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The Rio Declaration on Environment and Development: Two Steps Forward and One Back, or Vice Versa

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THE RIO DECLARATION ON ENVIRONMENT AND DEVELOPMENT: TWO STEPS FORWARD AND ONE BACK, OR VICE VERSA?

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I. INTRODUCTION

It has now been three years since the United Nations Conference on Environment and Development (UNCED), the so-called "Earth Summit," was held in Rio de Janeiro, Brazil from June 3 to 14, 1992. Both before and immediately after the meeting proper, there seemed to be as many views as there were observers, not all of which could be reconciled with each other. Now that the dust has begun to settle, examining the impact of this historic occasion in light of the accumulating objective evidence of its concrete impact, instead of on the basis of conjecture and speculation, becomes an increasingly viable task.

Rather than undertake that entire enterprise, this Article evaluates the significance of the Earth Summit to the continuing maturation of international environmental law through scrutiny of the Rio Declaration on Environment and Development, one of the principal instruments adopted at UNCED. The Rio Declaration is compared to its predecessor, the Stockholm Declaration on the Human Environment, which resulted from the United Nations

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Conference on the Human Environment held twenty years before Rio. By systematically examining the accretion of precedents from the Stockholm Declaration until the Rio meeting, this Article places both the 1992 Rio and 1972 Stockholm meetings in a larger context that reveals the dynamics of the ongoing development of this area of international law. In particular, a comparison of the texts and contexts of the Stockholm and Rio Declarations reveals tensions, tradeoffs, and ultimately compromise in the later text between the environment and development agendas, a phenomenon that reflects similar atmospherics on the policy level in Rio.

Accordingly, Section II below identifies the function of the Rio Declaration as one of the principal work products from the Earth Summit and as the successor instrument to the earlier Stockholm Declaration. Section III evaluates major portions of the Rio Declaration by reference to precedents that already had contributed to the systematic growth of international environmental law in the twenty years since Stockholm.[1]

II. THE RIO DECLARATION IN THE CONTEXT OF THE STOCKHOLM CONFERENCE AND THE EARTH SUMMIT

The United Nations Conference on the Human Environment (Stockholm Conference), held in Stockholm from June 5 to 16, 1972, generally is considered a major turning point that "marked the

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[1] Not surprisingly, there have been a number of treatments of the Rio Declaration in the legal literature since June of 1992. *See, e.g.*, John Batt & David C. Short, *The Jurisprudence of the 1992 Rio Declaration on Environment and Development: A Law, Science, and Policy Explication of Certain Aspects of the United Nations Conference on the Environment and Development*, 8 J. NAT. RESOURCES & ENVTL. L. 229 (1992-93); Alexandre Kiss, *The Rio Declaration on Environment and Development*, in THE ENVIRONMENT AFTER RIO: INTERNATIONAL LAW AND ECONOMICS 55 (Luigi Campiglio et al. eds., 1994); Jeffrey D. Kovar, *A Short Guide to the Rio Declaration*, 4 COLO. J. INT'L ENVTL. L. & POL'Y 119 (1993); Howard Mann, *The Rio Declaration*, 86 PROC. AM. SOC'Y INT'L L. 405 (1992); Marc Pallemaerts, *International Environmental Law from Stockholm to Rio: Back to the Future?*, 1 REV. EUR. COMM. & INT'L ENVTL. L. 254 (1992), *reprinted in* GREENING INTERNATIONAL LAW 1 (Philippe Sands ed., 1993); Ranee Khooshie Lal Panjabi, *From Stockholm to Rio: A Comparison of the Declaratory Principles of International Environmental Law*, 21 DEN. J. INT'L L. & POL'Y 215 (1993); Ileana M. Porras, *The Rio Declaration: A New Basis for International Co-operation*, 1 REV. EUR. COMM. & INT'L ENVTL. L. 245 (1992), *reprinted in* GREENING INTERNATIONAL LAW, *supra*, at 20; Mukul Sanwal, *Sustainable Development, The Rio Declaration and Multilateral Cooperation*, 4 COLO. J. INT'L ENVTL. L. & POL'Y 45 (1993).

culmination of efforts to place the protection of the biosphere on the official agenda of international policy and law."[2] The Stockholm Conference was widely regarded as one of the best organized and most successful United Nations meetings to that time.[3] Among its more concrete accomplishments, the Stockholm Conference endorsed the creation of a Governing Council for Environmental Programs and an Environment Secretariat headed by an Executive Director. Relying on this recommendation, the United Nations General Assembly established the United Nations Environment Program (UNEP),[4] which is virtually the sole intergovernmental institution whose mission is strictly environmental in nature. Maurice Strong, Secretary-General of the Stockholm Conference, was chosen to serve as UNEP's first Executive Director. More generally, the Stockholm Conference's legacy resulted from the meeting's "identification and legitimization of the biosphere as an object of national and international policy."[5]

The 1992 Earth Summit was strategically structured by its organizers as a successor to the Stockholm Conference.[6] In considering whether to convene an Earth Summit, the United Nations General Assembly noted that the earlier Stockholm

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[2] LYNTON K. CALDWELL, INTERNATIONAL ENVIRONMENTAL POLICY: EMERGENCE AND DIMENSIONS 55 (2d ed. 1990).

[3] *See* WADE ROWLAND, THE PLOT TO SAVE THE WORLD: THE LIFE AND TIMES OF THE STOCKHOLM CONFERENCE ON THE HUMAN ENVIRONMENT 35 (1973) (describing Stockholm as "perhaps the best-documented, best-organized conference ever held by the U.N." to date).

[4] *See* G.A. Res. 2997, U.N. GAOR, 27th Sess., Supp. No. 30, at 43, U.N. Doc. A/8730 (1972), *reprinted in* 12 I.L.M. 433 (1973) (providing institutional and financial arrangements for international environmental cooperation).

[5] CALDWELL, *supra* note 2, at 60.

[6] *See, e.g.*, G.A. Res. 228, § I, ¶ 15(d), U.N. GAOR, 44th Sess., Supp. No. 49, at 153, U.N. Doc. A/44/49 (1990) (deciding to convene UNCED and directing that conference should "promote the further development of international environmental law, taking into account the Declaration of the United Nations Conference on the Human Environment"); UNITED NATIONS ENVIRONMENT PROGRAMME, TWENTY YEARS SINCE STOCKHOLM: 1992 ANNUAL REPORT OF THE EXECUTIVE DIRECTOR v (1993) ("Two major international Conferences have been landmarks in UNEP's history—the United Nations Conference on the Human Environment at Stockholm in 1972 and the United Nations Conference on Environment and Development (UNCED) at Rio in 1992. Twenty years apart, one established UNEP and its programme, the other has strengthened UNEP's mandate and provided a new focus for our agenda."). *See generally* Alexandre S. Timoshenko, *From Stockholm to Rio: The Institutionalization of Sustainable Development*, *in* SUSTAINABLE DEVELOPMENT AND INTERNATIONAL LAW 143 (Winfried Lang ed., 1995).

Conference had recommended a follow-up meeting.[7] Not coincidentally, the timing of UNCED coincided, virtually to the day, with the twentieth anniversary of the Stockholm Conference.[8] The selection of Maurice Strong, Secretary-General of the Stockholm Conference, to serve in the same capacity for UNCED assured further continuity.

The Stockholm meeting produced a conference declaration containing 26 principles and an action plan including 109 recommendations for future implementation at the national and international levels.[9] The Stockholm Declaration generally is regarded as an advisory statement of purpose—so-called "soft" law—in contrast to binding or "hard" legal obligations contained in bilateral or multilateral treaties.[10] In principle, overcoming inertial "least common denominator" results[11] is one of the primary advantages of the nonbinding soft law format. Although not technically

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[7] U.N. GAOR 2d Comm., 43d Sess., Agenda Item 82(g), at 15, U.N. Doc. A/43/915/Add.7 (1988) (discussing resolution identifying convening of UNCED for discussion at next session and "noting that the United Nations Conference on the Human Environment ... recommended that the [General] Assembly convene a second United Nations conference on the subject"), *reprinted in* 19 ENVTL. POL'Y & L. 28 (1989).

[8] *See* Maurice F. Strong, *ECO '92: Critical Challenges and Global Solutions*, 44 J. INT'L AFF. 287, 290 (1991) (Secretary-General of UNCED noting that conference "coincides with the twentieth anniversary of the U.N. conference held in Stockholm in 1972, which elevated environmental issues onto the agenda of the global community").

[9] Declaration of the United Nations Conference on the Human Environment, *adopted* June 16, 1972, U.N. Doc. A/CONF.48/14, *reprinted in* 11 I.L.M. 1416 (1972) [hereinafter Stockholm Declaration]. The leading analysis of the negotiating history of the Stockholm Declaration is Louis B. Sohn, *The Stockholm Declaration on the Human Environment*, 14 HARV. INT'L L.J. 423 (1973).

[10] *See generally* Pierre-Marie Dupuy, *Soft Law and the International Law of the Environment*, 12 MICH. J. INT'L L. 420 (1991) (providing general overview of "soft law" in the international environmental context); Pierre-Marie Dupuy, *Remarks*, 82 PROC. AM. SOC'Y INT'L L. 381 (1988) (discussing concept of "soft-law"). *See also* Peter H. Sand, *UNCED and the Development of International Environmental Law*, 8 J. NAT. RESOURCES & ENVTL. L. 209, 216-17 ("The very success of soft-law instruments in guiding the evolution of contemporary international environmental law has also produced a backlash effect: governments have become wary of attempts at formulating reciprocal principles even when couched in non-mandatory terms, well knowing that 'soft' declarations or recommendations have a tendency to harden over time and to come back to haunt their authors."). *But see infra* note 56 and accompanying text (discussing whether Stockholm Principle 21 has matured into binding customary law).

[11] *See* PETER H. SAND, LESSONS LEARNED IN GLOBAL ENVIRONMENTAL GOVERNANCE 5 (1990) ("Unlike decisions by a national legislature, internationally agreed-upon standards tend to reflect the lowest common denominator—the bottomline.").

binding, soft law documents, depending upon the extent to which they are viewed as authoritative, can be influential in establishing "good practice standards," which may later be codified in binding treaties or may mature into binding customary obligations.

Just as UNCED itself was conceived as the successor to the Stockholm Conference, it was anticipated that an "Earth Charter would be adopted at UNCED to build on the precursor Stockholm Declaration."[12] During the negotiations, agreement on a "readable, understandable, and accessible"[13] statement of fundamental principles proved to be unattainable. Consequently, representatives of participating governments abandoned the title "Earth Charter" in favor of "Rio Declaration on Environment and Development,"[14] an alteration interpreted by some as diminishing the

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[12] Peter H. Sand, *International Law on the Agenda of the 1992 "Earth Summit"*, 3 COLO. J. INT'L ENVTL. L. & POL'Y 343, 346 (1992) ("It is expected that the 1992 Conference will adopt a statement of principles based on those enumerated in the 1972 Stockholm Declaration, and supplemented by other globally agreed upon statements regarding environment and development"); *see also* Strong, *supra* note 8, at 293 (statement of UNCED Secretary-General that Earth Summit was expected to adopt "a declaration or charter of basic principles, building on the declaration of the 1972 conference, to govern our behavior toward each other and toward nature so as to ensure global environmental security"). *See generally* G.A. Res. 228, *supra* note 6, § I, ¶ 15(d) (directing UNCED to examine "the feasibility of elaborating general rights and obligations of States, as appropriate, in the field of the environment, and taking into account relevant existing international legal instruments"). *Cf.* Sohn, *supra* note 9, at 425-26 (describing decision by Stockholm Preparatory Committee to draft "a declaration on the human environment dealing with 'rights and obligations of citizens and Governments with regard to the preservation and improvement of the human environment' "). The plan for future action adopted at UNCED, *Agenda 21*, U.N. Doc. A/Conf.151/4 (1992), *reprinted in* THE EARTH SUMMIT: THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT (UNCED) 125 (Stanley P. Johnson ed., 1993) [hereinafter Johnson], presumably is the analogue of the Stockholm action plan. Two major multilateral conventions also were opened for signature at the Earth Summit: (1) United Nations Framework Convention on Climate Change, May 9, 1992, S. TREATY DOC. NO. 38, 102d Cong., 2d Sess. (1990), *reprinted in* Johnson, *supra*, at 59, 3 AGENDA 21 & THE UNCED PROCEEDINGS 1686 (Nicholas A. Robinson ed., 1992) [hereinafter Robinson], 22 ENVTL. POL'Y & L. 258 (1992), Int'l Env't Rep. (BNA) 21:3901, 31 I.L.M. 851 (1992), *and in* 1 REV. EUR. COMMUNITY & INT'L ENVTL. L. 350 (1992); and (2) Convention on Biological Diversity, May 22, 1992, S. TREATY DOC. NO. 20, 103d Cong., 1st Sess. (1993), *reprinted in* Johnson, *supra*, at 82, Robinson, *supra*, at 1657, 22 ENVTL. POL'Y & L. 251 (1992), Int'l Env't Rep. (BNA) 21:4001, 31 I.L.M. 822 (1992), *and in* 1 REV. EUR. COMMUNITY & INT'L ENVTL. L. 359 (1992).

[13] Mann, *supra* note 1, at 409.

[14] Rio Declaration on Environment and Development, *adopted* June 14, 1992, U.N. Doc. A/CONF.151/5/Rev. 1 (1992) [hereinafter Rio Declaration], *reprinted in* Johnson, *supra* note 12, at 118, Robinson, *supra* note 12, at 1617, 22 ENVTL. POL'Y & L. 268 (1992), 31 I.L.M. 874 (1992), *and in* 1 REV. EUR. COMMUNITY & INT'L ENVTL. L. 348 (1992).

status of the instrument.[15]

Governmental representatives from over 170 nations and heads of state or government from over 100 countries attended the Rio meeting, which has been described as the largest summit-level conference ever.[16] Contrary to the assumptions of some, however, participation at the Stockholm Conference was similarly broad. Representation at Stockholm generally was not at the level of head of state or government, but delegations representing 114 of the then-131 UN member states attended the 1972 meeting.[17] As with the meeting in Brazil, extensive preparatory meetings preceded the Stockholm Conference. The very title of the 1992 meeting juxtaposed environment and development in a manner that invited reconciliation of potentially competing goals. Less well appreciated, perhaps, is that a divergence between industrialized and developing countries over possible conflicts between development and environment agendas also played a significant role in the debate twenty years earlier, although admittedly the profile of that debate was higher in Rio than in Stockholm.[18]

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[15] Kovar, *supra* note 1, at 122-23. The choice of the term "Charter" or "Declaration" did not affect the legal significance of the instrument, which was to be nonbinding whatever its title. Maurice Strong is now Chairman of the Earth Council, which consists of 21 prominent political, business, scientific, and nongovernmental leaders and is headquartered in Costa Rica. One of the goals of the Earth Council is to "[r]evive the efforts during the Earth Summit process to produce an Earth Charter which, along with the UN Charter on Human Rights, will form the basis for an Ombudsman-type function." Earth Council: Inaugural Meeting 11 (1994).

[16] *See, e.g.*, Johnson, *supra* note 12, at 4 (giving attendance figures for Rio Conference).

[17] *See* ROWLAND, *supra* note 3, at 42 n.6. The Soviet Union, Poland, Hungary, and Czechoslovakia boycotted the conference because of a political dispute over the status of East Germany. *See id.* at 39-41. The United Nations Secretary-General and representatives of twelve UN specialized agencies and other intergovernmental organizations also were present. *Id.* at 42 n.6.

[18] *See, e.g.*, Stockholm Declaration, *supra* note 9, pmbl. ¶ 4 ("In the developing countries most of the environmental problems are caused by under-development. Millions continue to live far below the minimum levels required for a decent human existence, deprived of adequate food and clothing, shelter and education, health and sanitation. Therefore, the developing countries must direct their efforts to development, bearing in mind their priorities and the need to safeguard and improve the environment. For the same purpose, the industrialized countries should make efforts to reduce the gap between themselves and the developing countries. In the industrialized countries, environmental problems are generally related to industrialization and technological development."). The 1972 Stockholm Conference was prompted largely by concerns about air pollution, water pollution, and hazardous wastes. The 1992 Rio meeting focussed more on issues of resource conservation,

The drafting history of the Rio Declaration has been set out in some detail elsewhere.[19] Although there had been attempts to identify a universe of proposals for inclusion in the instrument,[20] and major portions of the text had been drafted, there still was no single working text of the proposed declaration as the fourth and final Preparatory Committee (PrepCom) meeting prior to UNCED drew to a close in March 1992. Toward the end of that PrepCom meeting, a small group of representatives of seven industrialized

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biodiversity, deforestation, and ecosystem integrity. Whereas the Stockholm conference tended to serve the purpose of generating awareness about international environmental problems, the Rio meeting emphasized financial and technological issues. Despite these differences, Maurice Strong, Secretary-General for both conferences, emphasizes the continuity between Stockholm and Rio with respect to the role of developing countries:

> At the 1972 Stockholm Conference on the Human Environment, developing countries were deeply concerned that their own overriding need for development and the alleviation of poverty might be prejudiced or constrained by the industrial countries' growing preoccupation with pollution and other forms of environmental deterioration—dilemmas resulting from the same processes of economic growth that have produced such unprecedented progress and prosperity for the industrial world. Some participants from the developing world said that they would welcome pollution if it was a necessary accompaniment to the economic growth that they urgently needed.
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> The environment and development nexus that will be the central theme of the 1992 conference was first articulated at the conceptual level in the seminal meeting of experts and policy makers at Founex, near Geneva, Switzerland in 1971. It provided the intellectual and policy basis for the Stockholm conference.

