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INTRODUCTION

Under the auspices of the United Nations Environment Programme (UNEP), on March 22, 1989, over 116 nations endorsed the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention or Convention).[1] The Convention is designed to provide a global framework for regulating the movement of hazardous waste across international borders. Although final implementation awaits ratification by twenty signatories,[2] there is no mistaking the dimension of UNEP's achievement. Contrary to the expectations of many observers, UNEP was able to forge an agreement between nations that had been quarrelling over major provi-

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1. The Convention was endorsed by the 116 attending countries as the Final Act of the Conference of Plenipotentiaries on the Global Convention on the Control of Transboundary Movements of Hazardous Wastes. The Conference, held in Basel, Switzerland from March 20-22, 1989, was convened by the Executive Director of UNEP pursuant to decision 14/30, adopted by the Governing Counsel of UNEP on June 17, 1987. *See* Basel Convention on the Control on Transboundary Movements of Hazardous Wastes and Their Disposal, *adopted and opened for signature* Mar. 22, 1989, *reprinted in* UNITED NATIONS ENVIRONMENTAL PROGRAMME, BASEL CONVENTION ON THE CONTROL OF TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND THEIR DISPOSAL: FINAL ACT [hereinafter BASEL CONVENTION], *also reprinted in* 28 I.L.M. 649 (1989) (setting out participants and resolutions that address the transportation and disposal of hazardous waste); *see also, Thirty-four Countries Sign Convention on Transport, Disposal of Hazardous Wastes*, 12 Int'l Env't Rep. (BNA) 159 (Apr. 12, 1989) [hereinafter *Thirty-four Countries*] (discussing in detail some of the waste transport issues raised by the Basel Convention).

2. BASEL CONVENTION, *supra* note 1, art. 25, para. 1 (stating that the Convention takes effect on "the ninetieth day after the date of deposit of the twentieth instrument of ratification, acceptance, formal confirmation, approval or accession"). UNEP expects such ratification by the fall of 1990. *Bush Administration to Seek Ratification of Convention on Worldwide Waste Shipments*, 4 Toxic L. Rep. (BNA) 436 (Sept. 10, 1989). Prior to ratification, an interim secretariat operating under UNEP authority will oversee implementation of the Convention. *UNEP Member Appointed to Assist Waste Control Convention Secretariat*, 12 Int'l Env't Rep. (BNA) 607 (Dec. 13, 1989).

sions for several years.[3] Significantly, that dispute had pitted developed against developing countries, with the developing countries pressing for more stringent restrictions.[4] While some environmental groups have criticized the outcome as too lenient,[5] without question, the Basel Convention represents a substantial attempt to control the global movement of hazardous waste.

Although an impressive accomplishment, UNEP faces a still greater challenge ahead. UNEP must now worry about how to implement the Convention. If the Convention is not or cannot be enforced, it may impair not only UNEP's ability to remedy this problem, but other international environmental matters as well.

This concern is especially poignant in so far as UNEP has expanded its role significantly in recent years, tackling complex environmental

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3. *Western, African Nations Fail to Agree on Transboundary Movement of Toxic Wastes*, 12 Int'l Env't Rep. (BNA) 49 (Feb. 8, 1989) [hereinafter *Western, African Nations*] (indicating that the fifteen nations did not agree to a program to prohibit toxic waste shipments across national frontiers because they were concerned with such issues as the rights and obligations of transit coastal states in their offshore waters, liability, compensation, and the environmental standards governing the international movement of waste); *Delegates of 50 Countries Fail to Agree on Draft Covering Movement of Toxic Wastes*, 12 Int'l Env't Rep. (BNA) 49 (Feb. 8, 1989) [hereinafter *Delegates of 50 Countries*] (stating that disagreement over the issue of prior informed consent in relation to transit countries was a major stumbling block to approval of a convention on hazardous wastes); *UNEP Transboundary Transport Draft Bogged Down Over Prior-Consent Issue*, 11 Int'l Env't Rep. (BNA) 660 (Dec. 14, 1988) [hereinafter *UNEP Transboundary Transport*] (elaborating on how the developing countries insisted that no hazardous wastes be transported across their territories unless they gave their consent); *Waste Shipment Incidents Spur Interest in UNEP Agreement to Deal with Problem*, 11 Int'l Env't Rep. (BNA) 471 (Sept. 14, 1988) [hereinafter *Waste Shipment Incidents*] (describing how developing countries, particularly the island nations of the Caribbean, were more insistent in their demands for greater protection of their territorial waters from indiscriminate dumping); *Transfrontier Waste 'A Difficult Issue' Despite Caracas Conference, Long States*, 11 Int'l Env't Rep. (BNA) 376 (July 13, 1988) (noting that Bill Long, Environment Director for the Organization for Economic Cooperation and Development, believed that a world convention on transfrontier waste might not occur because of the issue of prior informed consent); *Developed, Developing Countries Disagree Over Elements of Waste Shipment Agreement*, 11 Int'l Env't Rep. (BNA) 376 (July 13, 1988) [hereinafter *Developed, Developing Countries*] (noting that there was disagreement over the issue of how to define a hazardous waste); Mackenzie, *Countries at Odds Over Waste Treaty*, NEW SCIENTIST, Nov. 19, 1988, at 19.

4. *Supra* note 3 and accompanying text.

