue.\(^9\)

The human rights at issue can be divided into several categories. Section A discusses substantive human rights. When human life is threatened, tribunals could interpret these rights to prevent governments from destroying the environment. Section B examines procedural human rights, which tribunals could interpret to guarantee access to government processes that could affect environmental quality. Finally, section C analyzes the proposed "right to a healthy environment."

A. Substantive Human Rights

Because very few cases have analyzed the human rights implicated by environmental problems, the circumstances under which environmental damage or the threat of damage meets the threshold of a human rights violation remains unclear. The following examination of the rights to life, self-determination, and freedom from apartheid and genocide seeks to illustrate the legal connection between environmental damage and human rights violations.

1. Right to Life

The right to life is a fundamental, non-derogable human right.\(^30\) The Universal Declaration of Human Rights states that "[e]veryone has the right to life, liberty, and security of person."\(^31\) Several instruments attempt to clarify the substance of that right by prohibiting the "arbitrary"\(^32\) or

\(^{29}\) The author participated in the Preparatory Committees for the UNCED, and raised these concerns with governments during negotiations.

\(^{30}\) As a Special Rapporteur of the U.N. Commission on Human Rights noted, the right to life is "a fundamental right in any society, irrespective of its degree of development or the type of culture which characterizes it, since this right forms part of jus cogens in international human rights law. The preservation of this right is one of the essential functions of the State." RAMCHARAN, supra note 21, at 14; see also Ksentini, supra note 28, at 15.


\(^{32}\) See, e.g., Political Covenant, supra note 31, art. 6(1); African Charter on Human and Peoples' Rights, opened for signature June 26, 1981, art. 4, O.A.U. Doc. CAB/LEG/67/3/Rev.5, 9 I.L.M. 58
"intentional" deprival of life. International and regional tribunals have further clarified these instruments, indicating that states may have affirmative duties to protect the lives of those within their jurisdictions.

The International Human Rights Committee has declared that a state's failure to take appropriate measures to prevent the disappearance and killing of an individual violates the right to life under Article 6 of the International Convention on Civil and Political Rights. In Velasquez Rodriguez, the Inter-American Court of Human Rights held that parties to the American Convention on Human Rights have an obligation to ensure the free exercise of the rights recognized under that convention, including the right to life. The obligation implies the duty to organize the governmental apparatus and, in general, all the structures through which public power is exercised, so that they are capable of juridically ensuring the free and full enjoyment of human rights. . . . States must prevent, investigate and punish any violation of the rights recognized by the Convention and, moreover, if possible attempt to restore the right violated and provide compensation as warranted for damages resulting from the violation.

The Court further clarified that the duty to prevent violations "includes all those means of a legal, political, administrative and cultural nature that promote the protection of human rights." In Soering v. United Kingdom, the European Court of Human Rights held that extradition of a defendant to a state under whose jurisdiction he could suffer torture or inhumane and degrading treatment constituted a serious, foreseeable violation of the defendant's human rights. The European Court concluded that given this potential human rights violation, the state could not extradite the defendant to the jurisdiction in question. These decisions support the general principle that states have a positive obligation to prevent situations within their jurisdictions that are likely to imperil human life.

The affirmative duty of states to protect the right to life should logically


37. Soering v. United Kingdom, 161 Eur. Ct. H.R. (ser.1) (1989) (forbidding extradition from United Kingdom to United States to face charges for murder which were punishable by death in United States).

38. See RAMCHARAN, supra note 21, at 6-7, 10 (arguing that jus cogens nature of right to life prescribes that governments be held internationally accountable for not taking all possible measures "to reduce infant mortality and to eliminate famine, malnutrition, and epidemics"); see also Gormley, Legal
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apply to circumstances in which a state’s activities pose life-threatening environmental risks. The few judicial pronouncements on the subject support this conclusion. In a pioneering case involving the indigenous Yanomami Indians, the Inter-American Commission on Human Rights found that environmental degradation can indeed violate the right to life. The Commission found that the Brazilian government had violated this and other human rights by not taking timely and effective measures to prevent environmental harm leading to the loss of life, cultural identity, and property among the Yanomami.39

Unfortunately, this case did not clearly delineate the scope of these rights. The Commission did not analyze the rights in relation to particular events, but only stated sweepingly that the government had violated these rights.40 Thus for now, one can only conclude that human rights doctrine obligates governments to take some measures, as yet undefined, to prevent serious hazards to the lives of indigenous populations from development activities.41

Human rights tribunals should expand this obligation to protect non-indigenous groups. The International Human Rights Committee made a step in this direction when it considered whether a nuclear waste disposal site in Port Hope, Canada, jeopardized the lives of nearby residents.42 Residents had alleged that the 200,000 tons of radioactive waste remaining in Port Hope after a partial clean-up by the government posed serious health risks in violation of Article 6(1) of the International Covenant of Civil and Political Rights.43 Although the Committee did not reach the merits because of jurisdictional defects,44 it observed that the case "raised serious issues with

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39. Yanomami Case, supra note 39, at 33. The Confederación de Nacionalidades Indígenas de la Amazonia Ecuatoriana (CONFENIAE) and the Sierra Club have filed a petition with the Inter-American Commission on Human Rights that tests the legal theories of this case. The petition contends that Ecuador is harming the Huaorani people by allowing oil exploration and related development that will have negative impacts on native lands. See Petition for the Huaorani People at 15, The Huaorani People v. Ecuador, Inter-Am. C.H.R. (June 1, 1990) (on file with author).

40. While the recent groundswell of interest in protecting the endangered ecosystems of indigenous groups has led many states to recognize indigenous rights, the breadth of these rights remains controversial. See infra part II.A.2.


42. See supra note 31 and accompanying text.

43. See supra note 31 and accompanying text.

44. Port Hope Case, supra note 42, at 27. The Committee dismissed the proceeding, because the victims failed to exhaust all of the local remedies within Canada.

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Obligation, supra note 22, at 96-97, 111.

39. Case No. 7615, Inter-Am. C.H.R. 24, 28, 33, OEA/Ser.L/V/11.66, doc. 10 rev. 1 (1985) [hereinafter Yanomami Case]. Government-approved development in the Amazon region caused various life- and culture-threatening harms to the Yanomami population, including their displacement, the break-up of social organization, introduction of prostitution and disease, and destruction of encampments. Id. at 26-27. In its opinion, the Commission recommended that the Brazilian government take numerous health and other protective measures and report to the Commission on its implementation of these measures. Id. at 33-34. See also William A. Shutkin, International Human Rights Law and the Earth: The Protection of Indigenous Peoples and the Environment, 31 VA. J. INT'L L. 479, 489-90, 499 (1991).

40. Yanomami Case, supra note 39, at 33. The Confederación de Nacionalidades Indígenas de la Amazonia Ecuatoriana (CONFENIAE) and the Sierra Club have filed a petition with the Inter-American Commission on Human Rights that tests the legal theories of this case. The petition contends that Ecuador is harming the Huaorani people by allowing oil exploration and related development that will have negative impacts on native lands. See Petition for the Huaorani People at 15, The Huaorani People v. Ecuador, Inter-Am. C.H.R. (June 1, 1990) (on file with author).
regard to the obligation of States parties to protect human life."\(^{45}\)

How the right to life will be interpreted in various environmental contexts remains uncertain.\(^{46}\) The extent of the measures that a government must undertake to prevent human life-threatening environmental damage may depend upon the nature and foreseeability of the harm. The pertinent cases, however scant, are important because they suggest an emerging trend among environmentally-abused victims to invoke human rights doctrine for protection and redress, and the willingness of human rights tribunals to apply this doctrine to cases involving environmental harm.