Strong, *supra* note 8, at 288-89, 291; *see also* CALDWELL, *supra* note 2, at 56 ("Two conflicting viewpoints were present [in Stockholm]. From the perspective of the first, the primary concern of the conference was the human impact on the biophysical environment with emphasis on control of pollution and conservation of resources. The second viewpoint held social and economic development (as perceived by the viewer) as the real issue. To bridge these differences, the concept was advanced that environmental protection was an essential element of social and economic development . . . ."); ROWLAND, *supra* note 3, at 45-82 (describing positions and participation of developing countries in Stockholm).

[19] *See* Kiss, *supra* note 1, at 55-56 (detailing drafting history of Rio Declaration from perspective of President of European Council for Environmental Law); Kovar, *supra* note 1, at 120-22 (U.S. negotiator analyzing drafting history); Porras, *supra* note 1, at 246-47 (observing from perspective of Legal Adviser to Costa Rican delegation to UNCED that "[n]egotiations of the Rio Declaration were, exceeding perhaps those on the financial resources chapter of . . . Agenda 21, the most overtly political of the UNCED process").

[20] *E.g.*, Principles on General Rights and Obligations: Chairman's Consolidated Draft, U.N. Doc. A/CONF.151/PC/WG.III/L.8/Rev.1 (Aug. 30, 1991) (containing 136 separate numbered paragraphs proposed by a wide variety of states).

and seven developing countries elaborated the final text of the Rio Declaration in private, with the direct input of PrepCom chairman Tommy Koh.[21] The PrepCom subsequently adopted that text, which ultimately was approved by the Rio Conference without alteration.

Among the more important way stations on the road from Stockholm to Rio was the World Commission on Environment and Development (WCED or Brundtland Commission). Constituted by the UN General Assembly in 1983, the WCED consisted of twenty-one eminent individuals appointed in their personal capacities. Gro Harlem Brundtland, Prime Minister of Norway, chaired the group. The Commission was charged with "propos[ing] long-term environmental strategies for achieving sustainable development to the year 2000 and beyond."[22] Among other things, the Commission recommended that the United Nations General Assembly "commit itself to preparing a universal Declaration and later a Convention on environmental protection and sustainable development."[23]

Although the term did not originate with the Commission, the WCED's report attempted to define "sustainable development," a concept that permeated the Commission's report and subsequently became the central theme of UNCED and the Rio Declaration:

> Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:
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> [1] the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and

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[21] *See generally* Mann, *supra* note 1, at 408 (discussing negotiation of text and observing that result "largely reflected the [developing countries'] negotiating text").

[22] G.A. Res. 161, § 8(a), U.N. GAOR, 38th Sess., Supp. No. 47, at 131, U.N. Doc. A/38/47 (1984).

[23] WORLD COMM'N ON ENV'T & DEV., OUR COMMON FUTURE 333 (1987).

> [2] the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.[24]

This central premise, which is far from intuitively obvious, is a postulate that has been assumed rather than demonstrated. There is no international consensus on the meaning of "needs," a fundamental component of the definition on which perspectives may vary around the globe. There appears to be little or no empirical evidence to demonstrate that the needs of both current and future generations, however modest they may be, can be met through economic growth while concurrently satisfying the constraint of preserving environmental capacities.[25] This definition of sustainable development, moreover, presents a serious challenge when applied to the operational reality of determining the "sustainability" of a given proposal, whether a discrete infrastructure project, such as a large dam, or a broader development policy or program.[26]

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[24] *Id.* at 43. Despite the World Commission's effort, there still appears to be no consensus definition for the term "sustainable development." *Cf.* Rio Declaration, *supra* note 14, Principle 4 ("In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it."). This passage has been described as "the closest the Rio Declaration comes to a definition of 'sustainable development'." Kovar, *supra* note 1, at 127. This passage, however, imposes less rigorous constraints on development that is sustainable, both in terms of meeting the needs of current and future generations and in conserving environmental integrity, than the Brundtland Commission definition.

[25] *See, e.g.*, John Maddox, *Sustainable Development Unsustainable*, 374 NATURE 305 (1995) (reviewing economist Wilfred Beckerman's book *Small Is Stupid*, which attacks the notion of sustainable development).

[26] *See, e.g.*, Günther Handl, *Controlling Implementation of and Compliance with International Commitments: The Rocky Road from Rio*, 5 COLO. J. INT'L ENVTL. L. & POL'Y 305, 312 (1994) ("The post-UNCED notion of sustainability . . . is . . . subject to mutually incompatible interpretive claims"). The best example of the indeterminacy of the concept of "sustainability" is probably the Global Environment Facility (GEF), established to provide financial support for environmentally beneficial activities and, in particular, to serve as the interim financial institution under the two major multilateral conventions opened for signature at UNCED. *See supra* note 12 (noting conventions opened for signature at UNCED). The GEF operates under the tripartite direction of the World Bank, the United Nations Development Program (UNDP), and UNEP. *See generally* Andrew Jordan, *Paying the Incremental Costs of Global Environmental Protection: The Evolving Role of GEF*, ENVIRONMENT, July-Aug., 1994, at 12 (discussing GEF's structural framework and its past and future role in "global environmental finance"); World Bank, Documents Concerning the

Most American observers judged the Earth Summit a success immediately afterward, although for different reasons. One school of thought focused on the procedural context of the meeting rather than its substantive results: The existence and size of the conference, the high rank of the governmental representatives that attended it, the number and breadth of participating countries, the extent of press coverage, and the degree of attention from the nongovernmental community demonstrated an increased appreciation for the magnitude of environmental problems.[27] Another

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Establishment of the Global Environment Facility, 30 I.L.M. 1735 (1991). Notwithstanding its expressly stated mission of providing financial support for sustainable projects, the GEF has still come under considerable environmental criticism on account of its governance structure and project design. *See, e.g.*, IAN A. BOWLES & GLENN T. PRICKETT, CONSERVATION INTERNATIONAL & NATURAL RESOURCES DEFENSE COUNCIL, REFRAMING THE GREEN WINDOW: AN ANALYSIS OF THE GEF PILOT PHASE APPROACH TO BIODIVERSITY AND GLOBAL WARMING AND RECOMMENDATIONS FOR THE OPERATIONAL PHASE (1994) (assessing approach of GEF during its pilot phase); 2 THE GLOBAL ENVIRONMENT FACILITY: SHARING RESPONSIBILITY FOR THE BIOSPHERE (David Reed ed., 1993) (assessing GEF's approach and reform efforts); GREENPEACE INT'L, THE WORLD BANK'S GREENWASH: TOUTING ENVIRONMENTALISM WHILE TRASHING THE PLANET 8 (1992) ("As long as the World Bank continues to fund environmentally destructive projects, and fails to support a transparent and participatory process, its management of the GEF will amount to nothing more than an expensive and elaborate greenwash."); David Reed, *The Global Environment Facility and Non-Governmental Organizations*, 9 AM. U.J. INT'L L. & POL'Y 191 (1993) (analyzing role of nongovernmental organizations in influencing activities and reforms of GEF); *cf.* Pallemaerts, *supra* note 1, at 261 ("It is not surprising that such a concept [as sustainable development] has received widespread support from leaders of the North and South alike, environmental and Third World movements, international bureaucrats and enlightened managers of financial and economic institutions and structures in both capitalist and socialist countries. This is explained by the artful vagueness which the new paradigm of 'sustainable development' casts upon their respective responsibilities.").

[27] *E.g.*, GARETH PORTER, ENVTL. & ENERGY STUDY INST., THE ROAD FROM RIO: AN AGENDA FOR U.S. FOLLOW-UP TO THE EARTH SUMMIT 1 (1992) (concluding that Rio represented a "remarkable achievement" in light of many barriers that had to be overcome, notwithstanding that concrete product fell "short of what is needed" to ensure sustainable development); Anthony D'Amato, *UNCED: An Observer's View*, AM. SOC. INT'L L. NEWSLETTER, Aug.-Sept. 1992, at 8 (acknowledging that Rio failed to reconcile conflicting goals, but concluding that conference was nonetheless successful because a "consciousness-raising conference was a necessity"); Daniel C. Esty, *Beyond Rio: Trade and the Environment*, 23 ENVTL. L. 387, 388 (1993) ("As time passes, the events at Rio will be much less remembered for the agreements produced and much more remembered for the symbolic emergence of the environment as a global issue of first-order importance."); Peter M. Haas et al., *Appraising the Earth Summit: How Should We Judge UNCED's Success?*, ENVIRONMENT, Oct. 1992, at 6, 7 (arguing that Rio should not be judged by "how many treaties were signed or what specific actions were agreed on"); Robert E. Lutz, *What Happened and Didn't Happen at the Earth Summit*, ENVTL. L., Summer 1992, at 7, 8

strain of opinion identified the Rio Conference as creating an opportunity to address previously underappreciated environmental hazards or as establishing a foundation for innovations in international institutional frameworks.[28] Others took the level of consensus at the meeting, even the modest, least-common-denominator variety, as evidence of success.[29] Curiously, given the widespread recognition of the Stockholm Conference's groundbreaking importance, one consistent theme was UNCED's role as a new or

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(observing that UNCED instruments are of "varying legal value," but that Rio meeting "reached an international understanding about the seriousness of international environmental problems"); Sir Crispin Tickell, *Rio Summit Has Raised Problems That Are Not Going Away*, CLIMATE ALERT, May-June 1992, at 2, 3 (commenting that although the pre-Rio texts were badly drafted, lacked specific commitments, and contained ambiguities regarding financing, Rio focussed attention on sustainable development and increased understanding). *But see* MICHAEL GRUBB ET AL., THE "EARTH SUMMIT" AGREEMENTS: A GUIDE AND ASSESSMENT 23-24 (1993) (concluding that Rio substituted process for specific commitments and observing that "as the culmination of such an extensive process itself, building on the twenty years since the Stockholm Conference and the five years since the Brundtland Commission, the lack of clear policy commitments must be recognized as troubling").

[28] *E.g.*, RICHARD N. GARDNER, NEGOTIATING SURVIVAL: FOUR PRIORITIES AFTER RIO 1 (1992) (claiming that Earth Summit "launched the world into a new era of eco-diplomacy, eco-negotiation, and eco-lawmaking"); GARETH PORTER & JANET WELSH BROWN, GLOBAL ENVIRONMENTAL POLITICS, ch. 4 (rev. ed. forthcoming) (emphasizing commitments in Agenda 21 to negotiate further on issues not previously subject of international regimes, such as overfishing, land-based sources of marine pollution, and pesticide trade); Lee A. Kimball & William C. Boyd, *International Institutional Arrangements for Environment and Development: A Post-Rio Assessment*, 1 REV. EUR. COMM. & INT'L ENVTL. L. 295, 303 (1992) (international institutional arrangements agreed to at Rio established "solid foundation on which to build a new international system"); James G. Speth, *A Post-Rio Compact*, FOREIGN POL'Y, Fall 1992, at 145 ("The greatest accomplishment of the Earth Summit may lie not in the actual commitments . . ., but in the way that event has shaped the international agenda for years to come. It defined the new international values of equity and environment, linked them inseparably, and dramatized how powerfully they affect North-South relations."); Peter S. Thacher, *Evaluating the 1992 Earth Summit—An Institutional Perspective*, 23 SECURITY DIALOGUE 117 (1992) (discussing institutional structures flowing from Rio Conference).

[29] *E.g.*, Nicholas C. Yost, *Rio and the Road Beyond*, ENVTL. L., Summer 1992, at 1, 4 (emphasizing that compromise was reached on most issues despite presence of conflict and disagreement and characterizing Rio Declaration as "carefully crafted reflection of different but converging aspirations"). *But see* Lord Zuckerman, *Between Stockholm and Rio*, 358 NATURE 273, 273-74 (1992) (concluding that lessons from Rio were same as those from Stockholm, namely that national interests differ, national and global environmental problems differ, long-term and short-term environmental issues do not belong together, development in poor nations creates environmental problems, and that "it is a waste of time to try to negotiate on national, international, global, short-term and long-term economic environmental problems as if they constituted a coherent and similar package for all concerned").

renewed starting point for future international cooperation.[30] Many observers, some at the conclusion of the meeting, but increasingly more over time, emphasized the need for diligent follow-up and aggressive implementation.[31] Recently there has been more intense criticism of the lack of post-Rio momentum, at least at the political or rhetorical level.[32]

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[30] *E.g.*, Lutz, *supra* note 27, at 8 (UNCED set the planet on a "new course towards global sustainable development"); Tickell, *supra* note 27, at 3 (Rio "should be seen as a beginning"); William K. Reilly, *Reflections on Rio*, 8 J. NAT. RESOURCES & ENVTL. L. 353, 353 (1992-93) (former Administrator of U.S. Environmental Protection Agency and head of U.S. delegation to UNCED observing that "[t]he purpose of the Rio Conference was to elevate the environment as a priority and to promote greater integration of environmental goals and economic aspirations"); Memorandum from William K. Reilly, Administrator, United States Environmental Protection Agency, to All EPA Employees (July 15, 1992) (observing that Rio Conference "heightened environmental concern worldwide" with "far-ranging impacts beyond the individual agreements"); *cf.* GARDNER, *supra* note 28, at 3-4 (noting that worsening environmental conditions of the last two decades demonstrate that the Stockholm conference had not "fulfilled its purpose," and decision to call Rio Conference indicative of recognition that new actions were required to address these conditions). *But see* Sir Geoffrey Palmer, *The Earth Summit: What Went Wrong at Rio?*, 70 WASH. U. L.Q. 1005, 1028 (1992) (characterizing UNCED as afflicted with "general failure of political will" and asking "[H]ow many new dawns must we endure before real, substantive progress is achieved?"); *cf.* Porras, *supra* note 1, at 245 ("International conferences, regardless of the subject matter, seem predetermined to be characteri[z]ed as 'good beginnings' and to end with an inevitable call for more law or more institutions.").

[31] *E.g.*, Philip Shabecoff, *Post-Rio Blues: Is the U.N. Letting Momentum Slip Away?*, GREENWIRE, July 27, 1992, at 13 (hailing Rio as "one of the finer moments in the 47-year history of the United Nations" because it "attracted intense media attention, captured the attention of public opinion around the world and sent governments back to their capitals with ambitious blueprints for environmentally sustainable development," but warning of developments that threatened to let Rio's momentum "dribble away"); Nicholas A. Robinson, After Earth Summit: Where Do We Go From Here?, Remarks at the Earth in Rebellion Conference 4, 6 (Mar. 1993) (on file with author) (criticizing lack of U.S. initiative and discussing other steps taken to implement Rio commitments).

[32] *E.g.*, Tim Beardsley, *Rio Redux: Suprise! Promises of the Earth Summit Are Still Unmet*, SCI. AM., June 1995, at 36; Robert L. Schiffer, *Fundamental Reappraisal on Earth Summit*, EARTH TIMES, June 15, 1994, at 1, 22 (quoting Jim MacNeill's characterization of sustainable development as a "sickly child struggling for life"); *Earth Summit Vows Broken, Groups Says*, L.A. TIMES, June 2, 1993, at A10 (describing criticism of Rio follow-up by World Wide Fund for Nature-U.K.).

III. THE RIO DECLARATION IN THE CONTEXT OF THE PROGRESSIVE DEVELOPMENT OF INTERNATIONAL ENVIRONMENTAL LAW

The Stockholm Declaration is a forward-looking instrument that was intended to provide a springboard for the future development of international environmental law and policy.[33] One significant piece of evidence for this perspective is Stockholm Principle 22, which declares, "States shall co-operate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction."[34] Quite plainly, the drafters of the

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[33] As one commentator noted, The Stockholm Declaration

> proved to be an authentic "sleeper." Planned originally as a relatively innocuous generalized statement of those principles which were so widely accepted as to provoke little serious argument—a sort of lowest ethical common denominator—it spawned so much controversy that the conference nearly foundered over the attempt to have it accepted.

ROWLAND, *supra* note 3, at 87.

[34] Principle 22 as written is confined to the international law governing liability for damage from transboundary pollution, an area that has not been especially productive in the years since Stockholm. *See, e.g.*, *Developments in the Law—International Environmental Law*, 104 HARV. L. REV. 1484, 1498-1504 (1991) (criticizing "[s]tillborn [r]egime of [i]nternational [l]iability") [hereinafter *Developments in the Law*]. Indeed, Rio Principle 13 encourages further work in this area "in an expeditious and more determined manner." Other portions of the earlier Declaration, however, lend support to a broad conclusion with respect to its forward-looking character. For example, Stockholm Principle 11 states that "appropriate steps should be taken by States and international organizations with a view to reaching agreement on meeting the possible national and international economic consequences resulting from the application of environmental measures." Principle 23 refers to "standards which will have to be determined nationally." Paragraph 7 of the preambular proclamation clearly anticipates further action, both nationally and internationally, in the areas addressed by the subsequent Declaration. Rio Principle 27 is somewhat clearer than the Stockholm Declaration in calling for "the further development of international law in the field of sustainable development." This exhortation, however, introduces yet another ambiguity. It is not clear to what extent "international law in the field of sustainable development" might supplement, complement, overlap, supplant, or supersede the body of existing international environmental law, particularly that developed in the twenty years between Stockholm and Rio. *See generally* Philippe Sands, *International Law in the Field of Sustainable Development: Emerging Legal Principles*, *in* SUSTAINABLE DEVELOPMENT AND INTERNATIONAL LAW, *supra* note 6, at 53 (arguing that international law in field of sustainable development comprises "prior and emerging international law in three fields of international cooperation: economic development, the environment and human rights. Historically, these three subjects have for the most part followed independent paths, and it

Stockholm Declaration anticipated a subsequent development in international law to advance the 1972 Conference's central themes of environmental conservation and preservation, enhancement of the integrity of environmental amenities, and mitigation of adverse environmental effects.