5. *See Legislation on Global Waste Control to Be Proposed by Year's End to Congress*, 12 Int'l Env't Rep. (BNA) 425 (Sept. 10, 1989) (elaborating on how Greenpeace and other environmental groups have criticized the Convention, charging that it legitimizes rather than eliminates the hazardous waste problem); *Thirty-four Countries*, *supra* note 1, at 159 (discussing Greenpeace's denouncement of the Basel Convention as a "cop out" that promotes the international trade of waste). Greenpeace was concerned about a provision in the Basel Convention that permits countries to enter into bilateral agreements outside the Convention. *Id.*

problems through programs that directly affect nations throughout the world.[6] UNEP has sponsored other substantial environmental conventions, particularly, those relating to ozone and chlorofluorocarbons.[7] At present, much attention is being accorded the issue of global warming or climatic change.[8] Ozone depletion and global warming may be of greater environmental significance than the international movement of hazardous wastes.[9] The Basel Convention, however, may soon shed light on the ability of UNEP to implement international environmental agreements, in large part, because many more nations are likely to participate in this Convention than in earlier ones.[10] As a result, any defi-

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6. *See Stockholm Declaration on the Human Environment*, in *Report of the United Nations Conference on the Human Environment*, U.N. Doc. A/CONF.48/14 and Corr. 1 (1972), U.N. Sales No. E.73.II.A.14 and Corr., *reprinted in* 11 I.L.M. 1416 (1972) (adopting a Declaration by 113 nations which, among other things, affirmed the need to limit the release of toxic substances into the environment); *Approval of Stockholm Conference by the General Assembly*, 1972 U.N.Y.B. 330 (creating UNEP in 1972 as an international environmental entity responsible for promoting international cooperation on environmental issues and publicizing emerging environmental problems of global significance); *Institutional and Financial Arrangements for International Environmental Cooperation*, G.A. Res. 2997, 27 U.N. GAOR Supp. (No. 30) at 43, U.N. Doc. No. A/8730 (1972); Comment, *U.S. Controls on International Disposal of Hazardous Waste*, 22 INT'L LAW. 775, 784 (1988) [hereinafter Comment, *U.S. Controls on International Disposal*] (stating that UNEP functioned chiefly as an information gathering agency during its early years, and only lately has it begun to implement guidelines in the area of international environmental policy); Bailey & Nanda, *Export of Hazardous Waste and Hazardous Technology: Challenge for International Environmental Law*, 17 DEN. J. INT'L L. & POL'Y 155, 188-190 (1988) (noting that UNEP's guidelines have focused on the areas of import consent and export notification requirements); *see also infra* notes 7-8 and accompanying text (acknowledging UNEP's heightened concern over depletion of the ozone layer).

7. Vienna Convention for the Protection of the Ozone Layer, *adopted and opened for signature* Mar. 22, 1985, *reprinted in* 26 I.L.M. 1516 (1987) (entered into force Sept. 27, 1988) [hereinafter Vienna Convention]; Montreal Protocol on Substances that Deplete the Ozone Layer, *adopted and opened for signature* Sept. 16, 1987, *reprinted in* 26 I.L.M. 1541 (1987) (entered into force Jan. 1, 1989) [hereinafter Montreal Protocol].

8. *Delegates to UNEP Meeting Say Treaty on Global Change Should Be Top Priority*, 12 Int'l Env't Rep. (BNA) 279 (June 14, 1989); Nanda, *Global Warming and International Environmental Law—A Preliminary Inquiry*, 30 HARV. INT'L L.J. 375, 375-76, 385-88 (1989).

9. Nanda, *supra* note 8, at 375-76, 380-81 (noting that any adverse environmental impact of hazardous waste exports is limited to those discrete areas that receive the wastes while ozone depletion and climatic change effects are likely to be much more global); Kindt & Menefee, *The Vexing Problem of Ozone Depletion in International Environmental Law and Policy*, 24 TEX. INT'L. L.J. 261, 266-67 (1989); Comment, *Underestimating Ozone Depletion: The Meandering Road to the Montreal Protocol and Beyond*, 16 ECOLOGY L.Q. 407, 408-12 (1989).

10. *See Thirty-four Countries*, *supra* note 1, at 159-60 (indicating that all 116 participants endorsed the Convention, although only 34 signed it in Basel); Kindt & Menefee, *supra* note 9, at 277, 282-83 (noting that fewer nations participated in the Vienna Convention and the Montreal Protocol—18 nations signed the Vienna Convention and 24 signed the Montreal Protocol).

ciencies in the Convention should be more readily exposed.

Despite the magnitude of UNEP's achievement, troubling questions remain about the Basel Convention. Quite simply, the scope of the task may preclude effective or successful international regulation. This problem is compounded by the Convention's failure to address several major implementation concerns. Furthermore, no international forum, including the United Nations and the International Court of Justice (ICJ), has displayed the capacity to enforce an international environmental agreement. Finally, UNEP does not appear to have resolved its future role in implementing the Basel Convention. Inevitably, conflicts and disputes will arise in implementing the Convention. The success of the Basel Convention, and the fate of future environmental accords, will turn on UNEP's ability to handle those problems.