2. Rights of Indigenous Peoples

From time immemorial, indigenous peoples\(^{47}\) judiciously managed their natural resources for food, shelter, medicine, tools, and cultural enrichment. They lived in productive harmony with the land. Today, "there are over 200 million indigenous people and many of them live in some of the world's most vulnerable ecosystems."\(^{48}\) Oil exploration, mining, deforestation, dam construction, and pollution degrade their environment, placing their cultural heritage — and sometimes their very survival — in peril. Often, indigenous communities are forced to leave their lands and either relocate to impoverished areas on the outskirts of cities or shantytowns, or leave their friends and family to become migrant laborers.\(^{49}\)

International standards for the protection of indigenous peoples are evolving rapidly. The International Labour Organisation's Convention Concerning Indigenous and Tribal Peoples in Independent Countries provides certain guarantees for indigenous peoples:

- Governments shall have the responsibility for developing, with the participation of

\(^{45}\) Id.

\(^{46}\) As legal scholars and activists continue to press international human rights bodies to impose liability upon states for environmental hazards, the right to life and the duties of states to protect this right are likely to become better defined. One scholar has called for imposition of both civil and criminal liability. Ramcharan, supra note 21, at 13-14. But see Gormley, Legal Obligation, supra note 22, at 96.

\(^{47}\) Although no clear definition of the term "indigenous peoples" exists, most scholars agree on several criteria:

- Indigenous peoples are the descendants of the original inhabitants of territories since colonized by foreigners; they have distinct cultures which set them apart from the dominant society; many have, until comparatively recently, had a high degree of control over their development;
- indigenous peoples have a strong sense of self-identity.


\(^{48}\) See Ksentini, supra note 28, at 8.

\(^{49}\) Shutkin, supra note 39, at 490-91.
the peoples concerned, co-ordinated and systematic action to protect the rights of these peoples and to guarantee respect for their integrity. . . . Special measures shall be adopted as appropriate for safeguarding the persons, institutions, property, labour, cultures and environment of the peoples concerned.50 Nevertheless, the special relationship between indigenous people and their environment is not yet formally recognized in a human rights instrument.51 Advocates of indigenous peoples should therefore seek to broaden established rights, such as the rights to self-determination and to freedom from apartheid and cultural genocide.

The right to self-determination is the right of peoples under colonial and alien domination to choose their political status freely and to pursue their economic, social, and cultural development without discrimination.52 In its broadest sense, the right to self-determination encompasses the rights of indigenous peoples to regain, enjoy, and enrich their cultural heritage;53 "to maintain and develop their identities, languages and religions;"54 and "to maintain, protect and have access to sacred sites."55

Regional human rights tribunals may soon begin to recognize the importance of the right to self-determination where environmental resources of indigenous populations are under attack. In the Yanomami Case, the Inter-American Commission on Human Rights stated that international law presently "recognizes the right of ethnic groups to special protection on their use of their own language, for the practice of their own religion, and, in general, for all those characteristics necessary for the preservation of their cultural identity."56 The Commission's determination that Brazil violated the Yanomami's rights to life, liberty, health, residence, and freedom of movement may have amounted to a determination that Brazil violated the

50. ILO Convention 169, supra note 47, arts. 2 & 4. However, states may not adopt measures which are against the wishes of indigenous peoples. Id.
53. ESPIEL, supra note 52, at 8.
54. ILO Convention 169, supra note 47, preamble.
56. Yanomami Case, supra note 39, at 31.
Yanomami's right to self-determination. Since the Commission did not directly address the self-determination question, it remains unclear whether the Commission will interpret self-determination as imposing a duty upon states to protect and preserve the environment when its degradation could affect indigenous peoples. The Commission is currently considering this claim in regard to the circumstances of the Huaorani people of Ecuador.

The International Convention on the Suppression and Punishment of the Crime of Apartheid defines the crime of apartheid as the taking of any measures calculated to prevent a racial group or groups from participation in the political, social, economic and cultural life of the country and the deliberate creation of conditions preventing the full development of such a group or groups, in particular by denying to members of a racial group or groups basic human rights and freedoms.

The international community considers apartheid a crime against humanity, so that freedom from apartheid is *jus cogens* and binding on all nations.

The destruction of tribal heritage and culture may implicate the international crime of apartheid when a government pursues development strategies that intentionally disenfranchise members of indigenous groups on the basis of cultural heritage or that prevent them from participating in decisions regarding their own displacement. International tribunals, however, have yet to consider the environmental rights of indigenous peoples within the framework of apartheid law.

Cultural genocide, or "ethnocide," can result when exploitation of natural resources forces the displacement of indigenous populations. The Draft Indigenous Rights Declaration sets forth the rights of indigenous peoples to protection against "ethnocide," which it defines as "any act which has the aim or effect of depriving [indigenous peoples] of their ethnic characteristics or identity, of any form of forced assimilation or integration, of imposition of foreign life styles and of any propaganda directed against them."

In contrast, the Genocide Convention defines genocide as any one of five types of acts, including those committed with intent to destroy a national, ethnic, racial, or religious group by "deliberately inflicting on the group conditions of life calculated to bring about its physical destruction." Genocide is "contrary to the spirit and aims of the United Nations and condemned by the

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57. See Cline, *supra* note 52, at 624.
58. See *supra* note 40.
civilized world," and is thus *jus cogens*. When ethnocide amounts to genocide, it must be condemned as genocide.

Advocates have argued that in circumstances where partial or full extinction of a people is likely, a government’s deliberate destruction of the environment and cultural heritage of indigenous peoples is a form of genocide. As discussed earlier, the displacement of indigenous groups by development projects can lead to such a break-down in the historic social structure of these groups and to the disintegration of cultural identity and unity, as recognized in the *Yanomami Case*.

3. Other Human Rights

Environmental threats may also violate other human rights, such as the rights to health, livelihood, culture, privacy, and property. In the *Yanomami Case*, for example, the Inter-American Commission on Human Rights not only held that the Brazilian government had violated the right to life, but also stated sweepingly that it had violated the rights to liberty and personal security, residence, movement, and the preservation of health and well-being. These rights are embodied in international instruments such as the Universal Declaration of Human Rights, the International Covenants, and arguably in customary international law. However, neither international human rights bodies nor other tribunals have determined the content or limits of these rights.

One exception is the right to privacy. In *Powell and Rayner*, the European Court of Human Rights held that noise pollution can interfere with one’s right to privacy because it affects the quality of one’s family and home life. The Court, however, found that privacy rights must be balanced

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63. *Id.* at preamble.
64. See Cline, *supra* note 52, at 593.
65. *Id.* at 628.
66. See *supra* note 40 (pending case of Huarani Indians in Ecuador); see also Cline, *supra* note 52, at 594.
67. *Id.* at 33; see also *supra* note 39 and accompanying text.
70. Plaintiffs had claimed that noise from nearby Heathrow airport interfered with their enjoyment of privacy and family life. While the court upheld the government’s decision against the claimants, it did so only after determining that they had a valid privacy interest which had been duly considered by the
against broader community interests. The Court did not rule out the possibility that a state may have a duty under certain circumstances to prevent harm from activities which threaten private life.\footnote{71}

B. Procedural Human Rights: Rights to Information and Participation in Environmental Decisions

Rights to information and political participation are fundamental to the exercise of traditional human rights, because one's survival and well-being depend upon knowledge of environmental risks and the ability to minimize or avoid them. Uninformed communities cannot adequately protect their lives, livelihood, property, cultural heritage, and natural resources; nor can they call for reforms in their government's environmental management policies.\footnote{72} States should be held to an affirmative duty to assess the environmental and public health risks associated with activities under their jurisdiction or control, and to inform those persons potentially affected.