The Brundtland Commission expressly advanced this mandate by forming a subsidiary group of thirteen environmental legal experts appointed in their personal capacities. The Experts Group on Environmental Law was charged not just with codifying existing legal principles, but also with giving "special attention to *legal principles and rules which ought to be in place now or before the year 2000* to support environmental protection and sustainable development within and among all States."[35] Accordingly, the Experts Group produced a text containing twenty-two general principles on such matters as an individual human right to an adequate environment, transboundary pollution, intergenerational equity, environmental impact assessment, international cooperation, exchange of information, notification, and prior consultation. Collectively these principles were intended as elements for a draft convention on environmental protection and sustainable development. The Experts Group clearly stated that some of the principles proposed in that document could not be identified as current customary practice, but instead indicate the direction in which the progressive evolution of international law should be encouraged.

The organizers of UNCED initially conceived the Earth Charter in the tradition of a hortatory, aspirational instrument intended to codify some, and to catalyze the necessary or desirable maturation

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is only with the advent of the concept of sustainable development, endorsed by the international community at UNCED, that they will increasingly be treated in an integrated and interdependent manner."); *cf.* Howard Mann, *Comment on the Paper by Philippe Sands, in id.* at 67 (arguing that the entire body of international law should "be seen as being for sustainable development, rather than having the legal community struggle to define a new, separate or overarching branch of law—international law *of* sustainable development").

[35] EXPERTS GROUP ON ENVTL. LAW OF THE WORLD COMM'N ON ENV'T & DEV., ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT: LEGAL PRINCIPLES AND RECOMMENDATIONS 1 (1987) (chairman's introduction to final report noting the principal guidelines of Experts Group) [hereinafter REPORT OF WCED LEGAL EXPERTS].

of other, international legal norms:[36] "Even though the Earth Charter will necessarily be limited to basic rules of conduct, it offers an opportunity to go beyond the codification of norms already established by customary international law and to espouse some of the more dynamic, forward-looking postulates . . . now emerging in environmental decision-making."[37] Accordingly, the initial expectations for the Rio Declaration were that the instrument establish "good practice standards" by reference to the best and most progressive approaches of the previous twenty years.

The remainder of this Article examines the extent to which the 1992 Rio Declaration accomplishes this aim in eight of the more important areas that both instruments address. Those areas are representative of evolutionary developments between the two declarations: (1) right to environment; (2) transboundary pollution; (3) intergenerational equity; (4) environmental impact assessment; (5) precautionary approaches; (6) cooperation, exchange of information, notification, and prior consultation; (7) trade and the Polluter-Pays Principle; and (8) public participation in environmental decision making.

A. RIGHT TO ENVIRONMENT

The Stockholm Declaration recognizes in Principle 1 the necessity for an environment of minimally acceptable quality as a vehicle to advance other substantive goals: "Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being . . . ."[38] The choice of the word "has" in Principle 1 suggests that

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[36] For this reason, the precise legal characterization of successors to the Stockholm Declaration and precursors to the Rio Declaration is of minimal significance to this analysis. The multilateral treaties, customary norms, and nonbinding declarations and resolutions referenced in this Article might require different analytical treatment one from another in another context. Except where expressly stated otherwise, however, this Article considers each of those authorities only as evidence of the evolution of international environmental policy, which may or may not have legal significance in a particular contextual setting.

[37] Sand, *supra* note 12, at 347-48 (footnotes omitted).

[38] Stockholm Declaration, *supra* note 9, *reprinted in* 11 I.L.M. 1416, 1417 (1972).

this right existed at the time of the instrument's adoption in 1972.[39] The Stockholm Declaration also contains a counterweight in its Principle 11, which states that "[t]he environmental policies of all States should enhance and not adversely affect the present or future development potential of developing countries, nor should they hamper the attainment of better living conditions for all . . . ."[40]

Although Principle 1 of the Rio Declaration obliquely addresses a substantive standard requiring a minimally acceptable environment, that provision stops well short of enunciating such a right. Instead, the Rio Declaration as a whole rejects what can be regarded as a balance in the Stockholm Declaration between a nascent right to environment on the one hand and attention to development imperatives on the other. Instead, Rio Principle 1 provides that human beings "are entitled to a healthy and productive life in harmony with nature." The first sentence of Rio Principle 1, stating that "[h]uman beings are at the center of concerns for sustainable development," implies that people's needs drive environmental policies, such as the preservation of natural resources. Instead of a right to environment, Rio Principle 3 identifies a "right to development [that] must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations."[41] Indeed, by emphasizing the central

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[39] Although the Stockholm Declaration is a nonbinding instrument, its text alternates between hortatory language, as indicated by the word "should," and mandatory requirements, as indicated by "shall" or "must." For instance, Principles 11 (developing countries), 12 (financial resources), 13 (planning), 16 (population), and 24 (bilateral and multilateral cooperation) all use the precatory "should." By contrast, Principles 7 (marine pollution), 22 (cooperation in development of international law), and 25 (international organizations) use the mandatory "shall." One can assume that the drafters of the Stockholm Declaration understood the distinction between these directives and that these differences in wording have some purpose. Significantly, Principle 21, which is widely accepted as customary law, uses the identical verb "to have" in articulating the rights and responsibilities of states with respect to transboundary pollution. *See infra* text accompanying note 56 (discussing Principle 21 as customary international law).

[40] Stockholm Declaration, *supra* note 9, Principle 11.

[41] *See, e.g.*, THE RIGHT TO DEVELOPMENT IN INTERNATIONAL LAW XXV (Subrata Roy Chowdhury et al. eds., 1992) (collecting papers presented at a 1991 conference "focused on the right to development, in particular its ideas and ideology, human rights aspects and implementation in specific areas of international law."). The text of Principle 3 does not clarify whether it refers to an individual human right to development or the right to development as an attribute of states. *Cf.* United Nations Framework Convention on

character of human beings in all decisions about sustainable development, the Rio Declaration as a whole is considerably more anthropocentric than its earlier counterpart, notwithstanding the wording of Principle 1 of the Stockholm Declaration.

Since the Stockholm Conference, the existence and desirability of an individual right to a minimally acceptable environment has been debated with considerable vigor.[42] Some representatives in

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Climate Change, *supra* note 12, art. 3, ¶ 4 ("The [states] Parties have a right to, and should, promote sustainable development."). Similarly, the use of the word "man," at least one interpretation of which has a collective connotation, instead of "each person" in its Principle 1 suggests that the Stockholm Declaration is similarly ambivalent about the individual nature of the right enunciated in that instrument. The formulation of Rio Principle 3 was initially "imposed" by PrepCom Chairman Koh before its acceptance by the group, and the articulation of a right to development elicited a formal interpretive statement from the United States objecting to the existence of such a right and emphasizing that "[t]he United States understands and accepts the thrust of Principle 3 to be that economic development goals and objectives must be pursued in such a way that the development and environmental needs of present and future generations are taken into account." Kovar, *supra* note 1, at 126 (reproducing U.S. interpretive statement); *cf.* text accompanying notes 68-73 *infra* (discussing intergenerational equity). *See generally* Dinah Shelton, *What Happened in Rio to Human Rights?*, 3 Y.B. INT'L ENVTL. L. 75 (1992) (discussing right to environment in international law).

[42] *See, e.g.*, W. Paul Gormley, *The Legal Obligation of the International Community to Guarantee a Pure and Decent Environment: The Expansion of Human Rights Norms*, 3 GEO. INT'L ENVTL. L. REV. 85, 85 (1990) ("The right of private individuals to be guaranteed a decent and safe environment is one of the newer rubrics of human rights law that has been recognized since the 1970s."); Iveta Hodkova, *Is There a Right to a Healthy Environment in the International Legal Order?*, 7 CONN. J. INT'L L. 65, 79-80 (1991) ("At present the necessity of the right itself is not disputed; rather, the differences of opinion concern the problem of how to classify and enforce the right."); James W. Nickel, *The Human Right to a Safe Environment: Philosophical Perspectives on Its Scope and Justification*, 18 YALE J. INT'L L. 281, 282 (1993) ("Considerable controversy exists at present about how widely the language of rights should be used in expressing environmental values and norms."); R.S. Pathak, *The Human Rights System As a Conceptual Framework for Environmental Law*, *in* ENVIRONMENTAL CHANGE AND INTERNATIONAL LAW: NEW CHALLENGES AND DIMENSIONS 205 (Edith B. Weiss ed., 1992) (analyzing conceptual framework of environmental law); Dinah Shelton, *Human Rights, Environmental Rights, and the Right to Environment*, 28 STAN. J. INT'L L. 103, 106 (1991) ("[A]lthough human rights and environmental protection represent separate social values, the overlapping relationship between them can be resolved in a manner which will further both sets of objectives."); Dinah Shelton, *The Right to Environment*, *in* THE FUTURE OF HUMAN RIGHTS PROTECTION IN A CHANGING WORLD: FIFTY YEARS SINCE THE FOUR FREEDOMS ADDRESS, ESSAYS IN HONOR OF TORKEL OPSAHL 197 (Asbjorn Eide & Jan Helgesen eds., 1991) (discussing scope of the right to environment); Melissa Thorme, *Establishing Environment As a Human Right*, 19 DEN. J. INT'L L. & POL'Y 301 (1991) (arguing that legal human right to environment is one way to protect "support system" needed for human life); Henn-Juri Uibopuu, *The Internationally Guaranteed Right of an Individual to a Clean Environment*, *in* HUMAN RIGHTS IN THE WORLD COMMUNITY: ISSUES

Stockholm thought that such a right already existed at that time,[43] although the drafting history of Stockholm Principle 1 and its final consensus formulation suggest otherwise. Nonetheless, an increasingly large number of international instruments in recent years articulate an individual right to environment. For example, the WCED Legal Experts Group identified as its first principle a "fundamental right to an environment adequate for [human] health and well-being."[44] The commentary to this 1986 report states that this right is not yet in existence, but "remains an ideal which must still be realized."[45] The nonbinding Declaration of the Hague, which resulted from an international meeting attended by seventeen heads of state in March 1989, alludes without further elaboration to "the right to live in dignity in a viable global environment."[46] The Banjul Charter of Human and Peoples Rights[47] and the Protocol of San Salvador[48] contain similar passages.

AND ACTION 151, 153 (Richard P. Claude & Burns H. Weston eds., 1989) (arguing that "human rights contain a specific right of an individual to a clean environment"); Jennifer A. Downs, Note, *A Healthy and Ecologically Balanced Environment: An Argument for a Third Generation Right*, 3 DUKE J. COMP. & INT'L L. 351 (1993) (proposing third generation human right to safe environment to fulfil other basic rights already guaranteed in international law); James T. McClymonds, Note, *The Human Right to a Healthy Environment: An International Legal Perspective*, 37 N.Y.L. SCH. L. REV. 583, 633 (1992) ("Various components of the third-generation human right to a healthy environment have emerged under international law"); *cf.* World Charter for Nature, G.A. Res. 7, ¶ 1, U.N. GAOR, 37th Sess., Supp. No. 51, at 17, U.N. Doc. A/37/L.4 and Add. 1 (1982) ("Nature shall be respected and its essential processes shall not be impaired.").

[43] *See* Sohn, *supra* note 9, at 452-53 (discussing status of right to environment in international law at time of Stockholm Declaration).

[44] REPORT OF WCED LEGAL EXPERTS, *supra* note 35, at 38.

[45] *Id.* at 42.

[46] Declaration of the Hague on the Environment, Mar. 11, 1989, ¶ 5, U.N. Doc. A/44/340, E/1989/120, *reprinted in* 28 I.L.M. 1308 (1989), 5 AM. U.J. INT'L L. & POL'Y 567 (1990), 19 ENVTL. POL'Y & L. 78 (1989), 30 HARV. INT'L L.J. 417 (1989), *and in* 12 Int'l Env't Rep. (BNA) 215 (1989).

[47] Banjul Charter on Human and Peoples' Rights, June 27, 1981, art. 24, O.A.V. Doc. CAB/LEG/67/3/Rev.5 (adopted under auspices of Organization of African Unity) (declaring "[a]ll peoples shall have the right to a general satisfactory environment favorable to their development"), *reprinted in* 21 I.L.M. 58, 63 (1982).

[48] Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights (Protocol of San Salvador), Nov. 14, 1988, art. 11, O.A.S.T.S. No. 69, 28 I.L.M. 156, 165 (1989) (adopted under the auspices of Organization of American States) ("(1) Everyone shall have the right to live in a healthy environment and to have access to basic public services[; and] (2) The States Parties shall promote the protection, preservation and improvement of the environment").

The constitutions of a number of States, including Brazil, Chile, Ecuador, Honduras, the Republic of Korea, Nicaragua, Norway, Peru, the Philippines, Portugal, South Africa, and Spain, explicitly pronounce an individual right to a clean and healthy environment.[49] In addition, the constitutions of others, including China, Greece, India, Iran, Namibia, the Netherlands, Panama, Sri Lanka, Sweden, and Thailand, create a related but distinct duty on the part of the state to protect and preserve the environment for the benefit of individuals.[50]

Certainly there are conceptual and practical difficulties in defining, implementing, and enforcing an individual human right to an environment of minimum quality. Even if an international legal right to a minimally acceptable environment were widely acknowledged, the precise content of that right would be very difficult to define and its application to particular cases would be a formidable task. Questions about the justiciability of a human right to environment and appropriate remedies, if any, necessarily

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[49] BRAZ. CONST. ch. VI, art. 225; CHILE CONST. ch. III, art. 19(8); ECUADOR CONST. tit. II, § 1, art. 19(2); HOND. CONST. ch. VII, art. 145; KOREA CONST. ch. II, art. 35; NICAR. CONST. tit. IV, ch. III, art. 60; NOR. CONST. art. 110b; PERU CONST. ch. II, art. 123; PHIL. CONST. art. II, § 16; PORT. CONST. pt. 1, § III, ch. II, art. 66(1); S. AFR. CONST. ch. III, art. 29; SPAIN CONST. ch. III, art. 45(1); *see* EDITH B. WEISS, IN FAIRNESS TO FUTURE GENERATIONS: INTERNATIONAL LAW, COMMON PATRIMONY, AND INTERGENERATIONAL EQUITY app. B at 297 (1989) (collecting constitutional provisions).

[50] P.R.C. CONST. ch. I, art. 26; GREECE CONST. pt. II, art. 24(1); INDIA CONST. pt. 4, art. 48A; IRAN CONST. ch. IV, art. 50; NAMIB. CONST. ch. 11, art. 95(l); NETH. CONST. art. 21; PAN. CONST. ch. VII, art. 114-117; SRI LANKA CONST. ch. VI, art. 27(14); SWED. CONST. ch. I, art. 2; THAIL. CONST. ch. V, § 65. These constitutional provisions are collected in WEISS, *supra* note 49; *see also* Ernst Brandl & Hartwin Bungert, *Constitutional Entrenchment of Environmental Protection: A Comparative Analysis of Experiences Abroad*, 16 HARV. ENVTL. L. REV. 1 (1992) (discussing constitutional provisions of Germany, Austria, Switzerland, the Netherlands, Greece, Spain, Portugal, Turkey, and Brazil, and their judicial enforceability); Richard O. Brooks, *A Constitutional Right to a Healthful Environment*, 16 VT. L. REV. 1063 (1992) (arguing for development of constitutional provisions consistent with principles of modern science that are feasible for adoption and enforcement); Joseph L. Sax, *The Search for Environmental Rights*, 6 J. LAND USE & ENVTL. L. 93 (1990) (collecting various provisions in U.S. state constitutions); Deborah Beaumont Schmidt & Robert J. Thompson, *The Montana Constitution and the Right to a Clean and Healthful Environment*, 51 MONT. L. REV. 411 (1990) (discussing Montana constitutional provisions for a clean environment); Shelton, *supra* note 42, at 104 n.5 (stating that 44 national constitutions contain provisions concerning environmental rights and noting that "virtually every constitution revised or adopted since 1960 has addressed environmental issues.").

arise if such a right is to be enforced by the judiciary.[51] The practical utility of a human right to a minimally adequate environment is not immediately evident, and the right certainly has not been realized in practice in many of the places where it is purportedly guaranteed. But the Rio Declaration, because it does not even approach the question of a substantive individual right to environment or a duty of states to provide a minimally tolerable environment, implicitly rejects such a notion as a matter of principle.

B. TRANSBOUNDARY POLLUTION

Transboundary pollution—the transmission of a physical agent from the territory of one state that causes harm in the territory of another or in the areas beyond national jurisdiction—was one of the principal issues addressed at Stockholm. Presumably because states are the near-exclusive subjects of public international law, transboundary pollution has been a particular focus of international legal norms from the maxim *sic utere tuo ut alienum non laedas*[52] through the Trail Smelter arbitration between the United States

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[51] The constitutions of at least two states that articulate duties on the part of the government to safeguard environmental integrity explicitly establish that those provisions are not enforceable through judicial processes. INDIA CONST., pt. 4, art. 37, *reprinted in* 8 CONSTITUTIONS OF THE COUNTRIES OF THE WORLD 76 (Albert P. Blaustein & Gisbert H. Flanz eds., 1994) [hereinafter CONSTITUTIONS] (declaring that provisions "shall not be enforceable by any court, but the principles therein laid down are nevertheless fundamental in the governance of the country and it shall be the duty of the State to apply these principles in making laws"); SRI LANKA CONST., ch. VI, art. 29 (provisions "do not confer or impose legal rights or obligations, and are not enforceable in any court or tribunal. No question of inconsistency with such provisions shall be raised in any court or tribunal"), *reprinted in* 18 CONSTITUTIONS, *supra*, at 29; *cf.* Robb v. Shockoe Slip Found., 324 S.E.2d 674, 676 n.2, 677 (Va. 1985) (article XI, § 1 of Constitution of Virginia, establishing conservation policy of Commonwealth, "[t]o the end that the people have clean air, pure water, and the use and enjoyment for recreation of adequate public lands, waters, and other natural resources," is non-self-executing and nonjusticiable). *Contra* Minors Oposa v. Secretary of the Dep't of Env't & Natural Resources, 33 I.L.M. 173, 191 (Phil. Sup. Ct. July 30, 1993) (concluding that constitutional right to balanced and healthful ecology is justiciable). *See generally* Mary E. Cusack, Note, *Judicial Interpretation of State Constitutional Rights to a Healthful Environment*, 20 B.C. ENVTL. AFF. L. REV. 173 (1993) (discussing creation and recognition of individual constitutional right to clean environment at state level).