I. BACKGROUND

The volume of hazardous waste generated annually worldwide has increased from roughly five million metric tons in 1947 to in excess of 300 million metric tons in 1988.[11] The overwhelming majority of the amount of waste generated in 1988—an estimated 265 million metric tons—was generated by the United States, with another thirty-five million metric tons from Western European countries.[12] While the amount of waste has risen dramatically in the United States and Western Europe, the expense of adequately disposing of this waste has increased enormously, in some cases surpassing $2,000 per metric ton.[13] In addition, space for such waste is on the decline as increasingly strict requirements have prompted many disposal facilities to close, particularly in the United States.[14]

11. Tifft, *Who Gets the Garbage?*, TIME, July 4, 1988, at 52.

12. *Id.*

13. *Id.*

14. *See* Langone, *A Stinking Mess*, TIME, Jan. 2, 1989, at 45 (explaining that 80% of the solid waste in the United States is deposited into 6,000 landfills, and that by 1993, 2,000 of those landfills will be closed); Judy, *Hazardous Substances in Developing Countries: Who Should Regulate Foreign Corporations?*, 6 VA. J. NAT. RESOURCES 143, 149 (1986) (stating that the increase in industrial pollution in developing countries has occurred primarily in the area of hazardous waste because public awareness about toxic substances in industrialized nations has caused countries such as the United States to adopt strict environmental standards); Comment, *International Regulation of Transfrontier Hazardous Waste Shipments: A New EC Environmental Directive*, 21 TEX. INT'L L.J. 85, 96 (1986) (noting that the European Community passed a directive in 1984 to better control transfrontier shipments of hazardous waste) [hereinafter Comment, *A New EC Environmental Directive*].

In the United States, the diminution of available sites stems from the Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA). 42 U.S.C. § 6924 (Supp. II 1984). The HSWA, passed in 1984, prevents the

Moreover, the "not in my backyard" (NIMBY) philosophy of nearby residents has prevented construction of many new facilities.[15] As a result, United States and Western European waste producers have looked elsewhere to dispose of their waste.

Most of this waste has been handled by transfrontier shipments for disposal within Europe itself and between the United States and Canada.[16] Facilities in neighboring countries may offer superior technology to treat a specific waste or simply have more available room. Because of the economic benefit derived by more efficient and effective disposal, the developed countries generally support the continued export of hazardous waste in the future.[17]

The developed countries also have turned to developing countries for disposal of hazardous waste in transactions often arranged by waste brokers. The economics of such disposal allow developing countries to dispose of hazardous waste at far lower costs, while still providing the receiving nation with substantial revenue. Because these countries may be ill-equipped to handle the waste properly, however, the wastes can present health and environmental problems for the receiving nation. Even faced with such a prospect, poor countries find it difficult to decline such activities because of the sheer amount of revenue possible. For example, Guinea Bissau entered into several contracts to receive American and European wastes over a five year period for $600 million, which roughly matches its annual gross national product.[18] Even

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disposal on land of hazardous wastes unless the EPA determines that no hazardous constituents will escape from the buried waste. *Id.*

15. Easterbrook, *Cleaning Up*, NEWSWEEK, July 24, 1989, at 27, 38; Langone, *supra* note 14, at 45.

16. *See Waste-Watching*, ECONOMIST, Feb. 18, 1989, at 43-44 [hereinafter *Waste-Watching*] (noting that East Germany has served as the depository for over one million tons of household waste from Western Europe); Comment, *A New EC Environmental Directive*, *supra* note 14, at 96 (arguing that transfrontier shipment of hazardous wastes in Europe is likely to increase). Although there are no published figures available, EPA officials estimate that approximately 85% of all exports have been to Canada. Telephone interview with Wendy Greider, Office of International Activities, United States Environmental Protection Agency (Oct. 10, 1989); *See also*, Handley, *Exports of Waste from the United States to Canada: the How and Why*, 20 Envtl. L. Rep. (Envtl. L. Inst.) 1061 (Feb. 1990) (discussing how Canada's laws and the economic and legal factors within the United States result in the United States shipping significant portions of its waste to Canada).

17. *See Western, African Nations*, *supra* note 3, at 49 (referring to Mostafa Tolba, Executive Director of UNEP, who commented that the international hazardous waste trade should not be banned when its purpose is to better preserve people's health and the environment).

18. Anderson, Dickey, Marshall, Meyer, Obe, & Stanger, *The Global Poison Trade*, NEWSWEEK, Nov. 7, 1988, at 66-68 [hereinafter Anderson]; *EC Rules on Waste Exports Often Ignored; Ministers Disagree on Tightening Standards*, 11 Int'l Env't Rep. (BNA) 375 (July 13, 1988).

though Guinea Bissau subsequently canceled the contract (due to pressure from its neighbors), the situation reflects the dilemma confronted by many emerging nations facing monetary offers to receive hazardous waste.

The export of hazardous waste to developing countries has created problems for several reasons. First, a number of exporters have misinformed or deceived the recipient country of the true contents of the waste.[19] Second, many countries do not possess the necessary technology or expertise to properly dispose of hazardous wastes.[20] Third, the transportation and disposal of hazardous waste itself has been fraught with problems.

In the past several years, there have been numerous prominent events, some of which include:

—Mismarked barrels of hazardous waste from Singapore labeled for a false destination sat unclaimed on a Bangkok, Thailand dock for years releasing their toxic contents to the environment.