The recognition of such an obligation under human rights doctrine would guarantee a type of due process for persons affected by government-sanctioned harm to the environment. An informed public can prevent the execution of an ill-conceived development project, lobby for the regulation of hazardous facilities, and take similar steps to protect itself from harm.\footnote{73} Moreover, public involvement in environmental management can reduce the risk of political, economic, and cultural conflict that can lead to widespread human rights violations. Open public discussions would help build broader consensus and overcome group differences.\footnote{74}
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This due process would be further strengthened by granting non-state actors the right to participate in intergovernmental decision-making. Such participation by those individuals and communities affected by the outcome of environmental projects will increase the credibility and force of the resulting standards. Given that international environmental laws and policies seek to regulate the behavior of individual non-state actors, increased participation by non-state actors should increase the efficacy of global environmental protection and reduce the incidence of conflict.  

International human rights legal doctrine should therefore recognize the state’s obligation to disclose and to facilitate citizen participation. International bodies and tribunals should interpret the following specific rights to allow access to information and participation in environmental decisions.

1. Freedom of Expression and the Right to Political Participation

The right to free expression is a fundamental human right recognized in many international instruments. It encompasses the right of individuals "to

The experience to date on the successes and failures of programmes and projects points to the need for popular support to sustain activities related to desertification and drought control. But it is necessary to go beyond the theoretical ideal of popular participation and to focus on obtaining actual active popular involvement, rooted in the concept of partnership. This implies the sharing of responsibilities and the mutual involvement of all parties.


75. See Developments, supra note 14, at 1600-01.

Some legal writers contend that the right to political participation encompasses the right to participate in government decisions concerning environmental risks, in the formulation and implementation of environmental policy, and in the development of regulations and laws concerning the environment. These writers also contend that these environmentally-oriented participatory rights have already been established. See, e.g., Gormley, Legal Obligation, supra note 22, at 108-09; Symonides, supra note 25, at 13-15.

77. See, e.g., Universal Declaration, supra note 31, art. 19; Political Covenant, supra note 31, art. 19; European Convention, supra note 33, art. 10; see also The Right to Freedom of Opinion and Expression, U.N. ESCOR, Hum. Rts. Comm’n, Subcomm’n on Prevention and Protection of Minorities,
seek, receive and impart information and ideas through any media regardless of frontiers." Historically, this right has not entailed an obligation of governments to impart information sought by the public. It has, however, recently been interpreted to include the "right of the public to be properly informed." This right should be expanded to include a "right of access" to government-held environmental information where that information would affect the health of a specific individual or group of individuals.

Freedom of expression is a necessary component of the right to political participation. The Political Covenant provides that "[e]very citizen shall have the right and the opportunity . . . [t]o take part in the conduct of public affairs, directly or through freely chosen representatives." For this right to be fully realized, governments must disclose relevant information when citizens request it. Furthermore, in matters which affect fundamental rights, governments should take the initiative to disclose relevant information in a manner reasonably calculated to put the potentially affected parties on actual notice so that those parties may take steps to protect their interests.

The scope of the right to free expression should be expanded and the right to political participation should be well defined. Those persons potentially threatened by the environmental impact of a development project should have a right to access relevant information, and in cases of potentially serious harm, governments should have an obligation to disclose such information in order to place the affected parties on notice.

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78. Universal Declaration, supra note 31, art. 19. The restrictions on this right include those prescribed by law and necessary for national security, public safety, and the protection of the reputation, confidentiality, and the rights of others. Id. art. 19(3).

79. The European Court of Human Rights has interpreted Article 10 of the European Convention "as guaranteeing not only the freedom of the press to inform the public, but also the right of the public to be properly informed," especially where that information relates to public health and safety. Sunday Times v. United Kingdom, Judgment No. 30, 2 Eur. H.R. Rep. 245, ¶ 66 (1979) (Court report). The House of Lords had sought to stop the Sunday Times from publishing an article about the thalidomide tragedy. The Court, recognizing a strong public interest in knowing about precautions the manufacturers took before selling the drug, found a violation of Article 10. It held that restrictions placed on the freedom of the press must be narrowly interpreted and "sufficiently pressing to outweigh the public interest." Id. at ¶ 66.


82. In addition, the right of privacy may encompass a right of access to environmental information and a duty upon states to provide such information. See Malinverni, supra note 80, at 450; Weber, supra note 69, at 182; see also supra note 69 and accompanying text (discussing Powell and Rayner and privacy right in environmental context generally). In the Gaskin case, the European Court found that the European Convention on Human Rights protects a vital interest in receiving information concerning one’s privacy interest (in this case information necessary to understand one’s childhood), but that a state may be justified in withholding that information if necessary to protect the confidentiality of those who submitted it. Gaskin Case, 160 Eur. Ct. H.R. (ser.A) (1989). This decision suggests that an individual may have a right of
2. The Emerging Right to Environmental Information

Historically, international environmental law has been limited to duties that states owe to each other to prevent activities within their territory from causing environmental harm to other states. However, an emergent trend in customary international law recognizes the informational duties that states owe to individuals within and outside their borders. The U.N. Convention on Environmental Impact Assessment in a Transboundary Context embodies this trend. Parties to the Convention must not only establish procedures that permit public participation in environmental impact assessment, but must also prepare extensive documentation on those assessments. The party of origin must provide its own residents and residents of other affected states equal opportunity to participate in environmental impact assessment procedures. The affected states’ residents must be informed of, and be provided with, the opportunity for making comments or objections to the competent authority of the state of origin.

access to information that is of vital concern to the requesting person’s privacy interest and whose disclosure would not violate the confidentiality of other individuals. Together, the Powell and Gaskin cases may stand for the principle that an individual has a right of access to information that concerns an environmental threat to that person’s home life. See Weber, supra note 69, at 182.

This emergent right is distinct from the rights to freedom of expression and political participation discussed at supra notes 77-82 and accompanying text. The instruments listed in infra note 88 evidence this trend.


The documentation must describe the proposed activity and its purpose, reasonable alternatives, the potential environmental impact, mitigation measures, and monitoring and management programs, as well as the predictive methods and assumptions used and uncertainties in compiling the required information. It must also include an outline for monitoring and management programs and a non-technical summary. Id. at app. II.

The party of origin is the party under whose jurisdiction the proposed activity would take place.

Id. art. 2(6). The party of origin must “arrange for distribution of the documentation to the authorities and the public of the affected Party in the areas likely to be affected and for the submission of comments to the competent authority of the Party of origin . . . within a reasonable time before the final decision is taken on the proposed activity.” Id. art. 4 (emphasis added); see also Convention on the Protection of the Environment, Den.-Fin.-Nor.-Swed., Feb. 19, 1974, art. 3, 1092 U.N.T.S. 279, 13 I.L.M. 591 (1974) [hereinafter Nordic Convention] (providing equal access for victims of environmental disputes to courts and proceedings within each state party to a transboundary dispute); Council Recommendation on Implementing a Regime of Equal Right of Access and Non-discrimination in Relation to Transfrontier Pollution, OECD Doc. C(77)28(Final) (May 23, 1977), reprinted in 16 I.L.M. 977 (1977).

Whether individuals may enforce these provisions against offending states is an issue that will arise if and when a state fails to implement the required assessment procedures. Enforcement by individuals seems likely in the European Community, where the European Court of Justice has ruled that individuals may invoke European Community law in national courts. See generally Gerhard Bebr, Community Report, in FEDERATION INTERNATIONALE POI'E LE DROIT EUROPEEN, REMEDIES FOR BREACH OF COMMUNITY LAW 10.1-10.3 (1980) (discussing "direct effects" doctrine). A recent Council Directive supports this conclusion. Council Directive 90/313, 1990 O.J. (L 158) 56 [hereinafter EC Directive] (requiring states
Numerous other international instruments advance a similar governmental obligation to ensure public access to environmental information and decision-making. The most recent of these is the Rio Declaration on Environment and Development which specifies that

(environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.)