[52] The latin phrase translates: "So use your own property as not to injure that of another." BALLENTINE'S LAW DICTIONARY 1178 (3d ed. 1969).

and Canada.[53]

The Stockholm Declaration addresses transboundary pollution in Principle 21:

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.[54]

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[53] Trail Smelter Case (U.S. v. Can.), 3 R.I.A.A. 1905, 1965 (Apr. 16, 1938 & Mar. 11, 1941). The *Trail Smelter* rule states:

> [U]nder the principles of international law . . . no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes 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.

Id. The *Trail Smelter* rule has also been increasingly widely accepted as a statement of customary international law generally applicable to cases of pollution, including media other than air. *See, e.g.*, 2 RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS LAW OF THE UNITED STATES § 601 reps. note 1 (1987) (noting invocation of *Trail Smelter* rule in later conflicts); ALEXANDRE KISS & DINAH SHELTON, INTERNATIONAL ENVIRONMENTAL LAW 125 (1991) (describing *Trail Smelter* decision as affirming existence of rule of international law forbidding transfrontier pollution); INT'L LAW ASS'N, REPORT OF THE SIXTIETH CONFERENCE HELD AT MONTREAL 160-66 (1983) (resolution concerning legal aspects of environmental conservation and noting scholars' acceptance of *Trail Smelter* rule as rule of international law); Günther Handl, *International Liability of States for Marine Pollution*, 21 CAN. Y.B. INT'L L. 85, 90 n.25 (1983) (noting *Trail Smelter* decision as affirmation of customary international legal obligation that pollution not interfere significantly with other state's use of seas). This view is not universally held, however:

> "[T]o assert categorically that [international environmental] principles have become customary law would require evidence of general state practice and *opinio juris*. Such evidence is only fragmentary. Principle 21 of the Stockholm declaration is, at best, a starting point. On its own terms, it has not become state practice: States generally do not 'ensure that the activities within their jurisdiction do not cause damage' to the environments of others. Nor have governments given any significant indication that they regard this far-reaching principle as binding customary law.

Oscar Schachter, *The Emergence of International Environmental Law*, 44 J. INT'L AFF. 457, 462 (1991).

[54] Stockholm Declaration, *supra* note 9; *see* Sohn, *supra* note 9, at 485-93 (discussing negotiating history of Stockholm Principle 21).

At the Stockholm Conference, both the United States and Canada stated that they regarded Principle 21 as a codification of then-existing customary international law.[55] Although it was framed as a nonbinding exhortation, over time Principle 21 acquired the force of a substantive rule of customary international law and is the only component of the Stockholm Declaration widely regarded to have achieved that status.[56]

Since 1972, Stockholm Principle 21 has been alluded to and incorporated by reference in innumerable international authorities.[57] While most of these instruments reference or quote the

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[55] *See* ROWLAND, *supra* note 3, at 99-100 (quoting statements of both Canada and United States at Stockholm Conference).

[56] *See, e.g.*, 2 RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS LAW OF THE UNITED STATES, *supra* note 53, § 601 reps. note 1 (quoting Principle 21 as general principle of state responsibility for environmental injury); KISS & SHELTON, *supra* note 53, at 130 ("Principle 21 of the Stockholm Declaration, part of a nonbinding text, today is generally recognized as having become a rule of customary international law."); INT'L LAW ASS'N, *supra* note 53, at 165 (noting that negotiations after adoption of Stockholm Declaration indicate customary international law prohibits introduction of transfrontier pollution at level of "serious consequences"); Handl, *supra* note 53, at 90 (stating that Principle 21 reaffirmed an existing customary norm). These substantive requirements of customary international law also contain limitations. For example, the two qualifications to the *Trail Smelter* rule—"when the case is of serious consequence and the injury is established by clear and convincing evidence"—may preclude its application to situations in which the state alleged to be causing transboundary harm claims scientific uncertainty in response. *See, e.g.*, Scott A. Hajost, *International Legal Implications of United States Policy on Acid Deposition*, *in* INTERNATIONAL LAW AND POLLUTION 344, 346 (Daniel B. Magraw ed., 1991) (discussing Principle 21's requirements for liability). Moreover, although the plain meaning of its wording does not necessarily support such a reading, Principle 21's apparently absolute prohibition on transboundary pollution has been interpreted to be qualified by a state's sovereign right to exploit its resources. *See, e.g.*, *id.* at 346-47 ("there must be a balancing between a State's right to act and another State's right not to be affected, on which there is no clear-cut answer"). Other interpretations of the same authorities stress an obligation on the originating state to prevent risks of reasonably foreseeable harm and a duty on the part of the originating state to take measures to abate and prevent transboundary harm commensurate with the magnitude of the potential harm. *E.g.*, REPORT OF WCED LEGAL EXPERTS, *supra* note 35, at 78-80 (discussing prevention and abatement of transboundary environmental pollution).

[57] *E.g.*, Convention on the Transboundary Effects of Industrial Accidents, Mar. 17, 1992, pmbl. ¶ 8, 31 I.L.M. 1330, 1333 (1992) (not in force) (reciting text of Principle 21 verbatim); Vienna Convention for the Protection of the Ozone Layer, Mar. 22, 1985, pmbl. ¶ 2, T.I.A.S. No. 11,097, 26 I.L.M. 1516, 1529 (1987) (referencing Principle 21), *reprinted in* 14 ENVTL. POL'Y & L. 72 (1985), *and in* Int'l Env't Rep. (BNA) 21:3101; Convention on Long-Range Transboundary Air Pollution, Nov. 13, 1979, pmbl. ¶ 5, T.I.A.S. No. 10,541, 18 I.L.M. 1442 (1979) (referencing Principle 21), *reprinted in* ALEXANDRE C. KISS, SELECTED MULTILATERAL TREATIES IN THE FIELD OF THE ENVIRONMENT 519 (1983), 6 ENVTL. POL'Y & L. 104 (1980),

text as adopted in Stockholm, some authorities go further than Principle 21 in articulating a "pure" or "clean" formulation of a substantive obligation to prevent transboundary pollution, omitting the qualifying language asserting states' "sovereign right to exploit their own resources."[58] By contrast, Rio Principle 2 restates

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and in Int'l Env't Rep. (BNA) 21:3001; Recommendation on Principles Concerning Transfrontier Pollution, *adopted* Nov. 14, 1974, O.E.C.D. Doc. C(74)224 at annex part B (incorporating Stockholm Principle 21 by reference), *reprinted in* ORG. FOR ECONOMIC CO-OPERATION & DEV., OECD AND THE ENVIRONMENT 142, 144 (1986) [hereinafter OECD AND THE ENVIRONMENT], 1 ENVTL. POL'Y & L. 44 (1975), *and in* 14 I.L.M. 242, 243 (1975); Draft Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States, Principle 3, U.N. Doc. UNEP/IG.12/2 Annex (1978), 17 I.L.M. 1097, 1098 (1978) (reciting text of Principle 21 verbatim), *approved in* UNEP, Governing Council Decision 6/14, U.N. GAOR, 33d Sess., Supp. 25, at 154, U.N. Doc. A/33/25 (1978), *noted in* G.A. Res. 186, U.N. GAOR, 34th Sess., Supp. 46, at 128, U.N. Doc. A/34/46 (1980). Stockholm Principle 21 was incorporated verbatim into the operative portion of a binding treaty for the first time in the Biodiversity Convention, one of the principal work products emanating from UNCED, in an article entitled merely "Principle" in the context of subject matter that engages transboundary pollution barely at all. Convention on Biological Diversity, *supra* note 12, art. 3. The formulation of that text tellingly omits the "and developmental" embellishment found in the Rio Declaration. Another major UNCED instrument also includes the unmodified text of Principle 21, rendered in quotation marks, as its first "principle/element." Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests, June 13, 1992, ¶ 1(a), 31 I.L.M. 882 (1992). The preamble of the UNCED climate convention, by contrast, recites the Rio Declaration version of the principle. United Nations Framework Convention on Climate Change, *supra* note 12, pmbl. ¶ 8.

[58] The nonbinding Final Act of the Conference on Security and Cooperation in Europe, Aug. 1, 1975, 73 DEP'T ST. BULL. 323 (1975), 14 I.L.M. 1292, 1307 (1975), usually known as the Helsinki Final Act,

> [a]cknowledg[es] that each of the participating States, in accordance with the principles of international law, ought to ensure, in a spirit of co-operation, that activities carried out on its territory do not cause degradation of the environment in another State or in areas lying beyond the limits of national jurisdiction.

Id. The Charter of Economic Rights and Duties of States, which otherwise emphasizes economic development and growth, states only that "[a]ll States have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction." Charter of Economic Rights and Duties of States, G.A. Res. 3281, art. 30, U.N. GAOR, 29th Sess., Supp. No. 31, at 50, U.N. Doc A/9631 (1975), *reprinted in* 14 I.L.M. 251 (1975). Similarly, Article 20, ¶ 1 of the Agreement on the Conservation of Nature and Natural Resources, July 9, 1985, *reprinted in* 15 ENVTL. POL'Y & L. 64, 68 (1985), concluded under the auspices of the Association of South East Asian Nations (ASEAN), provides:

> Contracting Parties have in accordance with generally accepted principles of international law the responsibility of ensuring that

Stockholm Principle 21 with an embellishment that expands this clause, authorizing states "to exploit their own resources pursuant to their own environmental *and developmental* policies."[59]

The addition of the phrase "and developmental" might be interpreted as disrupting and skewing the already delicate balance between the twin clauses juxtaposed in Stockholm Principle 21, and in a manner inconsistent with at least some post-Stockholm sources.[60] Alternatively, one observer commented that the drafters of Rio Principle 2 "simply updated" the Stockholm formulation by clarifying rights of states that are implicit in the earlier text[61] and, indeed, in the international legal regime. After all, a state's right to exploit its resources does not derive from a United Nations-sponsored conference or even the Stockholm Declaration, but instead is an inherent attribute of sovereignty.[62] The Rio Declaration, moreover, preserved the second clause, which addresses a

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> activities under their jurisdiction or control do not cause damage to the environment or the natural resources under the jurisdiction of other Contracting Parties or of areas beyond the limits of national jurisdiction.

Article 194, ¶ 2 of the United Nations Convention on the Law of the Sea, *opened for signature* Dec. 10, 1982, U.N. Doc. A/CONF./62/122 (1982), 21 I.L.M. 1261, 1308 (1982), provides that:

> States shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with this Convention.

However, Article 193 states that "States have the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment." *Id.*, art. 193. The Law of the Sea Convention entered into force on November 16, 1994. Although the United States is not a party to the Convention, it, like other states, has acknowledged that most of the substantive provisions of the Convention other than those dealing with seabed mining codify existing customary international law. *See* President's Statement on United States Oceans Policy, 19 WEEKLY COMP. PRES. DOC. 383 (Mar. 14, 1983), *reprinted in* 83 DEP'T STATE BULL., No. 2075, at 70-71, *and in* 22 I.L.M. 464 (1983) ("[T]he convention also contains provisions with respect to traditional uses of the oceans which generally confirm existing maritime law and practice . . . .").

[59] Rio Declaration, *supra* note 14, Principle 2.

[60] *See, e.g.*, Pallemaerts, *supra* note 1, at 256 (suggesting that Rio Principle 2 is "skillfully masked step backwards").

[61] Kovar, *supra* note 1, at 125.

[62] *See* Sand, *supra* note 10, at 216 (noting that "resource use [is] inherently 'developmental' ").

state' "responsibility" not to cause damage outside its own territory, suggesting that the obligation to refrain from transboundary pollution has not changed.

However this modification might be interpreted, the Rio Declaration clearly altered the text of the earlier principle. And if Stockholm Principle 21 codified customary international law on the day before the Rio conference began, what was customary law on the day after its conclusion?[63] Some might characterize Rio Principle 2 as "instant custom,"[64] a controversial approach whose application to Rio Principle 2 is not entirely clear. In this view, representatives of virtually every state on Earth, including more than a hundred heads of state or government, might be thought to have redirected the development of the international customary law of transboundary pollution when they adopted the Rio Declaration at UNCED.[65] Even if that were the case, this revision still is an

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[63] *See* Mann, *supra* note 1, at 410 ("This may be a situation without precedent in international law: the wording of a text seen as customary law is altered by a subsequent document that may not attain a similar status.").

[64] The International Court of Justice has recognized the potential for the creation of custom arising from widespread adherence to certain multilateral treaties. *See, e.g.*, North Sea Continental Shelf (F.R.G. v. Den./F.R.G. v. Neth.), 1969 I.C.J. 3, at 42, ¶ 73 (Feb. 20). *See generally* ANTHONY D'AMATO, THE CONCEPT OF CUSTOM IN INTERNATIONAL LAW 160-64 (1971) (discussing how treaties generate customary law); Prosper Weil, *Towards Relative Normativity in International Law?*, 77 AM. J. INT'L L. 413, 435-36 (1983) (noting possibility that treaties may generate "instant custom."); Gregory J. Kerwin, Note, *The Role of United Nations General Assembly Resolutions in Determining Principles of International Law in United States Courts*, 1983 DUKE L.J. 876, 892 (noting that many scholars believe "instant custom" is possible through acceptance by states of new norms).

[65] Although the act of agreeing to the reformulation of Stockholm Principle 21 as Rio Principle 2 by representatives of states at UNCED is not itself evidence of state practice with respect to the revised standard, the strength of *opinio juris* as demonstrated by the context of the meeting might be thought to compensate sufficiently to establish the character of Rio Principle 2 as customary law. *See* Frederic L. Kirgis, Jr., *Custom on a Sliding Scale*, 81 AM J. INT'L L. 146, 149 (1987) (stating that practice and *opinio juris* work as sliding scale; thus "a clearly demonstrated *opinio juris* establishes a customary rule with little affirmative showing that governments are consistently behaving in accordance with the rule"). *See generally* OSCAR SCHACHTER, INTERNATIONAL LAW IN THEORY AND PRACTICE 89-90 (1991) (discussing legal effect of United Nations resolutions as "instant custom"). Those authorities that have expressly considered this question have generally concluded that the addition of the words "and development" did not alter existing norms governing transboundary pollution. *E.g.*, Sand, *supra* note 10, at 216 ("Even though the Rio Declaration could hardly be deemed to have brought about an 'instant amendment' of customary law, the UNCED experience highlights the need to clarify processes of change and adjustment for 'hard' and 'soft' rules alike."). At least one major binding convention adopted since UNCED recites in its preamble

abrupt discontinuity in the development of law in this perennially sensitive area, a modification that at least potentially authorizes states to depart from the Stockholm Declaration by overemphasizing resource exploitation at the expense of the environment of foreign states, and an alteration that conflicts with the evolutionary direction of international approaches during the two decades after Stockholm. Whatever the legal effect of this change, given the widespread acceptance and reaffirmance of Principle 21 and, indeed, the numerous documents that have recited it verbatim in the years following the Stockholm Declaration, the only plausible motivation for this modification is a purposeful shift on the part of the drafters of the Rio Declaration in the direction of the development side of the environment/development debate.

In the twenty years since Stockholm, the focus of international environmental law has expanded from an emphasis on bilateral, transboundary pollution to include resource problems in areas completely under national jurisdiction and threats to the global commons other than purely transboundary pollution. The tangible results of the Rio meeting, including binding conventions to preserve biological diversity[66] and to protect the global climate from "greenhouse"-driven warming,[67] are themselves evidence of this trend. This unmistakable evolution renders the deliberate alteration of Stockholm Principle 21 in a contrary direction by the Rio Declaration's drafters even less explicable as a matter of principle.

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the Rio Declaration's Principle 2 verbatim. Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, June 17, 1994, pmbl. ¶ 15, 33 I.L.M. 1328, 1333 (1994) (not in force). Rio Principle 2 is one of the "Elements Which Might Be Included in a Legally Binding Instrument for the Mandatory Application of the Prior Informed Consent Procedure." Report of Second Meeting of the Task Force on Strengthening the Legal Basis of the Amended London Guidelines, Mar. 10, 1994, U.N. Doc. UNEP/PIC/TF.2/4; *see* London Guidelines for the Exchange of Information on Chemicals in International Trade, U.N. Doc. UNEP/WG.155/L.1 Annex I (1987), *adopted* G.C. Dec. 14/27, U.N. GAOR, 42d Sess., No. 25, Supp. at 79, U.N. Doc. A/42/25 (1987) (establishing principle of prior informed consent for chemicals in international trade), *amended*, U.N. Doc. UNEP/PIC/WG.2/4 app. (1989), *adopted as amended* Environmentally Harmful Chemical Substances, Processes and Phenomena of Global Significance, G.C. Dec. 15/30, 44 U.N. GAOR Supp. (No. 25) at 156, U.N. Doc. A/44/25 (1989), *reprinted in* 19 ENVTL. POL'Y & L. 125 (1989).

[66] Convention on Biological Diversity, *supra* note 12.

[67] U.N. Framework Convention on Climate Change, *supra* note 12.