—In Koko, Nigeria, 8,000 improperly marked barrels of hazardous waste were inadequately stored and they leaked into the environment. Italy ultimately agreed to repackage the wastes and return them to Italy after other countries refused to accept the waste on the *Karin B.*

—The *Khian Sea*, carrying municipal ash from Philadelphia, ferried its waste around the world for several years as nation after nation refused to let it dispose of the waste, before the waste was finally dumped.[21]

—The *Junior*, the *Herald of Free Enterprise*, and the *Olar*, each vessel carrying hazardous waste, capsized at sea releasing their contents.[22]

—The Jelly Wax Company, an Italian waste broker, exported wastes to Lebanon and Venezuela without first getting permission. The *Zanoobia*, carrying some of those wastes, then attempted to dump its con-

19. *See* Vir, *Toxic Trade with Africa*, 23 ENV'T SCI. & TECH. 23, 24 (1989) (noting that exporters from the United States falsely labeled hazardous military wastes and disposed of them improperly in Zimbabwe).

20. *See Waste-Watching*, *supra* note 16, at 44 (stating that the waste of most industrial nations was handled by such countries).

21. *Dumping of Philadelphia Ash in Haiti Triggers Furor Among Caribbean Nations*, 11 Int'l Env't Rep. (BNA) 189 (Mar. 9, 1988); *Ship with Philadelphia Ash Rejected by Six Countries Disappears Without a Trace*, 11 Int'l Env't Rep. (BNA) 325 (June 8, 1988).

22. *Action Taken Against Belgium, UK for not Applying Hazardous Waste Directive*, 10 Int'l Env't Rep. (BNA) 496 (Oct. 14, 1987); *Freighter Sinkings Prompt Dutch to Look at Hazardous Cargo, Shipping Regulations*, 10 Int'l Env't Rep. (BNA) 504 (Oct. 14, 1987).

tents in Djibouti and Syria before being forced to return to Italy.[23]

—United States exporters falsely labelled hazardous military wastes and disposed of them improperly in Zimbabwe.

—Radioactive wastes from various European countries and the Soviet Union have been dumped in Benin without adequate treatment.[24]

—The Guinea island of Kassa received 15,000 tons of material improperly labelled as raw material for bricks. After the death of nearby vegetation, the wastes were analyzed and discovered to be incinerator ash.[25]

—Workers at ports in the United Kingdom declined to unload PCB waste shipped from Canada for incineration in the United Kingdom.

As a result of such events, the Organization of African Unity passed a resolution in 1988 condemning the disposal of hazardous wastes in Africa and demanding that those responsible clean up the wastes.[26] Several member nations have enacted laws penalizing the unlawful disposal of hazardous waste, most notably Nigeria, which has threatened to impose the death penalty for improper disposal.[27]

The amount of hazardous waste exported either globally or to developing countries is unknown.[28] Furthermore, the consequence of such exports is equally elusive. Nevertheless, the events discussed above evidence the existence of at least some problems, and more importantly, the perception of such problems. Due to these events, environmental groups such as Greenpeace and the Natural Resources Defense Council have called for a ban on all exports of hazardous waste.[29] A ban on exports, however, may be counterproductive. Economic efficiencies may

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23. Vir, *supra* note 19, at 25.

24. *Id.*

25. *Id.* at 24.

26. *Id.* at 25; *Congressional Inquiry Scheduled into Disposal of U.W. Waste Abroad*, 11 Int'l Env't Rep. (BNA) 378 (July 13, 1988).

27. *Greenpeace Calls for World Ban on International Traffic in Waste*, 11 Int'l Env't Rep. (BNA) 433 (Aug. 10, 1988) [hereinafter *Greenpeace Calls for World Ban*]; *Developed, Developing Countries*, *supra* note 3, at 376.

28. *Thirty-four Countries*, *supra* note 1, at 160-61. The size of the global waste trade is a controversial subject. *Western, African Nations*, *supra* note 3, at 50. Even UNEP lacks an accurate figure. *Id.* Jan Huismans, leader of UNEP's International Register of Potentially Toxic Chemicals, asserts that West Germany itself exports 60,000 metric tons of waste annually. *Waste Shipment Incidents*, *supra* note 3, at 472. A 1988 Organization of Economic Cooperation and Development (OECD) estimate indicated that 300,000 metric tons of waste had been exported from Western Europe since 1983. *Greenpeace Calls for World Ban*, *supra* note 27, at 433. At least 11 developing countries have accepted waste from the United States and Europe since 1986. *Id.* Official estimates indicate that over 600,000 tons of hazardous waste are exported yearly from OECD nations, with about half of that originating from Western Europe. *Waste-Watching*, *supra* note 16, at 44.

29. *Greenpeace Calls for World Ban*, *supra* note 27, at 433-34.

be achieved through disposal at foreign sites. Moreover, exports to these foreign facilities may provide for more environmentally protective disposal because they may be better equipped to handle certain wastes. Additionally, sovereignty rights of individual countries may be subverted if they are forbidden from electing to receive such wastes.[30] For these and other reasons, the world community has chosen through UNEP to regulate rather than ban exports of hazardous wastes.

II. PREVIOUS EFFORTS TO CONTROL HAZARDOUS WASTE EXPORTS

The Basel Convention is a product of the prior efforts of various governmental and nongovernmental organizations to regulate the export of hazardous wastes. Those programs provided the framework and raised issues that shaped the debate within UNEP, and ultimately, the outcome of the Convention. Accordingly, those experiences are significant in understanding the evolution of the Convention and analyzing its prospects for success.