Read together, the great number of treaties and international instruments that enshrine this principle evidence an evolving right under customary international law — a right that obligates states to provide the public with information and access to governments’ environmental decisions. This right should be incorporated into human rights doctrine, because it is fundamental to the enjoyment and protection of other human rights, as discussed above.

A related legal issue arises after an environmental disaster occurs. Do states have an obligation to warn all other states affected or potentially affected by an accident causing transboundary environmental harm? If so, what is the extent of that obligation? Although numerous states have entered into bilateral and multilateral agreements for information exchange during environmental accidents, whether such an obligation has been established to ensure that public authorities make information relating to environment available to any inquirer, regardless of whether that person proves direct interest in information).


89. RIO DECLARATION, supra note 12, princ. 10.

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as a principle of customary international law remains unclear. Most commentators do agree, however, that customary law requires states to provide information during nuclear emergencies, indicating an emerging disclosure obligation in cases of serious harm. Furthermore, humanitarian principles may require states to provide information to potential nuclear victims in foreign countries. The International Atomic Energy Agency's guidelines also espouse such an obligation: "Dissemination of information to the public is an important responsibility of the appropriate authorities in each State. Particular arrangements ensuring the necessary co-ordination across international borders should be established." The Nordic Convention on the Protection of the Environment does not limit this obligation to nuclear accidents; rather, it requires that information about environmentally harmful activities be published "in the local newspaper or in some other suitable manner" where necessary to protect public or private interests.

C. The Emerging Right to a Healthy Environment

The growing number of international, regional, and national instruments which mention the right to a healthy environment seem to evidence the evolution of a right to live in a safe environment. Nevertheless, whether such a right exists remains controversial. Furthermore, interested parties have yet to clarify the scope, content, and enforceability of a "right to a healthy environment."

At the UNCED, participating states adopted the non-binding Rio

Exchange of Information Concerning Accidents Capable of Causing Transfrontier Damage, title D, OECD Doc. C(88)84(Final) (July 8, 1988), reprinted in 28 I.L.M. 249, 252 (1989) ("In the event of an accident or imminent threat of an accident capable of causing transboundary damage, the country of the [hazardous] installation shall immediately transmit an emergency warning to the exposed countries.").


94. Nordic Convention, supra note 87, art. 7.


96. However, since the Rio Declaration was developed to reconfirm the Stockholm Declaration, it
Declaration which proclaims: "Human beings are the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature." The Rio Declaration does not specify that an individual has a "right" to live in a healthy environment, as did the Stockholm Declaration twenty years earlier, but rather stipulates that individuals are "entitled" to a healthy life. Whether the latter term is meant to convey something less than a "right" is unclear. Significantly, the Rio Declaration does provide that states should develop national laws regarding liability and compensation for victims of pollution and other environmental damage. Various regional documents also profess the right of people to live in a healthy environment. However, these, too, are general and vague. Many countries have included environmental rights in their constitutions, but these provisions remain largely aspirational and express national goals or intents, rather than justiciable rights.

These instruments evidence the evolution of a substantive right to a healthy environment in international law. States and human rights bodies must clarify the precise nature and content of such a right in order for it to protect people and their environment effectively. Until they do so, procedural could be viewed as part of customary international law. See Gormley, Legal Obligation, supra note 22, at 98 (arguing that Stockholm Declaration constitutes customary international law).


98. STOCKHOLM DECLARATION, supra note 12, princ. 1 (proclaiming a "fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits life of dignity and well-being"); see also Brundtland Legal Principles, supra note 88, princ. 1 (stating that "[a]ll human beings have the fundamental right to an environment adequate for their health and well-being.").

99. RIO DECLARATION, supra note 12, princ. 13.

100. See, e.g., African Charter, supra note 32, art. 24 ("All peoples shall have the right to a generally satisfactory environment favorable to their development."); Protocol of San Salvador, Nov. 14, 1988, art. 11, O.A.S. T.S. No. 69, 28 I.L.M. 156 (1989) ("Everyone shall have the right to live in a healthy environment and to have access to basic public services. . . . The States Parties shall promote the protection, preservation and improvement of the environment."); Draft ECE Charter, supra note 88, princ. 1 ("Everyone has the right to an environment adequate for his general health and well-being."). The Protocol of San Salvador refers to enforcement mechanisms, but the state reporting scheme for rights other than civil and political rights is unlikely to help victims of environmental harm. See Protocol of San Salvador, supra.

101. These are Albania, Algeria, Austria, Bahrain, Belgium, Bolivia, Brazil, Bulgaria, Burma, Chile, China, Colombia, Costa Rica, Czechoslovakia, Ecuador, El Salvador, Ethiopia, Greece, Guatemala, Equatorial Guinea, Guyana, Haiti, Honduras, Hungary, India, Islamic Republic of Iran, Republic of Korea, Mozambique, Namibia, Netherlands, Nicaragua, Nigeria, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Romania, Russian Federation, Spain, Sri Lanka, Sweden, Switzerland, Taiwan, Tanzania, Thailand, Turkey, United Arab Emirates, Vanuatu, Viet-Nam, Yemen, and the former Yugoslavia. See Ksentini, supra note 28, at 5-7 (listing constitutional provisions); WEISS, supra note 24, at 297-327 (same).

102. KISS & SHELTON, supra note 95, at 21-31; cf. Gormley, Legal Obligation, supra note 22, at 85 (arguing right to environment has been established); Symonides, supra note 25, at 7-8 ("The right to a clean, balanced and protected environment is a fundamental one because it is vital for the exercise of other individual rights and duties, including the right to life."). But see Alston, supra note 23, at 608 (debating credibility of declaration of right absent formal process to consider establishment of that new right).
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guarantees, such as those discussed in section B above, may serve as a surrogate protection against environmental harm.¹⁰³

III. THE PLIGHT OF ENVIRONMENTAL REFUGEES

The exploitation and degradation of natural resources has led to the creation of a new refugee phenomenon: "environmental refugees." These are people fleeing natural disasters, such as radical land transformations, the construction of dams and irrigation works, or toxic contamination.¹⁰⁴ Environmental refugees now comprise the largest, as well as the fastest growing, group of displaced persons in the world.¹⁰⁵ Over 135 million people may be at risk of being displaced by severe desertification alone.¹⁰⁶

¹⁰³ Shelley, Right to Environment, supra note 24, at 24-25 (arguing right to environment can be viewed as procedural right, requiring state to adopt procedural guarantees against arbitrary action which could significantly affect environment); see also Shelley, Human Rights, supra note 23, at 117; Kiss & Shelley, supra note 95, at 25-26.

¹⁰⁴ Environmental refugees has been defined as people "forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and/or triggered by people) that jeopardized their existence and/or seriously affected the quality of their life." Essam El-Hinnawi, U.N. Env't Programme, Environmental Refugees 4 (1985). An environmental disruption refers to "any physical, chemical and/or biological changes in the ecosystem (or the resource base) that renders it temporarily or permanently unsuitable to support human life." El-Hinnawi, supra, at 4.

¹⁰⁵ Environmental refugees fall into three broad categories: those displaced temporarily by a natural disaster; those permanently displaced by changes to their subsistence base such as development projects; and those who migrate temporarily or permanently because of environmental degradation affecting their quality of life. Environmental factors cause these persons to migrate both within and across national boundaries. Id. at 4-5.