C. INTERGENERATIONAL EQUITY

Notions of intergenerational equity are fundamental to the concept of sustainable development that animates the Rio Declaration.[68] The identification of transgenerational concerns in international instruments, however, long predates the Rio Conference and the widespread use and acceptance of the term "sustainable development." In particular, two principles of the Stockholm Declaration mention intergenerational concerns by name. Stock-

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[68] *See generally* WEISS, *supra* note 49, at 39 (relating principles of intergenerational equity to sustainable development); *cf.* text accompanying note 24 *supra* (defining "sustainable development"). There have been criticisms of the very notion of anticipating the needs of future generations, the environmental services future generations may need or want, and the environmental constraints facing future generations:

> Even if the theory of intergenerational equity correctly resolves the balance between the interests of current and future generations, it does not provide much guidance for measuring future interests. The value of natural resources to each generation depends on how that generation uses them. It is impossible for the current generation to predict how future generations will use such resources because technological advances may dramatically increase the value of some resources and decrease the value of others.
>
> Measuring future interests is also difficult because the premises underlying the standard economic method of discounting future values become problematic. One such premise relates to time preferences: goods now are preferred to goods later. Treating future generations fairly, however, requires that the interests of the present generation *not* be preferred to those of future generations. Another premise relates to the opportunity costs of foregone investment: the use of resources now may produce wealth later. For long-range environmental problems, the possibility that the savings incurred by continued industrial production will result in technological advances and other investments that increase the wealth of future generations is far too speculative to justify the use of a model that yields trivial present values for future benefits. Yet even if the mathematical formula used in the discounting method fails, one cannot completely ignore the opportunity costs of projects involving scientific research and development foregone for the sake of preserving natural resources.

Developments in the Law, *supra* note 34, at 1541 (footnotes omitted). There is, moreover, currently no procedural vehicle for representing the interests of future generations in the international legal system, in which states are the near exclusive subjects of law and individuals of whatever generation have few, if any, rights. *See generally* David A. Wirth, *Reexamining Decision-Making Processes in International Environmental Law*, 79 IOWA L. REV. 769, 770 (1994) ("To be sure, by comparison with states as represented by their governments, individuals and other nonstate actors still play a small role in making, assuring observance of, and settling disputes concerning international environmental law.").

holm Principle 1 declares a "solemn responsibility to protect and improve the environment for present and future generations." Stockholm Principle 2 asserts that natural resources, including air, water, land, flora, and fauna, "must be safeguarded for the benefit of present and future generations." Further, without mentioning future generations as such, Stockholm Principle 5 nonetheless warns against "future exhaustion" of nonrenewable resources. An impressive number of post-Stockholm authorities establish the necessity of preserving natural resources and the environment for the benefit of future generations.[69]

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[69] The following multilateral agreements include express reference to principles of intergenerational equity: Framework Convention on Climate Change, *supra* note 12, art. 3, ¶ 1 ("Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities"); ASEAN Agreement on the Conservation of Nature and Natural Resources, *supra* note 58, pmbl. ¶ 1 (urging parties to "recogniz[e] the importance of natural resources for present and future generations"); Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, pmbl. ¶ 2, Mar. 24, 1983, T.I.A.S. No. 11,085 (stating that contracting parties are "[c]onscious of their responsibility to protect the marine environment of the wider Caribbean region for the benefit and enjoyment of present and future generations"), *reprinted in* 22 I.L.M. 221 (1983); Convention on the Conservation of European Wildlife and Natural Habitats, Sept. 19, 1979, pmbl. ¶ 3, Europe T.S. No. 104 ("wild flora and fauna constitute a natural heritage of aesthetic, scientific, cultural, recreational, economic and intrinsic value that needs to be preserved and handed on to future generations"), *reprinted in* KISS, *supra* note 57, at 509 (1983); Convention on the Conservation of Migratory Species of Wild Animals, June 23, 1979, pmbl. ¶ 2, 19 I.L.M. 15 (1980) ("each generation of man holds the resources of the earth for future generations and has an obligation to ensure that this legacy is conserved and, where utilized, is used wisely"), *reprinted in* KISS, *supra* note 57, at 500; Kuwait Regional Convention for Co-Operation on the Protection of the Marine Environment from Pollution, Apr. 24, 1978, pmbl. ¶ 8, 17 I.L.M. 511 (1978) (recognizing "importance of co-operation and co-ordination of action on a regional basis with the aim of protecting the marine environment of the Region for the benefit of all concerned, including future generations"); Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, pmbl. ¶ 5, May 18, 1977, 16 I.L.M. 88 (1977) ("the use of environment modification techniques for peaceful purposes could improve the interrelationship of man and nature and contribute to the preservation and improvement of the environment for the benefit of present and future generations"), *reprinted in* KISS, *supra* note 57, at 479; Convention on the Conservation of Nature in the South Pacific, June 12, 1976, pmbl. ¶ 6 (providing that contracting parties are "[d]esirous of taking action for the conservation, utilization and development of [natural] resources through careful planning and management for the benefit of present and future generations"), *reprinted in* KISS, *supra* note 57, at 463; Convention for the Protection of the Mediterranean Sea Against Pollution, Feb. 16, 1976, pmbl. ¶ 2, 15 I.L.M. 285, 290 (1976) (contracting parties are "[f]ully aware of their responsibility to preserve [the] common heritage of [the marine environment of the Mediterranean Sea] for the benefit and enjoyment of present and future generations"),

By contrast, Rio Principle 3 provides that "[t]he right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations."[70] Because it is directed at assuring the availability of multiple development options and not conservation of environmental integrity for future generations, Rio Principle 3 appears to be unprecedented. Indeed, depending on the meaning ascribed to the crucial word "fulfilled," this language might be taken to acknowledge trade-offs or conflicts between developmental and environmental goals; of the two, the Rio Declaration directs only the former to

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reprinted in KISS, *supra* note 57, at 448; Convention on International Trade in Endangered Species of Wild Fauna and Flora, Mar. 3, 1973, pmbl. ¶ 1, 27 U.S.T. 1087, 993 U.N.T.S. 243 ("wild fauna and flora . . . must be protected for this and the generations to come"), *reprinted in* 12 I.L.M. 1035 (1973), KISS, *supra* note 57, at 289, *and in* Int'l Env't Rep. (BNA) 21:2101; Convention for the Protection of the World Cultural and Natural Heritage, Nov. 23, 1972, art. 4, 27 U.S.T. 37, 41, 1037 U.N.T.S. 151, 154 (acknowledging that the "duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage . . . situated on its territory, belongs primarily to that State"), *reprinted in* 11 I.L.M. 1358 (1972), *and in* KISS, *supra* note 57, at 276; International Convention for the Regulation of Whaling, Dec. 2, 1946, pmbl. ¶ 1, 62 Stat. 1716, 1716, 161 U.N.T.S. 72, 74 ("[r]ecognizing the interest of the nations of the world in safeguarding for future generations the great nature resources represented by the whale stocks"), *reprinted in* KISS, *supra* note 57, at 67.

Additionally, the following nonbinding instruments acknowledge principles of intergenerational equity: Amazon Declaration, May 25, 1989, ¶ 2, U.N. Doc. A/44/275, E/1989/79 Annex, 28 I.L.M. 1303 (1989) (declaring that signatories are "[c]onscious of the importance of the cultural, economic and ecological heritage of our Amazon regions and of the necessity of using this potential to promote economic and social development of our peoples [and] reiterate that our Amazon heritage must be preserved through the rational use of the resources of the region, so that present and future generations may benefit from this legacy of nature"); World Charter for Nature, *supra* note 42, pmbl. ¶ 9 ("[r]eaffirming that man must acquire the knowledge to maintain and enhance his ability to use natural resources in a manner which ensures the preservation of the species and ecosystems for the benefit of present and future generations"); *see also* REPORT OF WCED LEGAL EXPERTS, *supra* note 35, art. 2, at 42 (specifying in article entitled "Conservation for present and future generations," that "States shall ensure that the environment and natural resources are conserved and used for the benefit of present and future generations"); *cf.* Minors Oposa v. Secretary of the Dep't of Env't & Natural Resources, 33 I.L.M. 173, 185 (Phil. Sup. Ct. July 30, 1993) (concluding that minor plaintiffs may "represent their generation as well as generations yet unborn . . . for themselves, for others of their generation and for the succeeding generations" in class action challenging governmental forest policies).

[70] Rio Declaration, *supra* note 14.

be "fulfilled."[71]

A comparison of the Rio Declaration and the 1975 Charter of Economic Rights and Duties of States demonstrates divergent approaches to questions of intergenerational equity over the course of nearly two decades. The earlier instrument specifies that

> [t]he protection, preservation and enhancement of the environment for the present and future generations is the responsibility of all States. All States shall endeavor to establish their own environmental and developmental policies in conformity with such responsibility. The environmental policies of all States shall enhance and not adversely affect the present and future development potential of developing countries.[72]

Significantly, even this fundamentally economic declaration recognizes the necessity of preserving environmental values in their own right for the benefit of future generations. In the Rio Declaration, the ambiguous phrase "environmental needs" replaces the reference in the charter of Economic Rights and Duties of States to "protection, preservation and enhancement of the environment." Moreover, instead of juxtaposing environment and development as potentially competing priorities as the Rio Declaration does, the Charter implies that national development policies must conform to, and are constrained by, the international environmental obligations of states. Finally, according to the Rio Declaration, environmental goals constrain development imperatives rather than

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[71] *Cf.* Kovar, *supra* note 1, at 126 ("[T]he final text [of Rio Principle 3] preserves the balance between environment and development encapsulated by the concept of sustainable development."). Rio Principle 3 is related to Principle 4, which specifies that "environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it." Reading the two principles together might then lead to the conclusion that the right to development includes both environmental and economic considerations. In any event, in contrast to Principle 3's ambiguous treatment of a substantive right to development, Principle 4 appears to be satisfied by the procedural "consider[ation]" of environmental goals.

[72] Charter of Economic Rights and Duties of States, *supra* note 58, at 50.

the other way around,[73] as in the Charter of Economic Rights and Duties of States.

D. ENVIRONMENTAL IMPACT ASSESSMENT

In the twenty years since the Stockholm Conference, an international consensus has formed over the utility of a methodology known as "environmental impact assessment" (EIA), or "environmental assessment."[74] EIA can be defined as:

> [A] component of a planning process by which environmental considerations are integrated into decision-making procedures for activities that may have adverse environmental effects. The emphasis in EIA is on the collection and analysis of information relating to the environmental consequences of a proposed action. EIA is a process-oriented technique distinct from substantive environmental standards and requirements. The principal purpose of environmental impact assessment is to facilitate informed decision-making through a thorough scrutiny of anticipated environmental effects. With the assistance of this analysis, an informed decision-maker should be able to assess the advisability of proceeding with proposed actions and to modify proposals to eliminate or mitigate their adverse environmental effects.[75]

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[73] *See* Mann, *supra* note 1, at 409 (noting that in Rio Declaration "development was set out as a *precondition* to environmental regulation").

[74] *See* REPORT OF WCED LEGAL EXPERTS, *supra* note 35, at 59-62 (discussing emergence of EIA as principle of customary international law); Nicholas A. Robinson, *International Trends in Environmental Impact Assessment*, 19 B.C. ENVTL. AFF. L. REV. 591, 602 (1992); Alexandre S. Timoshenko, *The Problem of Preventing Damage to the Environment in National and International Law: Impact Assessment and International Consultations*, 5 PACE ENVTL. L. REV. 475, 480 (1988).

[75] David A. Wirth, *International Technology Transfer and Environmental Impact Assessment*, *in* TRANSFERRING HAZARDOUS TECHNOLOGIES AND SUBSTANCES: THE INTERNATIONAL LEGAL CHALLENGE 83, 84 (Günther Handl & Robert E. Lutz eds., 1989) (footnote omitted).

For example, the EIA methodology would be a useful procedural tool to analyze and avoid impacts from transboundary pollution.[76]

Although the precise content of the international legal obligation to carry out an environmental impact assessment varies somewhat from instrument to instrument, the nonbinding UNEP Goals and Principles of Environmental Impact Assessment, a representative international instrument, includes the following elements:[77] (1) preparation of environmental impact assessments for any proposed activity that is likely to significantly affect the environment;[78] (2) examination of environmental effects prior to governmental authorization;[79] (3) consideration of environmental effects at an early stage of the planning process;[80] (4) inclusion of a description of the proposed action, a description of the potentially affected environment, a description of possible alternatives to the proposed action, a description of the environmental impacts of the proposed action and alternatives, and a consideration of mitigating measures;[81] (5) provision for public participation;[82] and (6) a publicly available explanation of the final decision whether to proceed with the proposed project describing how environmental concerns were taken into account.[83] A wide variety of international instruments encourage or mandate the application of the EIA methodology at the national level by reference to internationally harmonized

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[76] *See, e.g.*, Convention on Environmental Impact Assessment in a Transboundary Context, Feb. 25, 1991, U.N. Doc. E/ECE/1250, *reprinted in* 30 I.L.M. 802 (1991) (not in force); *see also* INT'L LAW ASS'N, REPORT OF THE SIXTIETH CONFERENCE HELD AT MONTREAL 157, 174 (1983) (resolution concerning legal aspects of the conservation of the environment; arguing that "the necessity for an environmental assessment is a consequence of [other] substantive and procedural duties" of environmental law); Günther Handl, *The Environment: International Rights and Responsibilities*, 74 PROC. AM. SOC'Y INT'L L. 223, 226 (1980) (arguing that substantive duties to mitigate pollution "might . . . have to be viewed as implying a duty on the part of states to devise domestically a general environmental assessment procedure"); *cf.* Part III.B *supra* (discussing transboundary pollution).

[77] U.N. Doc. UNEP/WG.152/4 Annex III (1987), *reprinted in* 17 ENVTL. POL'Y & L. 36 (1987), *adopted* G.C. Dec. 14/25 (1987), U.N. GAOR, 42d Sess., Supp. No. 25, at 77, U.N. Doc. A/42/25 (1987).

[78] *Id.* at Principle 1.

[79] *Id.*

[80] *Id.*

[81] *Id.* at Principle 4.

[82] *Id.* at Principle 7.

[83] *Id.* at Principle 9.

criteria,[84] to cases of actual or potential pollution of the territory of other states or of areas beyond national jurisdiction,[85] and in

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[84] *E.g.*, Directive on the Assessment of the Effects of Certain Public and Private Projects on the Environment, 1985 O.J. (L 175) 40, *reprinted in* Int'l Env't Rep. (BNA) 131:2201; World Charter for Nature, *supra* note 42, at ¶ 11(c) ("Activities which may disturb nature shall be preceded by assessment of their consequences, and environmental impact studies of development projects shall be conducted sufficiently in advance, and if they are to be undertaken, such activities shall be planned and carried out so as to minimize potential adverse effects."); Recommendation on the Assessment of Projects with Significant Impact on the Environment, *adopted* May 8, 1979, O.E.C.D. Doc. C(79)116, *reprinted in* OECD AND THE ENVIRONMENT, *supra* note 57, at 29, *and in* 5 ENVTL. POL'Y & L. 154 (1979); Recommendation on the Analysis of the Environmental Consequences of Significant Public and Private Projects, *adopted* Nov. 14, 1974, O.E.C.D. Doc. C(74)216, *reprinted in* OECD AND THE ENVIRONMENT, *supra* note 57, at 28; Goals and Principles of Environmental Impact Assessment, *supra* note 77; *see also* REPORT OF WCED LEGAL EXPERTS, *supra* note 35, art. 5, at 58 ("States planning to carry out or permit activities which may significantly affect a natural resource or the environment shall make or require an assessment of their effects before carrying out or permitting the planned activities.").

[85] *E.g.*, Protocol on Environmental Protection to the Antarctic Treaty, *opened for signature* Oct. 4, 1991, art. 8, S. TREATY DOC. NO. 22, 102d Cong., 2d Sess. (1992) (requiring EIA for certain activities undertaken in Antarctic Treaty area), *reprinted in* 30 I.L.M. 1461 (1991) (not in force); Convention on Environmental Impact Assessment in a Transboundary Context, *supra* note 76, art. 2, ¶ 2 (not in force) (requiring establishment of EIA procedures with respect to proposed activities likely to cause "significant adverse transboundary impact"); ASEAN Agreement on the Conservation of Nature and Natural Resources, *supra* note 58, art. 14 ¶ 1, art. 19 ¶ 2(C), art. 20 ¶ 3(a) (requiring that parties shall engage in EIA assessment with regard to cooperative activities, shared resources and "transfrontier environmental effects"); Directive on the Assessment of the Effects of Certain Public and Private Projects on the Environment, *supra* note 84, art. 7; Goals and Principles of Environmental Impact Assessment, *supra* note 77, Principle 12; Recommendation on the Assessment of Projects With Significant Impact on the Environment, *supra* note 84, § I, ¶ 8; Recommendation for Strengthening International Cooperation on Environmental Protection in Frontier Regions, Annex § II, ¶ 3, O.E.C.D. Doc. C(78)77 (requiring EIA on both sides of frontier region), *reprinted in* OECD AND THE ENVIRONMENT, *supra* note 57, at 154, *and in* 17 I.L.M. 1530, 1533 (1978).