A. UNITED STATES REGULATION OF THE EXPORT OF HAZARDOUS WASTE[31]

Pursuant to a statutory directive, the United States Environmental Protection Agency (EPA) regulates the export of hazardous wastes from the United States.[32] These requirements prohibit the export of hazardous waste without prior written consent of the receiving country.[33] Furthermore, exports must be made in accordance with detailed requirements designed to track the movement and disposal of such

30. *Delegates of 50 Countries*, *supra* note 3, at 49 (recognizing that developing countries may well wish to avail themselves of the financial benefit of such transactions to modernize their economies, while postponing until a later date the environmental consequences of doing so). Although others may object to such a decision, sovereignty rights enable a nation to accept wastes. *Id.*

31. *See, e.g.*, Semenoff, *Foreign Trade in Trash? Exporting Hazardous Waste*, 4 NAT. RESOURCES & ENV'T 14, 14-17, 44-46 (1989) (setting out the current United States statutory requirements for exporting hazardous waste); Comment, *U.S. Controls on International Disposal*, *supra* note 6, at 775-90; Comment, *A New EC Environmental Directive*, *supra* note 14, at 119-27 (contributing to the discussion of the United States government's program to regulate hazardous waste shipments).

32. 42 U.S.C. § 6938 (Supp. II 1984); 40 C.F.R. §§ 262.50-.57 (1988). An export must comply with the extensive manifest requirements of 40 C.F.R. 262.70 through 262.23. 40 C.F.R. § 262.54 (1988). An export must also comply with all transportation of hazardous waste requirements set forth in part 263 of volume 40 of the *Code of Federal Regulations*. *Id.* § 262.52.

33. 42 U.S.C. § 6938(a)(1)(B) (Supp. II 1984); 40 C.F.R. § 262.52(b) (1988).

wastes.[34]

Notwithstanding these requirements, occasionally, export of waste from the United States has been controversial—as typified by the infamous odyssey of the vessel *Khian Sea*[35]—and undesirable in the eyes of developing countries.

1. The Export Program

In 1976, the United States Congress enacted the Resources Conservation and Recovery Act (RCRA),[36] which provides an extensive "cradle to grave" regulatory system for tracking hazardous waste from generation through disposal. EPA regulations implementing RCRA provide extensive rules for the generation, treatment, storage, transportation, and disposal of wastes.[37] Central to the RCRA regulatory program is a manifest system that requires tracking of a particular waste throughout its life by way of uniform documents that must be filed with the government.[38] A document describing the waste, known as the Uniform Hazardous Waste Manifest, must accompany the waste at all times.[39] Failure to comply with these requirements can subject the waste handler to substantial civil and criminal penalties.[40]

EPA's definition of hazardous waste includes those substances that

34. 42 U.S.C. § 6938(c) (Supp. II 1984); 40 C.F.R. §§ 262.50-.57 (1988). A primary hazardous waste exporter must inform the EPA of a planned export at least 60 days before the first shipment of that export. 40 C.F.R. § 261.3. The notification must contain the following information: (1) an account of the type of hazardous waste and the EPA hazardous waste number; (2) the estimated rate at which the hazardous waste is to be exported and the time span over which such waste is to be exported; (3) the estimated amount of such waste; (4) all foreign ports of entry and departure; (5) a discussion of the method of transportation for each shipment of such waste; (6) an account of the way such waste will be handled in the receiving country; and (7) the name and address of the final treatment, storage, or disposal facility. *Id.*

35. *See supra* note 21 and accompanying text (discussing the world travels of Philadelphia municipal ash).

36. 42 U.S.C. §§ 6901-87 (Supp. II 1984).

37. *See* 40 C.F.R. § 260-265 (1988) (defining the rules for the identification and listing of hazardous material, the standards for hazardous waste transporters and producers, and the standards for operators of hazardous waste treatment, storage, and disposal facilities).

38. *See id.* §§ 262.20, 263.20, 264.70, 265.70 (requiring the Uniform Hazardous Waste Manifest to describe the waste, the container, the quantity, and the facility of storage). The Manifest must originate with the waste generator, pass to the transporter, and then be accepted by the accepting facility.

39. *Id.*

40. 42 U.S.C. § 6928 (Supp. II 1984). The EPA may, pursuant to an order assessing a civil penalty, suspend or revoke a hazardous waste handler's permit or demand up to a $25,000 per day penalty. *Id.* A person who is convicted of violating any provision of section 6928(d) can be sentenced up to two years in prison, or be fined up to $500,000 for each day of the violation. *Id.* § 6928(d).

EPA has specifically listed as hazardous (for example, specific wastes generated by particular industries) and wastes that fail certain tests pertaining to the characteristics of the waste itself (for example, ignitability, corrosivity, reactivity, and toxicity).[41] There are a few exceptions, although small quantities of the hazardous wastes are minimally regulated.[42] As a result, thousands of wastes fall within this expansive definition and are subject to the RCRA regulatory program.

Pursuant to its general RCRA regulatory authorization, EPA promulgated regulations governing the export of hazardous waste in 1980.[43] When Congress amended RCRA in 1984, it added requirements specifically governing the export of hazardous waste to foreign countries.[44] This amendment modified EPA's existing export program requiring the consent of the importing country before any export of waste.[45] It also expressly provided that a copy of the consent document must be attached to the manifest accompanying each shipment of waste.[46]

EPA has now adopted new regulations implementing the RCRA requirements.[47] The export requirements apply to all exports of waste which the RCRA defines as hazardous.[48] To export hazardous waste, a party[49] must provide EPA with advance written notification of the export.[50] The export notice may cover multiple shipments of that type of waste for a twelve month period.[51] This notice must occur sixty days

41. 40 C.F.R. § 261 (1988).