¹⁰⁶ The author directed an extensive project to document the tragedy of environmental refugees in various regions of the world. These case studies, co-published by the NHI, were submitted to a group of experts organized to assist the U.N. High Commissioner for Refugees, International Organization on Migration, and governments in better understanding the problem and in developing solutions. See Anthony V. Catanese, Universities Field Staff Int'l & Natural Heritage Inst., Haiti's Refugees: Political, Economic, Environmental (Field Staff Reports No. 17, 1990-91); Clarence Maloney, Universities Field Staff Int'l & Natural Heritage Inst., Environmental and Project Displacement of Population in India, Part I: Development and Deracination (Field Staff Reports No. 14, 1990-91) [hereinafter Maloney, Part I]; Clarence Maloney, Universities Field Staff Int'l & Natural Heritage Inst., Environmental and Project Displacement of Population in India, Part II: Land and Water (Field Staff Reports No. 19, 1990-91) [hereinafter Maloney, Part II]; Thomas G. Sanders, Universities Field Staff Int'l & Natural Heritage Inst., Northeast Brazilian Environmental Refugees, Part I: Why They Leave (Field Staff Reports No. 20, 1990-91); Thomas G. Sanders, Universities Field Staff Int'l & Natural Heritage Inst., Northeast Brazilian Environmental Refugees, Part II: Where They Go (Field Staff Reports No. 21, 1990-91); Susan Tamondong-Helin & William Helin, Universities Field Staff Int'l & Natural Heritage Inst., Migration and the Environment: Interrelationships in Sub-Saharan Africa 1 (Field Staff Report No. 22, 1990). The author, along with other non-governmental organizations, has presented testimony on this issue to a U.N. subcommission. See Written Statement Submitted by Human Rights Advocates, U.N. Hum. Rts. Comm'n, Sub-comm'n on Prevention of Discrimination and Protection of Minorities, U.N. GAOR, 44th Sess., Agenda Item 4, U.N. Doc. E/CN.4/Sub.2/1991/NGO/10 (1992). On the refugee problem, see generally Jodi L. Jacobson, Worldwatch Inst., Environmental Refugees: A Yardstick of Habitability (Worldwatch Paper No. 86, 1988); Refugee Policy Group, Conference Report: Migration and the Environment (Jan. 19-22, 1992) (unpublished manuscript, on file with author) [hereinafter RPG, Migration Report].
Although the problem has reached critical proportions, these refugees are among the most vulnerable: they do not fall within the traditional legal definition of "refugee" and thus generally do not qualify for international assistance and protection. Existing laws and institutions must be modified to protect and assist environmental refugees.

A. Causes of Environmental Migration

1. Irrigation and Flood-Control Projects

Large-scale irrigation projects share many of the environmental and human impact problems of the hydro-power dams, discussed in part I. For example, the Narmada Project in India, one of the biggest water development and resettlement projects ever planned, will displace more than one million people in the states of Maharashta and Madhya Pradesh. Nearly two hundred thousand of these people are members of indigenous groups. Although the Maharashta government has promised two hectares of land to all displaced persons over eighteen years of age, insufficient land and infrastructure makes fulfillment of this pledge unlikely. In fact, only five to ten percent of those displaced by this project have received compensation under the rehabilitation program since its institution six years ago. Furthermore, no reliable mechanism exists in India to involve the affected people in project planning or to redress their injuries.

The Volta River dam in Ghana is another example. Resettlement proposals tied to the project changed significantly over the years. Approximately 80,000

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107. See infra notes 129-134, 136 and accompanying text.

108. See K.V. Raju & Clarence Maloney, Environmental Refugees in India 10 (Jan. 1992) (unpublished manuscript, on file with author); see also MALONEY, PART I, supra note 105; MALONEY, PART II, supra note 105.


110. Id. at 10-11, 20 (contending that all land in India "even remotely suitable for agriculture is under the plow"); see also MALONEY, PART I, supra note 105, at 6-7 (contending that government used outdated appraisals for compensation and allotted land already occupied by others or land unsuitable for cultivation).

111. Raju & Maloney, supra note 108, at 19. Because of the lack of an established framework for negotiations between displacees and the government, project authorities often refuse to have anything to do with the oustees' organizations. Many of the oustees' organizations claim that as a result of the government's insincere attitude towards compensation, when the oustees are physically removed, they get compensated a nominal amount and then their grievances are supposed to completely cease.

This attitude of the government has led to a general loss of faith among the displaced persons and further exacerbates the polarization. The media too, often turn partisan, divided along language, communal or political lines.

Id.; see also EDWARD GOLDSMITH & NICHOLAS HILDYARD, THE SOCIAL AND ENVIRONMENTAL EFFECTS OF LARGE DAMS 19-23 (1984) (discussing general insensitivity of governments to needs of peoples displaced by dams).
people were displaced by the dam. Of these, 17,000 immediately opted for a cash settlement and left the area. Another 64,000 moved to new villages; however, a large number soon moved on when they were faced with shortages of housing, cleared land, money, and food.  

2. Desertification

Unsustainable farming practices stemming from overpopulation, poverty, drought, and economic pressures have led to widespread land degradation in various Third World countries. Desertification, for example, affects about 3.6 billion hectares, or about one quarter of the world’s total land area. About half of the people most threatened by desertification live in the Sahel, a semi-arid zone stretching across the entire continent of Africa, from Mauritania in the West to the Horn of Africa in the East. Droughts in the area can last for years, or even decades. Over the past few decades, intensive farming and rapid deforestation have led to massive soil depletion and erosion. Ground cover not cleared for cultivation is harvested for cooking fuel, frequently in violation of local laws. A recent study by the World Conservation Union (IUCN) concluded that, "[a]lternative fuel and building supplies could reduce the pressure on the shrinking forests. But unless those alternatives are available, people in the Horn will not stop cutting wood until the entire region is totally defor-


113. According to U.N. projections, the earth’s population will grow by one billion by the turn of the century. If unchecked, world population would pass ten billion by 2050, with 97% of that growth occurring in developing countries, where arable lands have already become marginal. U.N. DEP’T OF PUBLIC INFORMATION, EARTH SUMMIT IN FOCUS, No. 6, at 2-3, U.N. Doc. DPI/1200-92202 (1991). Population growth and movement interrelate significantly with environmental factors, contributing to natural resource destruction and the creation of environmental refugees; international laws and policies must address the problem of population growth.


116. Debt-laden countries, under pressure to maximize production of commodities for export, frequently overuse fragile soils. WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, FROM ONE EARTH TO ONE WORLD 18 (1987).

117. Managing Fragile Ecosystems, supra note 115, at 5; see also EL-HINNAWI, supra note 104, at 10-13; IUCN, FIGHTING FOR SURVIVAL: INSECURITY, PEOPLE AND THE ENVIRONMENT IN THE HORN OF AFRICA 89-100 (Robert A. Hutchison ed., 1991); UNFPA, supra note 106, at 32-35.

118. TAMONDONG-HELIN & HELIN, supra note 105, at I.

119. Id. at 3. The fuelwood deficit in the region has been estimated at 50%. Id.
This study estimated that "by the year 2010 some 38,000 square kilometres of the Ethiopian highlands will be down to bare rock and a further area of 60,000 square kilometres will have less than 10 centimetres of soil remaining on it." This degradation of land forces the people dependent on it to abandon their agricultural subsistence and relocate to already overpopulated cities nearby, where the influx of additional people will contribute to further land degradation.