A number of agreements addressing marine pollution contain similar requirements. *E.g.*, Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region, June 21, 1985, art. 13, ¶ 2 (requiring contracting parties to assess environmental effects of projects that may cause harm within convention area), *reprinted in* IWONA RUMMEL-BULSKA & SETH OSAFO, 2 SELECTED MULTILATERAL TREATIES IN THE FIELD OF THE ENVIRONMENT 324 (1991); Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, *supra* note 69, art. 12, ¶ 2 (requiring each party to assess potential effects of project on marine environments); United Nations Convention on the Law of the Sea, *supra* note 58, art. 206 (requiring parties to assess activities that may cause substantial pollution or significant and harmful changes to marine environment); Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment, Feb. 14, 1982, art. XI, ¶ 1 (requiring states to "take all necessary measures" to deal with pollution emergencies and reduce resulting damage), *reprinted in* 9

development assistance projects, policies, and programs.[86]

The Stockholm Declaration does not mention EIA, which is an outcome-neutral evaluation of policy and design options, by name. That instrument does, however, specify the need for "planning" in no fewer than seven of its twenty-six principles.[87] For example, Stockholm Principle 15 states that "[p]lanning must be applied to human settlements and urbanization with a view to avoiding adverse effects on the environment and obtaining maximum social, economic and environmental benefits for all." Similarly, Stockholm Principle 17 exhorts that "[a]ppropriate national institutions must be entrusted with the task of planning, managing or controlling the environmental resources of States with the view to enhancing environmental quality." Rio Principle 17 collects these strands and codifies subsequent developments in the following passage: "Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a

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ENVTL. POL'Y & L. 56 (1982); Convention for Co-Operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, Mar. 23, 1981, art. 13, ¶ 2 (obligating states to engage in environmental impact assessment for domestic projects that may pollute convention area), *reprinted in* 20 I.L.M. 746, 750 (1981); Kuwait Regional Convention for Co-Operation on the Protection of the Marine Environment from Pollution, *supra* note 69, art. XI, ¶ a (requiring environmental assessment for any project within contracting states' territories, particularly in coastal areas); *see also* REPORT OF WCED LEGAL EXPERTS, *supra* note 35, art. 16, ¶ 2, at 99 ("When a State has reasonable grounds for believing that planned activities may have [significant impacts, or a significant risk of impacts, on another State or on areas beyond the limits of national jurisdiction], it shall make an assessment of those effects before carrying out or permitting the planned activities."); Int'l Law Comm'n, Draft Articles on International Liability for Injurious Consequences Arising out of Acts Not Prohibited by International Law, art. 12, U.N. GAOR, 49th Sess., Supp. No. 10, at 384, U.N. Doc. A/49/10 (1994) ("Before taking a decision to authorize an activity [capable of causing transboundary harm], a State shall ensure that an assessment is undertaken of the risk of such activity.").

[86] *E.g.*, WORLD BANK, OPERATIONAL DIRECTIVE NO. 4.01: ENVIRONMENTAL ASSESSMENT (Oct. 1991) (establishing World Bank policy and procedure for environmental assessment); INT'L FIN. CORP., ENVIRONMENTAL ANALYSIS AND REVIEW OF PROJECTS (Sept. 1993) (directive concerning content of environmental analysis of projects financed by the corporation); Recommendation on Measures Required to Facilitate the Environmental Assessment of Development Assistance Projects and Programs, *adopted* Oct. 23, 1986, O.E.C.D. Doc. C(86)26 (recommending "formal adoption of an environmental assessment policy" for development assistance programs); Recommendation on Environmental Assessment of Development Assistance Projects and Programs, *adopted* June 20, 1985, O.E.C.D. Doc. C(85)104 (recommending consideration of environmental impact in development assistance projects), *reprinted in* OECD AND THE ENVIRONMENT, *supra* note 57, at 30.

[87] Stockholm Declaration, *supra* note 9, Principles 2, 4, 12, 13, 14, 15, 17.

significant adverse impact on the environment and are subject to a decision of a competent national authority."[88]

Although the Rio Declaration contains very general language that apparently did not permit the elaboration of specific EIA standards, three aspects of Principle 17's text deserve mention. First, the phrase "as a national instrument" implies a universal standard, applicable to undertakings strictly within domestic jurisdiction as well as those, such as transboundary pollution, that would be more prone to rise to the level of international concern. Second, the phrase "likely to have a significant impact," and the word "likely" in particular, suggest a somewhat higher threshold before the EIA obligation attaches than some precursor instruments.[89] Last,

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[88] Rio Declaration, *supra* note 14, Principle 17.

[89] *E.g.*, ASEAN Agreement on the Conservation of Nature and Natural Resources, *supra* note 58, art. 14, ¶ 1 (requiring application of EIA methodology for "any activity which may significantly affect the natural environment"); Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region, *supra* note 85, art. 13, ¶ 2 (requiring each party to "assess, within its capabilities, the potential environmental effects of major projects which it has reasonable grounds to expect may cause substantial pollution of, or significant and harmful changes to, the Convention area"); Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, *supra* note 69, art. 12 (providing for assessment of "potential effects . . . on the marine environment"); United Nations Convention on the Law of the Sea, *supra* note 58, art. 206 (obligating states to perform environmental impact assessments when they "have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment"); Recommendation on the Assessment of Projects With Significant Impact on the Environment, *supra* note 84, § I, ¶ 1 (urging utilization of EIA in "the planning and decision-making processes of all projects having potentially significant impact on the environment"); REPORT OF WCED LEGAL EXPERTS, *supra* note 35, art. 5, at 58 ("States planning to carry out or permit activities which may significantly affect a natural resource or the environment shall make or require an assessment of their effects before carrying out or permitting the planned activities.") *But see* Convention on Environmental Impact Assessment in a Transboundary Context, *supra* note 76, art. 2, ¶¶ 2, 5 (specifying assessment of proposed activities "likely to cause a significant transboundary impact"); Directive on the Assessment of the Effects of Certain Public and Private Projects on the Environment, *supra* note 84, art. 1, ¶ 1 (requiring "assessment of the environmental effects of those public and private projects which are likely to have significant effects on the environment"); Recommendation on the Analysis of the Environmental Consequences of Significant Public and Private Projects, *supra* note 84, art. I, ¶ 1 (recommending "[e]stablish-[ment of] procedures and methodologies for forecasting and describing the environmental consequences of significant public and private projects likely to have a major impact on the quality of the environment"); Goals and Principles of Environmental Impact Assessment, *supra* note 77, Principle 1 (stating desirability of analyzing effects of those activities "likely to significantly affect the environment"); *cf.* Part III.E *infra* (discussing precautionary

although most international instruments address projects and other activities requiring governmental approval, at least one international authority encourages private firms voluntarily to evaluate the environmental consequences of their proposed undertakings.[90]

E. PRECAUTIONARY APPROACHES

Rio Principle 15 states: "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."[91] Precautionary approaches are inherent in the concept of sustainable development,[92] presumably because precaution is part of the burden of proof necessary to establish that particular development decisions meet the needs of today while simultaneously satisfying present environmental constraints and preserving the ability of future generations to meet their own needs.

The Rio Declaration's codification of the "precautionary approach"[93] has no direct analogue in the Stockholm Declaration.

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approaches).

[90] In 1985 the Organization for Economic Cooperation and Development adopted a clarification to its existing nonbinding Guidelines for Multinational Enterprises, *adopted* June 21, 1976, O.E.C.D. Sales No. 21-86-03-1, stating that multinational corporations should "assess and take into account in decision-making the foreseeable consequences of their activities which could significantly affect the environment [and] co-operate with [governmental] authorities . . . by providing adequate and timely information regarding the potential impacts on the environment and on environmentally related health aspects of all their activities . . . ." Clarification to the Guidelines, *derestricted* Nov. 27, 1985, O.E.C.D. Doc. IME(85)37, *reprinted in* OECD AND THE ENVIRONMENT, *supra* note 57, at 191, 192.

[91] Rio Declaration, *supra* note 14, Principle 15.

[92] *E.g.*, Bergen Ministerial Declaration on Sustainable Development in the ECE Region, May 15, 1990, ¶ 7 ("In order to achieve sustainable development, policies must be based on the precautionary principle."), *reprinted in* 20 ENVTL. POL'Y & L. 100 (1990).

[93] *See generally* HARALD HOHMANN, PRECAUTIONARY LEGAL DUTIES AND PRINCIPLES OF MODERN INTERNATIONAL ENVIRONMENTAL LAW: THE PRECAUTIONARY PRINCIPLE: INTERNATIONAL ENVIRONMENTAL LAW BETWEEN EXPLOITATION AND PROTECTION (1994) (analyzing precautionary approach in international environmental law); Daniel Bodansky, *Scientific Uncertainty and the Precautionary Principle*, ENVIRONMENT, Sept. 1991, at 4 (describing development of precautionary principle); James Cameron & Juli Abouchar, *The Precautionary Principle: A Fundamental Principle of Law and Policy for the Protection of the*

An express statement of a precautionary principle is found in the Treaty of Rome,[94] as amended by the Treaty on European Union,[95] as well as in other international instruments adopted in the intervening twenty years.[96] Elaboration of the principle has occurred with special particularity in the context of marine pollution, including in the fora of the North Sea Conferences[97] and

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Global Environment, 14 B.C. INT'L & COMP. L. REV. 1 (1991) (discussing development of "precautionary approach"); Lothar Gündling, *The Status in International Law of the Principle of Precautionary Action*, 5 INT'L J. ESTUARINE & COASTAL L. 23 (1990) (discussing confusion over concepts); Ellen Hey, *The Precautionary Concept in Environmental Policy and Law: Institutionalizing Caution*, 4 GEO. INT'L ENVTL. L. REV. 303 (1992) (analyzing precautionary principle); Bernard A. Weintraub, Note, *Science, International Environmental Regulation, and the Precautionary Principle: Setting Standards and Defining Terms*, 1 N.Y.U. ENVTL. L.J. 173 (1992) (arguing for use of precautionary principle). A precautionary approach can be interpreted as a counterweight to, if not an outright rejection of, "wait and see" philosophies that emphasize a high degree of scientific certainty as a precondition to adopting policy responses. *See, e.g.*, C. Boyden Gray & David B. Rivkin, Jr., *A "No Regrets" Environmental Policy*, FOREIGN POL'Y, Summer 1991, at 47 (Counsel to former U.S. President Bush and Associate General Counsel to U.S. Department of Energy emphasizing scientific uncertainty in global warming debate). In some jurisdictions, such as the United Kingdom, a distinction is made between the "precautionary principle," some formulations of which might be taken to reject the validity of scientific analyses, and a "precautionary approach," which is explicitly grounded in science. *See* notes 97-98 *infra* (illustrating basic distinction between "precautionary principle" and "precautionary approach").

[94] Treaty Establishing the European Economic Community, Mar. 25, 1957, 298 U.N.T.S. 11 [hereinafter Treaty of Rome].

[95] Treaty on European Union, Feb. 7, 1992, 31 I.L.M. 247, 285 (1992) (amending art. 130r, ¶ 2 of Treaty of Rome to specify that "[c]ommunity policy on the environment . . . shall be based on the precautionary principle").

[96] *See, e.g.*, Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Mar. 17, 1992, art. 2, ¶ 5(a), 31 I.L.M. 1312, 1316 (1992) (not in force) (referencing "[t]he precautionary principle, by virtue of which action to avoid the potential transboundary impact of the release of hazardous substances shall not be postponed on the ground that scientific research has not fully proved a causal link between those substances, on the one hand, and the potential transboundary impact, on the other hand"); Houston Economic Summit Declaration, ¶ 62, 26 WEEKLY COMP. PRES. DOC. 1064, 1073 (July 11, 1990) (seven major industrialized nations agreeing that "in the face of threats of irreversible environmental damage, lack of full scientific certainty is no excuse to postpone actions which are justified in their own right.")

[97] *E.g.*, Ministerial Declaration of the Third International Conference on the Protection of the North Sea, the Hague, Mar. 8, 1990 (pledging to "continue to apply the precautionary principle, that is to take action to avoid potentially damaging impacts of substances that are persistent, toxic and liable to bioaccumulate even where there is no scientific evidence to prove a causal link between emissions and effects"), *reprinted in* THE NORTH SEA: BASIC LEGAL DOCUMENTS ON REGIONAL ENVIRONMENTAL CO-OPERATION 3 (David Freestone & Ton Ijlstra eds., 1991) [hereinafter Freestone & Ijlstra]; Ministerial Declaration of the Second International Conference of the North Sea, London, Nov. 25, 1987, *reprinted in* Freestone &

the Paris Commission.[98] Precautionary approaches also have received considerable attention in the policy debate on global climate change, beginning in nonbinding conference statements preceding UNCED[99] and culminating in the binding climate convention opened for signature at the Earth Summit.[100]

While Rio Principle 15 codified a precautionary approach for the first time at the global level, the formulation of that text is less

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Ijlstra, *supra*, at 40, 41 (declaring that "in order to protect the North Sea from possibly damaging effects of the most dangerous substances, a precautionary approach is necessary which may require action to control inputs of such substances even before a causal link has been established by absolutely clear scientific evidence").

[98] *See* Paris Commission Recommendation 89/1 on the Principle of Precautionary Action, June 22, 1989, *reprinted in* Freestone & Ijlstra, *supra* note 97, at 152 ("[T]he Contracting Parties . . . [a]ccept the principle of safeguarding the marine ecosystem of the Paris Convention area by reducing at source polluting emissions of substances that are persistent, toxic and liable to bioaccumulate by the use of the best available technology and other appropriate measures. This applies especially when there is reason to assume that certain damage or harmful effects on the living resources of the sea are likely to be caused by such substances, even when there is no scientific evidence to prove a causal link between the emissions and effects ('The principle of precautionary action')."). *See generally* Convention for the Prevention of Marine Pollution from Land-Based Sources, Feb. 21, 1974, arts. 15-18, 13 I.L.M. 352, 361-64 (creating Commission). *See also* G.C. Dec. 15/27, U.N. GAOR, 44th Sess., Supp. No. 25, Supp. at 152, U.N. Doc. A/44/25 (1989) ("Recognizing that waiting for scientific proof regarding the impact of pollutants discharged into the marine environment may result in irreversible damage to the marine environment and in human suffering, . . . the [UNEP Governing Council] [r]ecommends that all governments adopt the principle of Precautionary action as the basis of their policy with regard to prevention and elimination of marine pollution"), *reprinted in* 19 ENVTL. POL'Y & L. 130 (1989).

[99] *See* Ministerial Declaration on the Second World Climate Conference, Nov. 7, 1990, ¶ 7 ("In order to achieve sustainable development in all countries and to meet the needs of present and future generations, precautionary measures to meet the climate challenge must anticipate, attack, or minimize the causes of, and mitigate the adverse consequences of, environmental degradation that might result from climate change. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent such environmental degradation. The measures adopted should take into account different socio-economic contexts."), *reprinted in* 20 ENVTL. POL'Y & L. 220 (1990); Bergen Ministerial Declaration on Sustainable Development in the ECE Region, *supra* note 92, at ¶ 7 ("Environmental measures must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.")

[100] United Nations Framework Convention on Climate Change, *supra* note 12, art. 3, ¶ 3 ("The Parties should take precautionary measures to anticipate, prevent or minimi[z]e the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures . . . ").

forward-looking than many of its predecessors. In particular, the language qualifying the application of the principle "according to [the] capabilities" of individual states does not appear in any of the models for Rio Principle 15 and appears to be an artifact of UNCED's emphasis on equity between developing and developed countries.

F. PROCEDURAL DUTIES OF COOPERATION, EXCHANGE OF INFORMATION, NOTIFICATION, AND PRIOR CONSULTATION

Stockholm Principle 24 states, "Co-operation through multilateral or bilateral arrangements or other appropriate means is essential to effectively control, prevent, reduce, and eliminate adverse environmental effects resulting from activities conducted in all spheres . . . ."[101] This precept stimulated development of a well-accepted body of international guidelines articulating procedural duties that include not only cooperation, but also notification and prior consultation, primarily in potential cases of transboundary pollution.[102] The Rio Declaration addresses these questions in Principle 7, specifying cooperation among states, in Principle 18, requiring notification of disasters and emergencies, and in Principle 19, mandating notification and consultation in cases of transboundary pollution.

Although the underlying structure of these provisions in the Rio Declaration tracks the development of legal requirements or advisory exhortations since Stockholm, the Rio formulations nonetheless fall short of what might be described as the "best practice standard" in a number of details. The limitation of emergency notification to "sudden" effects in Rio Principle 18 is not found in analogous provisions of other instruments.[103] The Rio

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[101] *See* Sohn, *supra* note 9, at 504-06 (providing drafting history of Stockholm Principle 24).

[102] *See, e.g., Developments in the Law*, *supra* note 34, at 1517-20 (analyzing duty to inform or disclose in section discussing emergence of procedural duties); *cf. supra* note 76 and accompanying text (describing environmental impact assessment as procedural duty related to substantive obligations to mitigate or prevent transboundary pollution).

[103] *E.g.*, Convention on the Transboundary Effects of Industrial Accidents, *supra* note 57, art. 10, ¶ 2 (requiring notice of "an industrial accident, or imminent threat thereof, which causes or is capable of causing transboundary effects"); Protocol on Environmental Protection to the Antarctic Treaty, *supra* note 85, art. 15, ¶ 2(a) (requiring "procedures for immediate

Declaration does not expressly address risks of harm from transboundary environmental effects[104] or impacts on the global commons in addition to those in the territory of foreign states.[105]

While these departures from the most rigorous precursor instruments might be dismissed as details, the Rio Declaration also is noteworthy for entire areas of law and practice it fails to address. Many international instruments place an affirmative obligation on individual states, presumably including but not limited to the originating state, to cooperate in remedying an emergency that has transboundary effects.[106] More generally, prior authorities,[107]

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notification of, and co-operative response to, environmental emergencies"); International Convention on Oil Prollution Preparedness, Response and Co-Operation, Nov. 30, 1991, art. 4, 30 I.L.M. 735 (1991) (requiring reporting of an oil pollution "event"); Kuwait Regional Convention for Co-Operation on the Protection of the Marine Environment from Pollution, *supra* note 69, art. IX (requiring notice of "any pollution emergency"); Convention for the Protection of the Mediterranean Sea Against Pollution, *supra* note 69, art. 9 (requiring notice of "any pollution emergency"); Montreal Guidelines for the Protection of the Marine Environment Against Pollution from Land-Based Sources, Guideline 14, U.N. Doc. UNEP/WG.120/3 Annex (1985), *noted*, G.C. Dec. 13/18, U.N. GAOR, 40th Sess., Supp. No. 25, at 51, U.N. Doc. A/40/25 (1985), *reprinted in* 14 ENVTL. POL'Y & L. 77 (1985). Article 198 of the United Nations Convention on the Law of the Sea, *supra* note 58, specifies notification in "cases in which the marine environment is in imminent danger of being damaged . . . by pollution." Article 11, ¶ 1 of the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, *supra* note 69, contains a similar formulation. However, "imminent" is a different concept from "sudden." *See also* REPORT OF WCED LEGAL EXPERTS, *supra* note 35, art. 19, ¶ 1, at 116 (concerning obligation of states during emergency situations). *But see* Int'l Law Comm'n, Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, art. 28, ¶ 1, U.N. GAOR, 49th Sess., Supp. No. 10, at 197, U.N. Doc. A/49/10 (1994) (defining "emergency" as "a situation that causes, or poses an imminent threat of causing, serious harm to watercourse States or other States and that results suddenly from natural causes. . . .").