42. *See generally, id.* § 261.5 (defining small quantities of hazardous waste as no greater than 100 kilograms per month).

43. 40 C.F.R. §§ 262-263 (1988). The 1980 export regulations required an exporter to notify EPA each year before the initial shipment of the waste. *Id.* § 262.53.

44. 42 U.S.C. § 6938 (Supp. II 1984).

45. *Id.*

46. *Id.*

47. 40 C.F.R. §§ 262.50-.57 (1988).

48. *Id.* § 261.3 (defining a hazardous waste); Comment, *U.S. Controls on International Disposal, supra* note 6, at 781 n.59 (noting that spent industrial ethyl alcohol is exempt from EPA domestic regulation, but not from the export requirements).

49. 40 C.F.R. § 262.53(A) (1988). The "primary exporter" must provide the notification before such waste is scheduled to leave the United States. *Id.* A "primary exporter" refers to the party exporting the waste or to the broker arranging for disposal in a foreign nation, and not to the transporter of the waste. *Id.*

50. *Id.* The notice must describe: the waste (including the EPA hazardous waste number, Department of Transportation proper shipping name, and the hazardous class); the frequency of export and the time period over which it will occur; the total quantity of the waste; all ports of departure and entry; a description of the means of transport; the volume of disposal; the name of the receiving party; and the name of any transit country through which the waste will pass and the length of storage in that transit country. *Id.* § 262.53(a)(2)(i-viii).

51. 40 C.F.R. § 262.53(a) (1988).

before the exporter intends to move the waste off-site.[52]

After receiving a complete notification,[53] EPA and the United States Department of State contact the receiving country and request approval to export the waste.[54] As part of that notice, EPA provides the receiving nation with copies of applicable regulations governing handling of that waste in the United States. Once the receiving country has consented in writing, EPA provides the exporter with the consent, including any requirements imposed by the receiving country on receipt or disposal of the waste.[55] The waste may then be exported subject to RCRA manifest requirements.[56] First, the written consent must accompany the waste at all times after export.[57] Second, the transporter must comply with RCRA transport requirements.[58] Third, the exporter must make conscious efforts to determine if the waste arrived at its proper destination.[59] Finally, the exporter must confirm that the waste arrived at the designated facility.[60] If the waste does not arrive or it arrived with some discrepancy from the manifest, the exporter must file an exception report with EPA,[61] retain records relating to the export,[62] and file an annual report identifying the total amount of waste it handled in that year.[63]

A waste may also be exported to a nation if the United States has entered into a bilateral agreement with that nation regarding such ex-

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52. *Id.*

53. *Id.* § 262.53(e) (1988). The EPA determines when the application is complete. *Id.* If a request for confidentiality is made to protect trade secrets, the application is not complete until the claim is resolved pursuant to 40 C.F.R. § 260.2. *Id.*

54. *Id.* § 262.53(e) (1988).

55. *Id.* § 262.53(f) (1988). The EPA will also notify the primary exporter of withdrawal of a prior consent or of any responses from transit countries. *Id.*

56. *Id.* § 262.54 (enumerating exceptions to general manifest requirements of 40 C.F.R. §§ 262.2-.23).

57. *Id.* § 262.52(c) (requiring consent also to be attached to the manifest unless exported by rail or water).

58. *Id.* § 262.50 (requiring transporters to comply with 40 C.F.R. § 263).

59. *Id.* §§ 262.54(f), 262.55. The primary exporter must require the consignee to confirm in writing the delivery of hazardous waste to that facility and to describe any significant discrepancies between the manifest and the shipment. *Id.* § 262.54(f).

60. *Id.* § 262.54(f). An exception report must be filed if certain conditions are not met. *Id.*

61. *Id.* §§ 262.54-.55.

62. *Id.* § 262.57.

63. *Id.* § 262.56. The annual report must summarize the types, quantities, frequency, and ultimate destination of all hazardous waste exported during the previous year. *Id.* The annual report must also contain a description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated and a description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years. *Id.*

ports.[64] An exporter must still provide written notice to EPA prior to an export. The bilateral agreement, however, provides the consent, so that written consent need not be obtained. To date, the United States has entered into such agreements with Mexico and Canada,[65] and government officials have announced plans to increase the number of agreements.[66]

2. *Problems with the Export Program*

Implementation of this export program has revealed several major problems. Various bills have been introduced and hearings held to address these deficiencies.[67] The most important problem involves the issue of identifying the waste and activities that are subject to the requirements of the program. The export regulations only apply to wastes that EPA has defined as "hazardous" under RCRA.[68] Although the United States has an expansive definition for such wastes,[69] various wastes in need of regulation have escaped the definition's scope. For example, wastes such as the incinerator ash carried by the *Khian Sea*[70]

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64. 42 U.S.C. § 6928 (Supp. II 1984).