3. Policies of International Financial Institutions

International financial organizations contribute to the environmental refugee problem by financing projects that displace populations. Bank policies to mitigate the effects of involuntary displacement\(^\text{122}\) have proven ineffective at preventing the problem, largely because host governments have ignored them.\(^\text{123}\) For example, during the 1980s, the World Bank financed 101 projects that caused the displacement of approximately 1.6 million to 1.8 million people.\(^\text{124}\) The World Bank itself has estimated that between 1.2 million and 2.1 million people are displaced worldwide because of new dam construction alone.\(^\text{125}\) Although it has thus far failed to prevent such displacement, the World Bank has at least acknowledged that displacement "can cause profound distress, disruption of social and productive structures, increased poverty, and environmental damage."\(^\text{126}\)

Recognizing the World Bank's failure to enforce its policies concerning

\(^{120}\) IUCN, *supra* note 117, at 94.

\(^{121}\) *Id.* at 93.

\(^{122}\) The World Bank’s initial resettlement policy called on host governments to avoid or minimize involuntary displacement wherever possible, to encourage community participation in planning and implementing resettlement, to invest sufficient resources to assist resettlers in their efforts to improve or restore their previous living standards, and to compensate displaced persons for their losses at replacement cost. Revised policy guidelines, issued in October 1991, require a resettlement plan for every project that causes involuntary displacement. *WORLD BANK, ANNUAL REPORT 1992* 58-59 (1992). However, the policy remains aimed primarily at mitigating the resettlement impacts rather than affording public participation in the decision-making process. Interview with Owen T. Lammers, Executive Director of International Rivers Network, in Berkeley, C.A. (Feb. 25, 1992); *see also* Letter from Owen T. Lammers, Executive Director of International Rivers Network, to E. Patrick Coady, U.S. Executive Director of the World Bank 1 (June 27, 1991) (on file with author) (arguing that Environmental Assessment Operational Directive must treat public participation as fundamental component of environmental review process, rather than as peripheral issue).

\(^{123}\) *But see* *WORLD BANK, ANNUAL REPORT 1990* 63-67 (1990).

\(^{124}\) Michael M. Cernea, *Involuntary Resettlement: Social Research, Policy, and Planning, in PUTTING PEOPLE FIRST: SOCIOLOGICAL VARIABLES IN RURAL DEVELOPMENT* 188, 192 (Michael M. Cernea ed., 2d ed. 1991). It should be noted, however, that these projects represented less than five percent of the total number of projects approved by the Bank during this period. *Id.*

\(^{125}\) *Id. But see* Raju & Maloney, *supra* note 108, at 203 (estimating higher numbers of persons displaced by dam projects in India alone).

\(^{126}\) *WORLD BANK, WORLD BANK DEVELOPMENT REPORT 59* (1990).
resettlement of people forcibly displaced by large-scale projects, a U.S. Congressional committee threatened to withhold part of the appropriations for the World Bank.\textsuperscript{127} Given the World Bank's poor track record, the approach suggested by the Congressional committee's purse-string threat may offer the most promising option for protecting environmental refugees created by internationally-financed projects.\textsuperscript{128}

B. Legal Protection for Environmental Refugees

The definition of "refugee" in the Convention Relating to the Status of Refugees (Refugee Convention) restricts the scope of protection to those who fear civil or political persecution.\textsuperscript{129} The Refugee Convention defines a refugee as any person who, "owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country."\textsuperscript{130} Because of this restrictive definition, nations who have adopted the Convention have not yet accorded refugee status to environmental migrants.\textsuperscript{131} International organizations established to foster protection and aid for refugees, such as the U.N. High Commissioner for Refugees (UNHCR), must also constrain their activities to addressing the needs of political refugees. In a recent report, a group under the UNHCR noted that there is a need to provide international protection to persons outside the current international legal definition of refugee.\textsuperscript{132} The Refugee

\textsuperscript{127} Congress demanded that the World Bank submit to the U.S. Treasury and to the Senate Appropriations Committee a list of all current projects in which people were being forcibly displaced and the action plans for each project. It also demanded that the Bank seek agreement with the borrowers to ensure that the projects comply with the Bank's resettlement policy by mid-1993. Kasten & Leahy Letter, supra note 123, at 4-5. Finally, it also urged the World Bank to modify its policies so that environmental documents and opportunities for comment are made available to the public. Id. at 5.

\textsuperscript{128} Greater involvement of international human rights bodies and non-governmental organizations (NGOs) could also serve this end.


\textsuperscript{132} The group examined the situation of certain categories of persons seeking asylum and refuge, including internally displaced persons and those forced to leave or prevented from returning to their homes because of human-made disasters, natural or ecological disasters, or extreme poverty. Report of the Working Group on Solutions and Protection, Exec. Comm. of the High Commissioner's Programme, Sub-comm. of the Whole on Int'l Protection, 42nd Sess., at 3, U.N. Doc. EC/SCP/64 (1991) [hereinafter Working Group on Solutions].
Convention's conceptualization of refugees is inadequate today because it ignores the overwhelming number of people whose rights to health, food, and employment are threatened by environmental disasters. A more comprehensive, functional definition of refugee must be developed.133

Two regional groups have defined "refugee" more expansively. The Organization of African Unity's Convention Governing the Specific Aspects of Refugee Problems in Africa (OAU Convention) states that the term applies to every person who, owing to external aggression, occupation, foreign domination or events seriously disturbing public order in either part or the whole of his country of origin or nationality, is compelled to leave his place of habitual residence in order to seek refuge in another place outside his country of origin or nationality.134

If environmental disruptions "seriously disturb public order", those affected by these events may be refugees within the OAU Convention's definition. However, this definition restricts refugee status to those who seek refuge in another country. Those who are internally displaced would not come within the OAU definition of refugee.

Similarly, the Cartagena Declaration, adopted by the Organization of American States, also incorporates an expansive definition of "refugee." It includes in its definition of refugee persons who have fled "their countries because their life, safety or liberty have been threatened by widespread violence, foreign aggression, domestic conflict, massive violation of human rights or other situations that have seriously disturbed public order."135 Significantly, natural disaster is not listed as one of the threats that place environmental migrants within the definition of refugee. Thus, even these more expansive definitions do not protect the nearly twenty million people who have been displaced within their countries because of environmental and other causes.136 The definitions of refugee contained in the OAU Convention and the Cartagena Declaration apply only to persons who have fled their


135. Declaration of Cartegena, para. 3, in Yanomami Case, supra note 39, at 179-80 (approved at Colloquium on International Protection of Refugee in Central America, Mexico and Panama: Legal and Humanitarian Programs, Cartegena, Colombia, Nov. 19-22, 1984); see also Héctor Gros Espiell et al., Principles and Criteria for the Protection of and Assistance to Central American Refugees, Returnees and Displaced Persons in Latin America, 2 Int'l J. Refugee L. 83, 94-96 (1990); Hathaway, supra note 129, at 131 n. 10. This requires an objective examination of the situation in the country and the situation of the particular individual or group of persons. Espiell et al., supra, at 93.

country of origin or nationality, in conformity with existing international legal principles.

Furthermore, international humanitarian law provides little, if any, protection for victims of internal disturbances. 137 These persons consequently have received very little protection and assistance from human rights organizations. 138 In recent years, however, U.N. agencies, non-governmental organizations (NGOs), and foreign governments have experienced moderate success in providing humanitarian assistance despite non-cooperative governments. 139 Environmental refugees can only hope that this trend will continue and that the world community will begin to respond to their plight.

IV. Providing Effective Rights and Remedies

Several key international instruments do not specifically refer to environmental rights. Thus, the definitions of human rights in international instruments should be expanded to include the right to a clean and healthy environment. However, the articulation of rights means little unless accompanied by effective remedies. Therefore, access to human rights tribunals and national courts should be expanded to facilitate the presentation of environmental human rights claims.