[104] *Cf.* REPORT OF WCED LEGAL EXPERTS, *supra* note 35, art. 19, ¶ 1, at 116 (addressing duty to notify of "significant risk" of transboundary pollution); Int'l Law Comm'n, *supra* note 85, art. 15, ¶ 1 (requiring notification and information of "risk of . . . significant transboundary harm").

[105] *Cf.* REPORT OF WCED LEGAL EXPERTS, *supra* note 35, art. 19, ¶ 1, at 116 (addressing impacts "in an area beyond the limits of national jurisdiction").

[106] *E.g.*, Convention on the Transboundary Effects of Industrial Accidents, *supra* note 57, arts. 11-12 (requiring response and mutual assistance); Convention on the Protection and Use of Transboundary Watercourses and International Lakes, *supra* note 96, art. 15, ¶ 1 ("[i]f a critical situation should arise, the Riparian Parties shall provide mutual assistance upon request"); International Convention on Oil Preparedness, Response and Co-Operation, *supra* note 103, art. 7 (mandating international cooperation in pollution response); Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution, *supra* note 69, art. IX (establishing duty to notify of pollution emergency for "[a]ny contracting State which becomes aware of any pollution"); Convention for the Protection of

including Stockholm Principle 24, expressly address the need for bilateral or multilateral cooperation to remedy or avert transboundary harm.

By contrast, Rio Principle 18 contains a vaguely worded exhortation to "the international community to help states so afflicted." Similarly, Principle 7 encourages only "cooperat[ion] in a spirit of global partnership to conserve, protect and restore the health and integrity of the earth's ecosystem." The Rio Declaration does not allude to the preparation of contingency plans, a practice which has been codified in many international instruments.[103] Finally, a

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the Mediterranean Sea Against Pollution, *supra* note 69, art. 19, ¶ 1 (requiring "all governments to co-operate"); Recommendation on Principles Concerning Transfrontier Pollution, *supra* note 57, Annex ¶ 10 (providing that "Countries should assist each other"); Draft Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States, *supra* note 57, Principle 9 (establishing duty to inform and cooperate with other states); *see also* REPORT OF WCED LEGAL EXPERTS, *supra* note 35, art. 19, ¶ 1 (describing obligation of state creating transboundary environmental interference to assist in preventing or minimizing harmful effects in other states).

[107] *E.g.*, Recommendation for Strengthening International Cooperation on Environmental Protection in Frontier Regions, *supra* note 85, at 1531 (promoting "cooperation among the Member countries of the OECD"); Draft Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States, *supra* note 57, at Principles 7, 8 (promoting "principle of good faith and in the spirit of good neighborliness"); Int'l Law Comm'n, *supra* note 103, at art. 28, ¶ 3 ("A watercourse State within whose territory an emergency originates shall, in cooperation with potentially affected States, and, where appropriate, competent international organizations, immediately take all practicable measures . . . to prevent, mitigate and eliminate harmful effects.").

[108] *E.g.*, Convention on the Transboundary Effects of Industrial Accidents, *supra* note 57, at art. 8 (calling for emergency preparedness); Protocol on Environmental Protection to the Antarctic Treaty, *supra* note 85, at art. 15 (requiring plan for emergency response action); International Convention on Oil Preparedness, Response and Co-operation, *supra* note 103, at arts. 3, 6 (requiring oil pollution emergency plans and national regional systems preparedness and response); Agreement on Cooperation for the Protection and Improvement of the Environment in the Border Area, U.S.-Mex., July 18, 1985, Annex II, T.I.A.S. No. 11,269, *reprinted in* Int'l Env't Rep. (BNA) 31:1403 (addressing pollution of environment along the inland international boundary by discharges of hazardous substances); Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, *supra* note 69, art. 11 (specifying that "contracting Parties shall, individually and jointly, develop and promote contingency plans for responding to incidents involving pollution or the threat thereof in the Convention area"); United Nations Convention on the Law of the Sea, *supra* note 58, at art. 199 (establishing obligation to develop contingency plans for responding to environmental emergencies); Recommendation on Principles Concerning Transfrontier Pollution, *supra* note 57, at Annex ¶ 10 (recommending that "[c]ountries . . . should develop contingency plans"); Montreal Guidelines for the Protection of the Marine

number of international authorities provide for routine exchanges of environmental data even when transboundary pollution is not contemplated,[109] which the Rio Declaration does not.

G. TRADE AND THE POLLUTER-PAYS PRINCIPLE

At the time of the Rio conference, as now, the relationship between international trade and the environment was highly controversial and unsettled. Rio Principle 12 addresses this difficult area by advising states to

> cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation. Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade.[110]

Although often overlooked, the Stockholm Conference also dealt directly with many of the linkages between trade and environment that were to inform the Rio debate twenty years later. Recommendation 103 of the 1972 action plan states that the Stockholm

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Environment Against Pollution from Land-Based Sources, *supra* note 103, at Guideline 14 ("States should, as appropriate, individually or jointly, develop and promote national and international contingency plans for responding to incidents of pollution from land-based sources."); Int'l Law Comm'n, *supra* note 103, at art. 28, ¶ 4 ("When necessary, watercourse States shall jointly develop contingency plans for responding to emergencies, in cooperation, where appropriate, with other potentially affected States and competent international organizations.").

[109] *E.g.*, Convention on the Protection and Use of Transboundary Watercourses and International Lakes, *supra* note 96, art. 6 ("The Parties shall provide for the widest exchange of information, as early as possible, on issues covered by the provisions of this Convention."); Recommendation on Principles Concerning Transfrontier Pollution, *supra* note 57, Annex part G (promoting exchange of "all relevant scientific data"); Draft Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States, *supra* note 57, Principles 5, 7 (promoting exchange of information); Int'l Law Comm'n, *supra* note 103, art. 9 (encouraging regular exchange of data and information).

[110] Rio Declaration, *supra* note 14, Principle 12.

Conference participants "agree not to invoke environmental concerns as a pretext for discriminatory trade policies or for reduced access to markets."[111] Similarly, "[e]nvironmental standards should be established, at whatever levels are necessary, to safeguard the environment, and should not be directed towards gaining trade advantages."[112]

The remainder of Rio Principle 12 provides as follows: "Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing trans-boundary or global environmental problems should, as far as possible, be based on an international consensus."[113] This language, which has no analogue in the Stockholm documentation, appears to codify the well-known holding of a specific dispute settlement panel constituted under the auspices of the General Agreement on Tariffs and Trade (GATT). That dispute concerned a United States embargo on importing from Mexico and other countries yellowfin tuna captured with technologies that harm marine mammals. A GATT dispute settlement panel disapproved the embargo as a unilateral use of trade measures to protect resources located outside U.S. jurisdiction.[114] The rule set out in this passage, however, has failed to gain acceptance even among the GATT contracting parties as a defini-

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[111] Stockholm Declaration, *supra* note 9.

[112] *Id.* Recommendation 103 also encourages international harmonization of national measures to minimize international trade distortions, a theme which also has been echoed more recently in the trade and environment debate.

[113] Rio Declaration, *supra* note 14, Principle 12.

[114] *See* Kovar, *supra* note 1, at 132 (discussing drafting history of Rio Principle 12). In response to a complaint lodged by Mexico, this panel report addressed a U.S. embargo on importation of yellowfin tuna. The embargo was designed to encourage foreign states to ensure that vessels under their jurisdiction conduct tuna fishing operations so as not to kill or injure dolphins. Dispute Settlement Panel Report on United States Restrictions on Imports of Tuna, BASIC INSTRUMENTS AND SELECTED DOCUMENTS, Supp. No. 39, at 155 (1993), *reprinted in* 30 I.L.M. 1594, 1619 (1991) [hereinafter Tuna Dolphin I Panel Report]. A second challenge, initiated by the European Union and the Netherlands, addressed a secondary import ban designed to discourage "tuna laundering" by intermediary nations that purchase yellowfin tuna abroad and export it to the United States. United States—Restrictions on Imports of Tuna, *reprinted in* 33 I.L.M. 842 (1994). Both panels concluded that the import prohibitions in question were inconsistent with the United States's obligations under the GATT. Unlike the first panel report, on which Rio Principle 12 is based, the second panel did not identify a prohibition on a state's use of trade measures to protect extrajurisdictional resources.

tive interpretation of the General Agreement.[115]

Rio Principle 16 makes the following assertion at an unprecedented global level of universality and generality: "National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment." This passage in effect codifies the Polluter-Pays Principle, which was first articulated in a 1972 recommendation of the Organization for Economic Cooperation and Development (OECD).[116] Over the course of twenty years, the Polluter-Pays Principle has gained

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[115] With respect to Principle 12, the United States interposed the following interpretive statement: "The United States understands that, in certain situations, trade measures may provide an effective and appropriate means of addressing environmental concerns, including long-term sustainable forest management concerns and environmental concerns outside national jurisdiction, subject to certain disciplines." *See* Kovar, *supra* note 1, at 133. Mexico refrained from presenting the first tuna panel report to the GATT Council at the time of that report's release, and the GATT Council rejected a request by the European Union to adopt the report. *See GATT Council Refuses EC Request to Adopt Panel Report on U.S. Tuna Embargo*, 9 Int'l Trade Rep. (BNA) 353 (Feb. 26, 1992) (discussing GATT ruling on U.S. tuna embargo). In a discussion of the second report, the GATT Council is reported to have rejected a proposal from the United States that would have opened further Council meetings on that case to the public, and Mexico was said to consider requesting adoption of the first report. Frances Williams, *GATT Shuts Door on Environmentalists*, FIN. TIMES, July 21, 1994, at 6. As of this writing, neither report has been adopted by the GATT Council, and hence, neither has yet acquired legal force. *See* William J. Davey, *Dispute Settlement in GATT*, 11 FORDHAM INT'L L.J. 51, 94 (1987) (discussing lack of legal effect if losing party objects to consensus adoption of dispute settlement panel report).

[116] Recommendation on Guiding Principles Concerning International Economic Aspects of Environmental Policies, *adopted* May 26, 1972, O.E.C.D. Doc. C(72)128, *reprinted in* OECD AND THE ENVIRONMENT, *supra* note 57, at 23; *see also* Recommendation on the Implementation of the Polluter-Pays Principle, *adopted* Nov. 14, 1974, O.E.C.D. Doc. C(74)223 (reaffirming Polluter-Pays Principle as "fundamental principle for allocating costs of pollution prevention and control measures"), *reprinted in* OECD AND THE ENVIRONMENT, *supra* note 57, at 26. Recommendations express nonbinding undertakings for those OECD members that agree to them. Convention on the Organisation for Economic Co-Operation and Development, *done* Dec. 14, 1960, art. 5(b), 12 U.S.T. 1728. The Organization also can adopt decisions that are binding on member states agreeing to them. *Id.* art. 5(a). The members of the Organization are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

increasing acceptance, most notably within the European Union.[117] As originally formulated in what might be described as its "weak" form, the Polluter-Pays Principle prohibited governmental subsidies for pollution control equipment to assure that the price of manufactured goods would reflect the cost of pollution abatement.[118] Rio Principle 16, on the other hand, appears to state an affirmative and original "strong" form of the Polluter-Pays Principle that directs governments to assure the internalization of environmental costs through the use of economic instruments, not merely to refrain from subsidizing the purchase and use of pollution control equipment by private industry.

Although the Polluter-Pays Principle is an aspirational element of domestic policy that has been realized only partially in practice, the Principle is closely related to the international trade regime. For example, Rio Principle 16 exhorts states to apply its precepts "without distorting international trade and investment." This limitation is somewhat incoherent, as the Polluter-Pays Principle is specifically intended to prevent trade distortions arising from disparate environmental policies among countries by requiring the internalization of environmental costs.[119] As a matter of principle, then, a country of export's failure to implement the Polluter-Pays Principle could be treated as a pollution subsidy that distorts

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[117] *See* Single European Act, Feb. 17 & 28, 1986, art. 25, 19 BULL. EUR. COMM. Supp. (No. 2) at 5 (1986) (adding new article 130R, ¶ 2, specifying "that the polluter should pay," to Treaty of Rome), *reprinted in* 25 I.L.M. 506 (1986); Recommendation Regarding Cost Allocation and Action by Public Authorities on Environmental Matters, 18 O.J. EUR. COMM. (No. L 194) 1 (1975) (implementing Polluter-Pays Principle), *reprinted in* Int'l Envtl. Rep. (BNA) 131:1001; *cf.* Convention on the Protection and Use of Transboundary Watercourses and International Lakes, *supra* note 96, art. 2, ¶ 5(b) (referencing "[t]he polluter-pays principle, by virtue of which costs of pollution prevention, control and reduction measures shall be borne by the polluter").

[118] *See generally* Sanford E. Gaines, *The Polluter-Pays Principle: From Economic Equity to Environmental Ethos*, 26 TEX. INT'L L.J. 463 (1991) (discussing evolution of Polluter-Pays Principle).

[119] Recommendation on Guiding Principles Concerning International Economic Aspects of Environmental Policies, *supra* note 116, ¶ 1. By reducing the potential for substandard environmental policies to serve as de facto export subsidies, an affirmative requirement for cost internalization also tends to minimize, not exacerbate, trade distortions. *See* David A. Wirth, *The International Trade Regime and the Municipal Law of Federal States: How Close a Fit?*, 49 WASH. & LEE L. REV. 1389, 1400 (1992) (suggesting international trade regimes should establish trade-based disciplines for identifying countries with substandard environmental policies that operate as de facto "pollution subsidies").

international trade. A country of import could correct the distortion by imposing countervailing duties at the border to offset the subsidy.[120] In any event, the Polluter-Pays Principle cannot be implemented in a way that distorts international trade, and there is a sound argument that failure to implement the Polluter-Pays Principle creates trade distortions. More likely, however, the language of Rio Principle 16 reflects the possibility that an affirmative requirement for cost internalization enforced through at-the-border duties or fees might be inconsistent with the GATT.[121]

Rio Principle 14, which also addresses trade-related matters, exhorts states to "cooperate to discourage or prevent the relocation and transfer to other States of any activities and substances that cause severe environmental degradation or are found to be harmful to human health." To the extent that this Principle addresses the international transit of hazardous substances, this provision has a large number of precursors dating from the late 1970s and early 1980s, which address industrial chemicals, pesticides, and hazardous wastes.[122] But with respect to hazardous "activities"—presumably including manufacturing installations—this passage appears to be quite innovative, as industrial equipment, processes, and know-how have received relatively little attention at

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[120] *Cf.* Paul Demaret & Raoul Stewardson, *Border Tax Adjustments Under GATT and EC Law and General Implications for Environmental Taxes*, J. WORLD TRADE, Aug. 1994, at 5.

[121] Although the GATT permits application of the Polluter-Pays Principle as a domestic environmental measure, *see* United States—Taxes on Petroleum and Certain Imported Substances, ¶¶ 5.2.3-.7, BASIC INSTRUMENTS AND SELECTED DOCUMENTS, 34th Supp. (1988), *reprinted in* 27 I.L.M. 1596 (1988), that agreement most likely does not authorize the enforcement of that standard with respect to imported goods through at-the-border measures like duties or fees to offset the costs to domestic industries of pollution control measures. *See, e.g.*, Tuna Dolphin I Panel Report, *supra* note 114, ¶¶ 5.11-.16 (distinguishing between product characteristics and process by which product is manufactured); William J. Snape, III & Naomi B. Lefkovitz, *Searching for GATT's Environmental* Miranda*: Are "Process Standards" Getting "Due Process?"*, 27 CORNELL INT'L L.J. 777, 779-80 (1994) ("Only if a country wishes to control harmful [production and process methods] with restrictions on imports or exports do these trade restrictions run into trouble with the [GATT].").

[122] *E.g.*, Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, March 22, 1989, S. TREATY DOC. NO. 5, 102d Cong., 1st Sess. (1991), *reprinted in* 19 ENVTL. POL'Y & L. 68 (1989), Int'l Envtl. Rep. (BNA) 21:3101, *and in* 28 I.L.M. 657 (1989); London Guidelines for the Exchange of Information on Chemicals in International Trade, *supra* note 65.

the international level even in the wake of the Bhopal disaster.[123]

H. PUBLIC PARTICIPATION IN ENVIRONMENTAL DECISIONMAKING

Rio Principle 10, addressing public participation, in effect is an endorsement of democratic decisionmaking processes:[124]

> 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 [sic], 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.[125]

While a number of international instruments address public access to information and popular participation as a component of environmental decisionmaking,[126] this sweeping statement ap-

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[123] Those international instruments that treat this issue by and large are voluntary codes of conduct addressed directly to private parties such as multinational corporations and not, as contemplated by Rio Principle 14, standards of conduct for states. *See* Wirth, *supra* note 75, at 102-03 (discussing nonbinding OECD Guidelines for Multinational Enterprises and their inadequacy).

[124] *Cf.* Kovar, *supra* note 1, at 131 (Principle 10 "enshrin[es] this basic democratic principle for the first time at a UN-wide level."). *But see* Pallemaerts, *supra* note 1, at 260 (criticizing Rio Principle 10).

[125] Rio Declaration, *supra* note 14, Principle 10.