65. Agreement on the Transboundary Shipments of Hazardous Wastes and Hazardous Substances, United States-Mexico, *opened for signature* Nov. 12, 1986, *reprinted in* 26 I.L.M. 25 (1987) (enters into force upon exchange of notes stating that each party has completed its necessary internal procedures); Agreement Concerning Transboundary Movements of Hazardous Waste, United States-Canada, *opened for signature* Oct. 28, 1986, *reprinted in* 26 I.L.M. 593 (1987).

66. *Thirty-four Countries*, *supra* note 1, at 159-61; *U.S. Would Tie Waste Exports to Bilateral Agreements, Thomas Says*, 11 Int'l Env't Rep. (BNA) 472 (Sept. 14, 1988) (stating that bilateral agreements would be the basis for the export of toxic waste under an approach being considered by the United States, rather than shipment-by-shipment determinations as is now the case).

67. *See* H.R. REP. NO. 5434, 100th Cong., 2d Sess. (1988) (forwarding a bill to ensure that solid waste exported from the United States to foreign countries is managed to protect human health and the environment); H.R. REP. NO. 2525, 101st. Cong., 1st Sess. (1989) (putting forth a bill to amend the Solid Waste Disposal Act to ensure that any solid waste exported from the United States to foreign countries is managed to protect human health and the environment); *see also Bush Administration*, *supra* note 2, at 437 (stating that the Bush administration has repeatedly stated that it intends to introduce legislation consistent with the Convention). Although the Bush administration did not introduce legislation by the end of the year, the remaining obstacle to such legislation (the definition of recycled) was resolved, laying the groundwork for the legislation. *EPA Decides Against 'Recycling Definition' for Waste Export Bill*, INSIDE EPA, Dec. 15, 1989, at 12-13.

68. 40 C.F.R. § 262.50 (1988).

69. *Id.* § 261.3.

70. *See supra* note 21 and accompanying text (discussing the problems of disposing of the Philadelphia municipal ash). In fact, two recent cases affirmed that ash remaining after the incineration of household waste is exempt from regulation if the facility meets specific criteria. Environmental Defense Fund, Inc. v. Chicago, Civ. No. 84-C-3045, 30 E.R.C. 1624 (N.D. Ill. Nov. 8, 1989) (1989 WL 154009); Environmental

are not defined as hazardous and are therefore not subject to the export regulation program. Thus, even with the extensive United States regulatory export program, certain dangerous wastes have fallen outside regulation.

Another problem is the different treatment the RCRA affords to small quantities of wastes. If the amount of the hazardous waste does not exceed a certain established minimal quantity, the regulatory program, including export requirements, is not applicable to the same extent.[71] Furthermore, the RCRA regulations do not apply to an entity that is "recycling" rather than disposing of hazardous waste.[72] It is not always clear into which group a waste should be classified.

In addition, EPA's role in the export process is inadequate. Its function is limited to a ministerial task: to ensure that notice has been given. The agency does not substantively evaluate the waste, nor does it assess the capacity of the receiving facility to treat the waste. Instead, EPA merely certifies that the relevant foreign country has consented to receipt of the waste.[73] Moreover, EPA's export oversight program has not even accomplished that limited task. The program was described by the EPA inspector general at Congressional hearings in 1988 as in "shambles."[74] The program is inadequately staffed to identify exporters who fail to completely analyze or list the constituent elements of the waste being shipped, or to determine the capacity of the receiving facility to dispose of that waste. EPA also may be failing to observe many illegal exporters who are exporting without any notice to EPA or the importing country. In short, enforcement of the program is lacking.

Finally, the regulatory program requires only that the receiving country consents to receipt.[75] Transit countries receive notice of the transport of the waste, but their prior consent is not necessary for any shipment.[76] Thus, a shipment could pass through a transit country before that country has had an opportunity to evaluate the appropriateness of such activity. However, recent shipping events, particularly oil spills, reveal the vulnerability of a transit nation to accidents.

Defense Fund, Inc. v. Wheelabrator Technologies, Inc., 725 F. Supp 758, 30 E.R.C. 1609 (S.D.N.Y. Nov. 22, 1989).

71. 40 C.F.R. § 261.5 (1988).

72. *See id.* (referring to small quantity generators); *id.* §§ 261.1-.2, 261.6 (referring to recycled materials).

73. *Id.* §§ 262.52-.53.

74. Anderson, *supra* note 18, at 68.

75. 40 C.F.R. § 262.52 (1988).

76. *Id.* §§ 262.50-.57.

B. EUROPEAN COMMUNITY REQUIREMENTS[77]

The European Community (EC) member states[78] generate roughly thirty-five million metric tons of waste annually, of which ten to fifteen percent is disposed of in countries other than the ones generating the waste.[79] To handle the extensive movement of hazardous waste, the EC has adopted requirements governing such shipment. Because its members support such shipments, the EC program also regulates rather than bans export of hazardous waste.

1. The Export Program

Two directives[80] underlie the EC regulation of hazardous wastes: the 1975 Directive on General Principles of Waste Disposal (1975 Directive) and the 1978 Directive on Toxic and Dangerous Wastes (1978 Directive).[81] The 1975 Directive requires Member States to ensure that waste is disposed of without harm to human health or the environment. Member States are to develop disposal plans, create permissible systems for transportation, implement storage and disposal facilities, and

77. *See* Lomas, *Environmental Protection, Economic Conflict and the European Community*, 33 MCGILL L.J. 506, 515-32 (1988) (discussing the dynamics of the inter-relationship between the environmental and economic policies of the European Community); Kramer, *The Single European Act and Environment Protection: Reflections on Several New Provisions in Community Law*, 24 COMMON MKT. L. REV. 659-88 (1987) (analyzing the procedure for implementing the EC environmental provisions). *See generally*, Comment, *A New EC Environmental Directive*, *supra* note 14, at 95-115 (discussing the development of the EC Directive on Hazardous Waste, focusing on the Final Directive of 1984).