A. Broadening Substantive Human Rights Violations to Include Environmental Human Rights

The primary problem with providing a remedy for environmental damage in the existing human rights legal fora is that international human rights instruments do not clearly define environmental rights. Thus, many adjudicatory human rights institutions which can hear claims brought by individuals, such as those discussed below, cannot hear the claims of many environmental victims.

For example, the International Human Rights Committee (IHRC) may only consider issues arising under the International Covenant of Civil and Political Rights (Political Covenant). 140 Thus, a victim would need to demonstrate a

137. It is unclear whether the mandates of international humanitarian organizations allow them to provide assistance to internally displaced persons. RPG, Internally Displaced Persons, supra note 136, at 2. For example, the Executive Committee of the High Commissioner's Programme has indicated that the competence of the U.N. High Commissioner for Refugees does not generally extend to people displaced inside their own countries because of natural or ecological disasters. Working Group on Solutions, supra note 132, at 9.
139. Id. at 8.
140. The IHRC was established under the Political Covenant. Political Covenant, supra note 31, art. 28. It consists of 18 human rights experts, charged with overseeing the implementation of the Covenant. The IHRC may investigate individual complaints against states party to the Optional Protocol.
serious threat to her life from the probability of an environmental disaster, or show actual physical harm, in order to make a claim before the IHRC. A claim concerning environmental damage that injured one's general health, economic stature, or cultural identity would not necessarily fall within the IHRC's jurisdiction. As such, it is uncertain whether the IHRC can effectively serve the needs of many environmental victims. In order for the IHRC to address the claims of all environmental victims, the substantive rights enunciated in the Political Covenant would have to be supplemented with a right to be protected from environmental harm. This may require the development of an additional protocol.

The Commissions and Courts established pursuant to the European and American Conventions review the international human rights embodied in those Conventions, including the rights to life, privacy, and cultural survival. Each of these rights can be asserted to protect victims from environmental harm. Like the Political Covenant, however, these conventions do not provide clearly defined environmental human rights enforceable by individuals. Consequently, like the IHRC, these tribunals may hear complaints from environmental victims only if the victims can demonstrate harm to the human rights defined in these regional conventions.

As these examples demonstrate, the primary inadequacy of the various adjudicatory human rights institutions is that the conventions and instruments under which they operate do not expressly include the right to a clean and healthy environment. Thus, until protocols or conventions are adopted, protection for victims of environmental harm will depend upon the willingness of international and regional human rights bodies and tribunals to interpret existing human rights to achieve the goal of a clean and healthy environment.

141. The IHRC cannot enforce its decisions. Rather, it can only request that a state modify its behavior and provide redress to the victim. Dr. Henn-Jüri Uibopuu, The Internationally Guaranteed Right of an Individual to a Clean Environment 114 (modified text of paper presented at the International Conference on the Law in Protection of the Environment, held at Szombathely, Hungary, Sept. 6-10, 1976, on file with author). The IHRC hopes that public reports identifying an offending state will encourage other states and the public to condemn that government, thus pressuring it to change its behavior.

142. See Gormley, Legal Obligation, supra note 22, at 15-16.

143. The decisions of both the European and American human rights institutions, which occasionally award compensation to victims, are binding on member states. Under the European Convention, for example, the Court may award compensation to the aggrieved party and request the Committee of Ministers to supervise the enforcement of the judgement. See, e.g., Neumeister Case, 17 Eur. Ct. H.R. (ser.A) at 20-21 (1974) (awarding compensation for lawyer's fees necessary to prevent illegal detention); see generally GORMLEY, HUMAN RIGHTS, supra note 22, at 52-53.


145. Some argue that the right to life implicates the right to a healthy environment. See, e.g., Uibopuu, supra note 141, at 106-10.
To facilitate this process, the IHRC and the Inter-American and European Courts and Commissions should (1) identify the rights in the covenants and conventions that may be violated by environmental abuses; (2) specify the limits and content of those rights in protecting environmental victims; and, (3) based upon the foregoing evaluation, investigate environmental human rights abuses of governments.

Furthermore, to best address the needs of all environmental victims, the U.N. Human Rights Commission should draft either a protocol to an existing human rights convention or a new convention that recognizes a fundamental right to a clean and healthy environment and that provides special protections for environmental refugees. The instrument should require governments to (1) ensure the right of all persons to know about potential environmental threats and to effectively participate in all environmental decision-making; (2) evaluate the environmental risks associated with their activities or those that they approve; and (3) disapprove projects or activities that may harm residents, unless they implement mitigating measures developed with citizen input. To be effective, the instrument should provide victims with a right to compensation 146 which can be enforced by an international agency.

B. Modifying Established Human Rights Enforcement Mechanisms

The re-interpretation and expansion of existing human rights should be accompanied by broadening access to human rights institutions and national tribunals. The following sections present several such possible modifications.

1. Modifying Proceedings Before the International Court of Justice

The Statute of the International Court of Justice sets forth restrictive standing requirements. 147 Numerous scholars have proposed expanding this provision to allow individuals to petition and appear as parties before the Court. 148 Given the myriad shortcomings of the international liability

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147. See supra notes 16-17 and accompanying text. By contrast, the Inter-American Commission on Human Rights may consider petitions by individuals, groups, or NGOs, including, in most cases, petitions lodged on behalf of third parties. American Convention, supra note 32, art. 44; see also Shutkin, supra note 39, at 492. The European Commission on Human Rights may also hear individual petitions against states who have declared to recognize the Commission's competence to receive such petitions. European Convention, supra note 33, art. 25. Still, the only remedy available to individual environmental victims in states not party to these conventions is for them to persuade their own government to take up their cause against an offending state.

148. GORMLEY, HUMAN RIGHTS, supra note 22, at 15; Gormley, Legal Obligation, supra note 22,
regime,149 modification of the standing requirements of the ICJ to permit the opportunity for individual petition would afford only marginal gains in protecting individuals from environmental abuses.150 Efforts to expand the role of the ICJ in the protection of the environment would be better directed toward encouraging the Court to adopt the doctrine of actio popularis.

Under actio popularis, states may claim violations of obligations owed to the world community; for example, one state may challenge another’s activities which damage common resources. Although the ICJ has declined to adopt this doctrine,151 more recent evidence suggests that the Court may have reconsidered its position.152 The expansion of the actio popularis doctrine to allow any state to proceed on a claim against another state for degrading the global commons might not only encourage states to challenge other states’ environmental practices, but would also augment the ICJ’s contribution to the development of the corpus of international environmental law.153 Other procedures, as discussed below, are better-suited to address the human rights abuses suffered by individuals and non-state groups because of environmental harm.

2. Modeling Mechanisms on the International Labour Organisation

Procedures similar to those of the International Labour Organisation (ILO) would be desirable for enforcing the individual and collective human rights implicated by natural resource exploitation and degradation. Human rights

149. See supra notes 10-19 and accompanying text.

150. Moreover, the mere fact that the Court and the international community of states have consistently refused to expand the standing requirements to include individuals counsels against emphasizing this approach. The ICJ, it seems, is determined to remain a Court reserved for the resolution of intergovernmental disputes.