[126] *E.g.*, Directive on the Freedom of Access to Information on the Environment, 1990 O.J. (L 158) 56, *reprinted in* Int'l Envtl. Rep. (BNA) 131:7001 (establishing guidelines for access to publicly held information relating to environment). The nonbinding World Charter for Nature, *supra* note 42, addresses access to information in two of its provisions: paragraph 16, which specifies "disclos[ure of the results of planning processes] to the public by appropriate means in time to permit effective consultation and participation"; and paragraph 23, which states that "[a]ll persons, in accordance with their national legislation, shall have the opportunity to participate, individually or with others, in the formulation of decisions of direct concern to their environment." More commonly, international legal instruments

pears to owe at least as much to concepts originating in the international law of human rights.[127]

Several details of this language warrant particular mention. First, it is unclear whether the qualifier "at the relevant level" includes, at least under some circumstances, a direct right of access by the public to international and, most importantly, multilateral processes,[128] an area where practice varies widely among interna-

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addressing access to information and public participation are confined to discrete contexts, such as environmental impact assessment. *See* Convention on Environmental Impact Assessment in a Transboundary Context, *supra* note 76, art. 2 ¶¶ 2 & 6, art. 3 ¶ 8, art. 4 ¶ 2 (requiring public notification and comment on activities likely to cause transboundary impact and EIA procedures evaluating those activities); Goals and Principles of Environmental Impact Assessment, *supra* note 77, Principle 7 ("Before a decision is made on an activity, government agencies, members of the public, experts in relevant disciplines and interested groups should be allowed appropriate opportunity to comment on the EIA."); *see also* text accompanying note 82 *supra* (referring to UNEP Goals and Principles of Environmental Impact Assessment provision relating to public participation). International risk communication standards likewise require both public access to information and public participation as an essential element of their public policy strategy. *See, e.g.*, Decision-Recommendation Concerning Provision of Information to the Public and Public Participation in Decision-Making Processes Related to the Prevention of, and Response to, Accidents Involving Hazardous Substances, *adopted* July 8, 1988, O.E.C.D. Doc. C(88)85 (Final) (recommending providing members of public information and opportunity to participate in decisions related to safeguarding against environmental hazards), *reprinted in* 28 I.L.M. 277 (1989). *See generally* Henri Smets, *The Right to Information on the Risks Created by Hazardous Installations at the National and International Levels*, *in* INTERNATIONAL RESPONSIBILITY FOR ENVIRONMENTAL HARM 449 (Francesco Francioni & Tullio Scovazzi eds., 1991) (emphasizing OECD instruments).

[127] *See, e.g.*, Konrad Ginther, *The Domestic Policy Function of a Right of Peoples to Development: Popular Participation a New Hope for Development and a Challenge for the Discipline*, in THE RIGHT TO DEVELOPMENT IN INTERNATIONAL LAW, *supra* note 41, at 61. The Rio Declaration language originated in proposals from Western European states endorsed by the UN Economic Commission for Europe (ECE). *See* Bergen Ministerial Declaration on Sustainable Development in the ECE Region, *supra* note 92, at ¶ 16(g) (statement of ministerial conference in preparation for UNCED acknowledging need "to safeguard the rights of individuals and concerned groups to have access to all relevant information and to be consulted and participate in the planning and decision-making concerning activities which may affect health and environment with reasonable access to appropriate legal or administrative remedies and redress"). *See generally* Pallemaerts, *supra* note 1, at 259-60 (discussing ECE and human rights, access to information, and public participation).

[128] *See* Kovar, *supra* note 1, at 131 (noting that Rio Principle 10 "calls for broad participation by the public at national and international levels"). *But see* Letter from Peter H. Sand, Principal Program Officer, United Nations Conference on Environment and Development, to David A. Wirth (Sept. 29, 1992) (on file with author) (noting that, although the words "at the relevant level" in Principle 10 and the Rio Declaration generally do not provide for public participation in decisionmaking on the international level, Agenda 21

tional organizations and institutions. This formulation also might imply a right of participation in crafting national positions for international undertakings, an area in which practice even in the United States is very closed.[129] Second, the rationale for limiting the principle to "information concerning the environment" is by no means obvious, and the scope of this qualification may be incapable of precise delineation. For instance, a feasibility study containing structural and design information for a large infrastructure project, such as a dam, might not qualify strictly as "information concerning the environment," but still might be highly relevant for anticipating environmental effects.

The final sentence, specifying that "[e]ffective access to judicial and administrative proceedings, including redress and remedy, shall be provided," is particularly noteworthy and, like Principle 10 as a whole, is barely prefigured by prior United Nations practice in the environmental area. The World Charter for Nature, embodied in a United Nations General Assembly resolution, states that "[a]ll persons . . . shall have access to means of redress when their environment has suffered damage or degradation."[130] The OECD's recommendations on transfrontier pollution, however, provide only that potentially affected parties in foreign states should have access to the same processes and remedies as are afforded domestic parties.[131] If a state makes no such processes

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anticipates entry points into multilateral processes for members of public).

[129] *See generally* David A. Wirth, *A Matchmaker's Challenge: Marrying International Law and American Environmental Law*, 32 VA. J. INT'L L. 377 (1992) (analyzing relationship between international agreements and domestic public law in context of U.S. environmental decisionmaking).

[130] World Charter for Nature, *supra* note 42, at ¶ 23.

[131] Recommendation on Implementation of a Regime of Equal Right of Access and Non-Discrimination in Relation to Transfrontier Pollution, *adopted* May 17, 1977, O.E.C.D. Doc. C (77)(28)(FINAL), *reprinted in* OECD AND THE ENVIRONMENT, *supra* note 57, at 150, 4 ENVTL. POL'Y & L. 53 (1978), *and in* 16 I.L.M. 977 (1977); Recommendation on Equal Right of Access in Relation to Transfrontier Pollution, *adopted* May 11, 1976, O.E.C.D. Doc. C(76)(55)(FINAL), *reprinted in* OECD AND THE ENVIRONMENT, *supra* note 57, at 148, 2 ENVTL. POL'Y & L. 104 (1976), *and in* 15 I.L.M. 1218 (1976). Likewise, the availability of administrative and judicial remedies was sufficiently controversial in the negotiation of the UNEP Goals and Principles of Environmental Impact Assessment, *supra* note 77, that Principle 13 of that instrument states merely that "[a]ppropriate measures should be established to ensure implementation of EIA procedures." *Cf.* Convention on the Transboundary Effects of Industrial Accidents, *supra* note 57, art. 9, ¶ 3 ("The Parties shall, in accordance with their legal systems and, if desired, on a reciprocal basis provide natural

and remedies available to any parties, domestic or foreign, the requirements of the recommendations presumably are fully satisfied.[132]

IV. CONCLUSION

Certainly much more went on at the Earth Summit than can be summarized in the antiseptic black marks that comprise the concrete work product from UNCED, including the Rio Declaration. But at the same time a close reading of those texts provides considerable evidence of the conference's mood, as well as of the larger, long-term significance of the Earth Summit.

Different components of the Rio Declaration fall on a variety of points along the spectrum of the development of international environmental law. Some, such as Rio Principle 10 on public participation, are substantial innovations with little precedential motivation. Others, such as Principle 12 on the Polluter-Pays Principle, Principle 15 on the precautionary approach, and Principle 17 on environmental impact assessment, reinforce and codify at the universal level a consensus that had been building in more or less linear fashion since Stockholm. But in the implied rejection of an individual right to a minimally acceptable environment, in Principle 2 on transboundary pollution, and in the treatment of intergenerational equity, some elements of the Rio Declaration amount to outright backtracking. In many aspects, the Rio Declaration falls short of the highest standards set by predecessor instruments, and a number of well-accepted doctrines were lost or watered down. In some cases, such as Principle 12 on the Polluter-Pays Principle, the particular formulations chosen by the drafters of the Declaration contain provisions that border on incoherence.

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or legal persons who are being or are capable of being adversely affected by the transboundary effects of an industrial accident in the territory of a Party, with access to, and treatment in the relevant administrative and judicial proceedings, including the possibilities of starting a legal action and appealing a decision affecting their rights, equivalent to those available to persons with their own jurisdiction.").

[132] *Cf.* International Covenant on Civil and Political Rights, *opened for signature* Dec. 19, 1966, art. 2, ¶ 3(b), 999 U.N.T.S. 171, 174 (specifying access to "competent judicial, administrative or legislative authorities, or . . . any other competent authority provided for by the legal system of the State" for human rights violations), *reprinted in* 6 I.L.M. 368, 369 (1967).

If the history of the Stockholm Declaration teaches anything, it is that the long-term significance of a nonbinding, aspirational statement of purpose such as the Rio Declaration, the content of which may be responsive to immediate political and policy imperatives, cannot be predicted with certainty. Moreover, the trajectory of discrete components of such an instrument may vary considerably as states make selective use of individual principles.[133] For example, a number of areas in which the Rio Declaration articulates more rigorous requirements than previously acknowledged on the global level, such as environmental impact assessment, the Polluter-Pays Principle, public participation, and even precautionary approaches, have operative significance in the day-to-day formulation of environmental policy. States' experience in applying these principles may further elaborate, entrench, and codify these exhortations from both the policy and legal points of view. By contrast, over time the portions of the Rio Declaration that most obviously represent a retreat from more demanding international precedents—most notably the portions dealing with a right to environment, intergenerational equity, and the reformulation of states' obligations to refrain from transboundary pollution—may appear to be anachronistic assertions of territorial sovereignty that later are overwhelmed by the irresistible momentum of global interdependence in environmental matters. Future developments may well demonstrate that the apparent tension between the existing international law of the environment on the one hand and the Rio Declaration's allusions to a new international law of sustainable development on the other[134] is illusory.

Other major instruments that resulted from that meeting, including the two binding conventions opened for signature at UNCED, illuminate the dynamics of the Brazil conference in significant ways only hinted at in the unadorned text of the Rio Declaration itself. First, the formulation "common but differentiated responsibilities" appears in Principle 7 of the Rio Declaration, with no specific analogue in the Stockholm Declaration. The same

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[133] See text accompanying note 56 *supra* (noting that Principle 21 is only one of 26 principles contained in Stockholm Declaration that is widely regarded as having matured into customary law).

[134] *See supra* note 34 (discussing Rio Principle 27's call for further development of international law of sustainable development).

locution appears repeatedly in the climate convention opened for signature at the Earth Summit.[135] The United States recorded an interpretive statement on this point, noting that "[t]he United States does not accept any interpretation of Principle 7 that would imply . . . any diminution in the responsibilities of developing countries."[136] If widely accepted, this concept could inject an explicit double standard into the customary international law of the environment and sustainable development. Another contentious point was the notion of "common concern of humankind," which appears in both UNCED conventions but not in the Rio Declaration.[137] This terminology is burdened by the unfortunate baggage of the acrimonious controversy over equitable distribution of benefits among developing and developed countries in the context of deep seabed mining.[138] Viewed in the larger setting of the contentious debate over these principles during the UNCED preparations, perhaps the Rio Declaration should be interpreted more as a global compromise on environment and development issues than as a code of future conduct. Its emphases on equity, distributional justice, and resolution of competing policy concerns as a result of North-South tensions plausibly account for some textual formulations that reflect a loss of a sense of urgency about environmental considerations.

A number of contextual factors suggest that the Rio Declaration may have less long-term impact than the Stockholm Declaration precisely because of this compromise character. During the preparations for the Stockholm conclave, the draft conference declaration received a wide airing and was revised in significant respects by a parallel, open-ended working group during the

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[135] United Nations Framework Convention on Climate Change, *supra* note 12, pmbl. ¶ 6, art. 3 ¶ 1, art. 4 ¶ 1; *cf. supra* pp. 634-35 (precautionary approach as formulated in Rio Principle 15 applies only "according to [the] capabilities" of individual states).

[136] *See* Kovar, *supra* note 1, at 130 (quoting statement by United States).

[137] United Nations Framework Convention on Climate Change, *supra* note 12, pmbl. ¶ 1; Convention on Biological Diversity, *supra* note 12, pmbl. ¶ 3.

[138] *See generally* Frederic L. Kirgis, Jr., *Standing to Challenge Human Endeavors That Could Change the Climate*, 84 AM. J. INT'L L. 525 (1990) (noting relationship between "common concern" and "common heritage" as used with respect to deep seabed mining).

meeting itself.[139] By contrast, fewer than ten percent of the states assembled in Rio participated in the final and dispositive deliberations during the last PrepCom meeting, where crucial compromises on the most contentious issues were forged.[140] Presumably because the consensus on the text was so fragile, the draft Rio Declaration, in contrast to the earlier Stockholm Declaration, was not reopened in the Rio meeting itself. Although the United States participated in the small working group for the Rio Declaration, it nonetheless recorded interpretive statements on four principles of that instrument,[141] suggesting a relatively low level of consensus even among the states most closely involved in the drafting process.

While there was perhaps little agreement about the immediate impact of UNCED, virtually all observers concurred that the Earth Summit's long-term success depended upon subsequent implementation. From this point of view, the Rio Declaration may also have less impact than other instruments resulting from the Earth Summit. The United Nations created the Commission on Sustainable Development[142] specifically to oversee follow-up to Agenda 21, the action plan for the future adopted at UNCED.[143] The two

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[139] *See* ROWLAND, *supra* note 3, at 89-100 (describing in considerable detail the Working Group proceedings); Sohn *supra* note 9, at 430-31 (describing Working Group process). Some participating states at Stockholm, as in Rio, made interpretive statements with respect to the Declaration. *Id.* at 431.

[140] *See supra* text accompanying notes 19-21 (discussing final negotiation of Rio Declaration text).

[141] *See* Kovar, *supra* note 1, at 122.

[142] *See Agenda 21*, ch. 38, *in* Johnson, *supra* note 12 (establishing international institutional arrangements); *Institutional Arrangements to Follow Up The United Nations Conference on Environment and Development*, G.A. Res. 191, U.N. GAOR, 47th Sess., 93d plen. mtg. at 2, U.N. Doc. A/RES/47/191 (1992) (providing institutional arrangements, including creation of Commission on Sustainable Development, to follow up United Nations Conference on Environment and Development, noting in ¶ 2 the need to "rationalize the intergovernmental decision-making capacity for the integration of environment and development issues"), *reprinted in* 23 ENVTL. POL'Y & L. 41 (1993), *and in* 32 I.L.M. 254 (1993). *See generally* KATHRYN G. SESSIONS, INSTITUTIONALIZING THE EARTH SUMMIT: THE UNITED NATIONS COMMISSION ON SUSTAINABLE DEVELOPMENT (1992) (discussing organization and function of Commission on Sustainable Development); Jared Blumenfeld, *Institutions—The United Nations Commission on Sustainable Development*, ENVIRONMENT, Dec. 1994, at 2 (discussing formation of Commission on Sustainable Development and its activities since 1992); Kimball & Boyd, *supra* note 28, at 300-01 (discussing Commission on Sustainable Development).

[143] *See supra* note 12 (discussing *Agenda 21*).

major conventions opened for signature at Rio anticipate further international action through periodic meetings of the parties to those conventions.[144] These features suggest a view of the two conventions and Agenda 21 as organic instruments, whose texts are merely starting points for an ongoing process of evolution and maturation. By comparison, no formal institutional mechanism has been identified for monitoring progress in individual states' implementation of the Rio Declaration. In fact, there has been little systematic activity in this area since the Declaration's adoption three years ago.[145] This is more than a mere procedural distinction. Instead, this contrast strongly suggests that, by comparison with at least some of the other major work product from the Earth Summit, the Rio Declaration is much more a "snapshot" that represents no more than a static point in the environment and development debate as of mid-1992.[146]

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[144] United Nations Framework Convention on Climate Change, *supra* note 12, art. 7 (establishing conference of parties, which "shall keep under regular review the implementation of the Convention . . . and shall make, within its mandate, the decisions necessary to promote the effective implementation of the Convention"); Convention on Biological Diversity, *supra* note 12, art. 23(4) (establishing conference on parties, which "shall keep under review the implementation of this Convention").

[145] Those follow-up activities that have taken place in the case of the Rio Declaration have been sporadic, as opposed to systematic, and of relatively low profile. *See, e.g.*, G.A. Res. 113, U.N. GAOR, 49th Sess., U.N. Doc. GA/8860, at 200 (1995) (entitled "Dissemination of the Principles of the Rio Declaration on Environment and Development" and "[u]rg[ing] all Governments to promote widespread dissemination at all levels of the Rio Declaration on Environment and Development").

[146] *See* Koy Thompson, *The Rio Declaration on Environment and Development*, *in* GRUBB ET AL., *supra* note 27, at 85 ("Lacking a strong central theme, the Earth Charter slowly became a distillation of the political and conceptual arguments dogging the North-South debate. Far from a timeless ethic, it was now a snapshot of history.") *See generally* Statement by Maurice F. Strong, Secretary-General of the United Nations Conference on Environment and Development, 2 REPORT OF THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT, U.N. Doc. A/CONF.151/26/Rev. 1 (Vol. II), at 66, 70 ("We have a profoundly important [Rio] Declaration, but it must continue to evolve towards what many of us hope will be an Earth Charter that could be finally sanctioned on the fiftieth anniversary of the United Nations in 1995"), *reprinted in* 22 ENVTL. POL'Y & L. 242, 243 (1992). *See also* Kovar, *supra* note 1, at 139 (describing Rio Declaration as "a delicate balance of principles that—as a package—could gain the support of all states participating in UNCED"); Reilly, *supra* note 30, at 354 ("The 'Earth Charter' represents a compromise statement of principles by the developed and developing nations"); Sand, *supra* note 10, at 215-16 (quoting Maurice Strong as characterizing Rio Declaration as "intermediate" and noting that, "[a]s it stands, the [Rio] Declaration represents a delicate balance of policy goals supported by developed and developing countries"). *But see* Porras, *supra* note 1, at 245

("When the dust settles, the Rio Declaration on Environment and Development . . . is likely to prove the most influential of the numerous international instruments adopted during the United Nations Conference on Environment and Development.").