151. See supra note 18.


153. See Developments, supra note 14, at 1498, 1502. A similar procedure has met with some success in the context of the International Labor Organization, whereby any member state may file a complaint against another member state’s practices violative of any convention which both states have ratified. In such cases, the Governing Body appoints a Commission of Inquiry, pursuant to Articles 24-26 of the ILO Constitution, to investigate the allegations and to make the findings public, even if the interests of the petitioning state are not "directly" affected. Thus, for example, the government of Ghana challenged Portugal’s behavior with respect to nationals of Angola, Guinea, and Mozambique under the Abolition of Forced Labour Convention. Report of the Commission Appointed Under Article 26 of the Constitution of the International Labour Organization to Examine the Complaint Filed by the Government of Ghana Concerning the Observance by the Government of Portugal of the Abolition of Forced Labour Convention, 1957 (No. 105), 45 I.L.O. OFF. BULL., SUPP II (Apr. 1962). The proceedings were conciliatory in nature and the Commission commended Portugal for its cooperation throughout the investigation. See W. PAUL GORMLEY, THE PROCEDURAL STATUS OF THE INDIVIDUAL BEFORE INTERNATIONAL AND SUPRANATIONAL TRIBUNALS 56-57 (1966).
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scholars continue to applaud the ILO’s mechanisms;\textsuperscript{154} some have urged their applicability specifically to international environmental rights.\textsuperscript{155} Among the most appealing aspects of the ILO system is the provision in the ILO Constitution allowing individuals to petition through "an industrial association of employees or of workers."\textsuperscript{156} Upon receipt of a petition in cases involving protection of trade union freedoms, forced labor, or employment discrimination, a special commission hears the complaint and issues findings and conclusions. The proceedings are conciliatory in nature, and respondent governments have generally been cooperative.\textsuperscript{157} A system modelled on the ILO could be effective in the environmental context, as many regional and international NGOs with expertise in environmental and human rights matters could play a role in representing the concerns of aggrieved victims.

The ILO’s provision for petition by associations may only be invoked by associations that have "recognized standing" in the labor movement. In the environmental context, this requirement could have the perverse effect of favoring only established non-governmental organizations and the causes that they wished to espouse. This could effectively deny representation of the concerns and claims of fledgling and non-traditional associations of peoples.\textsuperscript{158} As the purpose of this requirement is to diminish "frivolous" or politically-motivated claims,\textsuperscript{159} it may be preferable in the environmental context to create a board to screen petitioners.

Finally, members of the ILO are bound not only by the conventions which they have ratified, but also by a "common law" comprised of the ILO Constitution and interpretations thereof, as well as the Conventions and Recommendations promulgated at the International Labour conferences.\textsuperscript{160} This aspect of the ILO system, too, might be desirable for the international environmental regime because it would contribute to the advancement of the corpus of shared obligations and interests of states.

\textsuperscript{154} See, e.g. Richard B. Lillich & Frank C. Newman, International Human Rights: Problems of Law and Policy 385-86 (1979) (noting that ILO has "what many observers regard as the most effective program extant in international human rights implementation").

\textsuperscript{155} See, e.g., Gormley, Human Rights, supra note 22, at 44-45 & 45 n.41 (presenting case for applicability of some aspects of ILO mechanisms to international environmental rights); Thorne, supra note 144, at 340 (same).

\textsuperscript{156} Constitution of the International Labour Organisation, Oct. 9, 1946, art. 23, T.I.A.S. 1868, 15 U.N.T.S. 40, 84; see also Gormley, Legal Obligation, supra note 22, at 102-03.

\textsuperscript{157} See generally Gormley, Procedural Status, supra note 153, at 57-60. In the case of trade union rights, complaints are first screened by the Governing Body. Id. at 59.

\textsuperscript{158} See, e.g., Developments, supra note 14, at 1602-03 (noting related concerns arising from NGO involvement in intergovernmental decision-making processes).

\textsuperscript{159} Thorne, supra note 144, at 340.

\textsuperscript{160} Both of these sources of law are binding upon all Member States and are enforceable pursuant to Articles 24-26 of the ILO Constitution. See Gormley, Human Rights, supra note 22, at 46 ("[T]he significance of the ILO common law is that it is binding on ILO Members without the requirement of ratification. Legal obligations are assumed by the acceptance (or the continuation) of ILO membership.").
3. Utilizing National Tribunals

Domestic courts should be utilized to enforce claims arising under international human rights and environmental law.\textsuperscript{161} People harmed by pollution originating in another state should be allowed to bring claims in the national courts of the polluting state.\textsuperscript{162} The adjudication of such claims in national courts may have the important advantage of providing an enforceable judgment.\textsuperscript{163} However, the effectiveness of this approach would depend on the polluting state’s environmental standards and remedies.\textsuperscript{164}

States may accomplish this by agreement. For example, the Nordic Convention provides access to courts and administrative agencies for foreign victims of transnational pollution.\textsuperscript{165} Moreover, by providing injunctive, as well as compensatory, relief,\textsuperscript{166} the Nordic Convention moves toward a preventative approach to eliminating transfrontier environmental degradation. Similar conventions at the regional level and among states with comparably developed environmental legal orders would further the goals of an individual’s right to redress and international environmental protection.

\begin{itemize}
  \item \textsuperscript{162} Developments, supra note 14, at 1609-10. Some international environmental instruments already recognize the usefulness of such an approach. See, e.g., Brundtland Legal Principles, supra note 88, paras. 13 & 20:
    \begin{quote}
      States shall apply as a minimum at least the same standards for environmental conduct and impacts regarding transboundary natural resources and environmental interferences as are applied domestically. . . . States shall grant equal access, due process and equal treatment in administrative and judicial proceedings to all persons who are or may be affected by transboundary interferences with their use of a natural resource or the environment.
    \end{quote}

    Another candidate for national court enforcement involves the sort of extraterritorial adjudication wherein a national court hears a private claim brought by foreign citizens challenging acts of a corporate entity of that nation having harmful effects abroad. This instance, however, is somewhat more controversial. Developments, supra note 14, at 1611-12, 1632, 1634-35.
  \item \textsuperscript{163} Id. at 1621.
  \item \textsuperscript{164} Id. at 1610. State practice varies. See Symonides, supra note 25, at 16-17 (discussing remedies).

Some states provide for redress when claimants can prove tangible physical or emotional harm from environmental damage, while others provide for a right of action by citizens to enforce environmental protection statutes regardless of whether they can prove physical injury. For example, India’s tort laws in this regard were sufficient to hold Union Carbide liable for damages to the victims of the company’s Bhopal disaster. These laws are based in part upon \textit{Rylands v. Fletcher} and a myriad of codes prescribing liability and remedies for physical injuries resulting from the negligent conduct of others. See generally \textit{Rylands v. Fletcher}, L.R. 3 H.L. 330 (1868); 12 Annual Survey of India Law 42-44 (1985); Symposium, \textit{The Bhopal Tragedy: Social and Legal Issues}, 20 Tex. Int'l L.J. 267 (1985). See STEPHEN C. MCCAFFREY & ROBERT E. LUTZ, \textit{Environmental Pollution and Individual Rights} (1978), for an expansive survey of state procedures for hearing individual claims related to environmental pollution. Note that some states do not provide for any meaningful redress at all. \textit{Id.} at xx.
  \item \textsuperscript{165} See Nordic Convention, supra note 87, art. 3; Uibopuu, supra note 141, at 104.
  \item \textsuperscript{166} Nordic Convention, supra note 87, art. 3 & protocol.
\end{itemize}
V. CONCLUSION

The increasing significance of environmental crises around the world warrants the development of international environmental human rights standards. The governments participating in the U.N. Conference on Environment and Development did not adopt a framework for protecting environmental victims. Therefore, for the present, any meaningful protection must come from within the human rights system. This paper has suggested several ways to reinterpret, expand, and modify existing human rights instruments and procedures to protect victims of environmental abuse. The most effective and well-defined protection would come through the adoption of a new instrument which specifically provides a right to a healthy and safe environment and establishes standards to govern state conduct. Taking these measures will protect the growing numbers of actual and potential environmental victims.