78. The EC consists of twelve member states: Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, and the United Kingdom. Single European Act, *opened for signature* Feb. 17, 1986, *reprinted in* 25 I.L.M. 503 (1986).

79. Comment, *A New EC Environmental Directive*, *supra* note 14, at 96.

80. Three kinds of actions are binding upon EC members: regulations, directives, and decisions. Treaty Establishing the European Economic Community, Mar. 25, 1957, 1973 G.R. Brit. T.S. No. 1 (Cmd. 5179-II) (official English trans.), 298 U.N.T.S. 11, art. 189 (1958) (unofficial English trans.). A directive prescribes the general requirements that each member country is to incorporate into its own nation's laws within a set period of time. *Id.* The individual nation has the discretion to decide what form or method it shall use to satisfy the result to be achieved. *Id.* If a Member State fails to implement a directive, or does so inadequately, another Member State may bring an action against the Member State in the European Court of Justice. *Id.* art. 170. A regulation has general application and each Member State must comply with the exact language and requirements. *Id.* art. 189. A decision is binding upon the particular entity-state or individual-to whom it is addressed. *Id.*

81. *Counsel Directive on General Principles of Waste Disposal*, 18 O.J. EUR. COMM. (No. L 194) 39 (1975) [hereinafter 1975 Directive]; *Directive on Toxic and Dangerous Waste*, 21 O.J. EUR. COMM. (No. L 84) 43 (1978) [hereinafter 1978 Directive].

track the movement of hazardous wastes.[82] The 1978 Directive identified twenty-seven generic types of waste and required member states to provide for proper transportation, treatment, and disposal of such wastes.[83] In general, however, the 1978 Directive left it up to each member state to define hazardous waste and to develop its own regulatory system.[84]

In 1984, the EC adopted a directive (1984 Directive) regarding the transfrontier movement of hazardous waste within the EC and of that exported to nations outside the EC.[85] In general, the 1984 Directive establishes a compulsory notification and tracking system of hazardous wastes. In 1986, the EC amended the 1984 Directive to allow export of waste to non-EC countries only after the receiving country agrees to accept it and demonstrates a capacity for handling the hazardous waste.[86]

Before an EC country may export a hazardous waste, the holder of the waste must notify the receiving, exporting, and transit nations of the shipment.[87] Notification is made through a "uniform consignment note," which is similar to the manifest in the United States system.[88] The note provides information about the waste, its destination, its route, and its source;[89] it also indicates if any insurance coverage applies to the shipment.[90] In addition, the holder of the waste must demonstrate a contractual relationship with the ultimate recipient of the waste, who, in turn, must have the capacity to handle the waste.[91]

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82. 1975 Directive, *supra* note 81.

83. 1978 Directive, *supra* note 81.

84. *Id.*; *see Parliament Condemns Commission's Failure to Ensure Implementation of Waste Directive*, 7 Int'l Env't Rep. (BNA) 132 (1984) (detailing the problems of implementation of the directives as a result of allowing the Member States to develop their own regulatory systems).

85. *Council Directive on the Supervision and Control Within the European Community of the Transfrontier Shipment of Hazardous Waste*, 27 O.J. EUR. COMM. (No. L 326) 31 (1984) [hereinafter 1984 Directive].

86. *Council Directive of 12 June, 1986 Amending Directive 84/631/EEC on the Supervision and Control Within the European Community of the Transfrontier Shipment of Hazardous Waste*, 29 O.J. EUR. COMM. (No. L 181) 13 (1986) [hereinafter 1986 Directive].

87. 1984 Directive, *supra* note 85, at 33.

88. *Compare id.* art. 3(2) (requiring notification to be provided by means of a uniform consignment note) *with* 40 C.F.R. §§ 262.52-.54 (requiring notification by means of EPA Uniform Hazardous Waste Manifest Form).

89. 1984 Directive, *supra* note 85, annex 1. The notification is divided into five parts: (1) notification information; (2) acknowledgement by member states; (3) information on transport arrangements; (4) acknowledge waste by the ultimate disposer; and (5) customs endorsement for waste shipped outside of the European Community. *Id.*

90. *Id.* art. 3(3).

91. *Id.*

The holder may not ship the waste unless the receiving country has provided consent.[92] A receiving EC country may condition receipt of hazardous wastes, although if the exporter satisfies the conditions, the country may not reject the waste.[93] Similarly, transit states may not ban shipments through their territory, but they may impose conditions on the shipment. Finally, once a shipment has been authorized, the holder must package and label the hazardous waste in accordance with the 1986 Directive requirements, identify the nature, composition, and quantity of the waste, and provide accident instructions.[94]

The 1986 Directive does not require producers, shippers, or disposers of hazardous waste to submit annual reports; however, they must retain records of hazardous waste exports.[95] Each EC member state must also submit biennial reports regarding the transboundary movement of hazardous waste within that nation.[96]

2. *Problems with the Export Program*

Implementation of the hazardous waste export program has encountered several major problems.[97] First, the EC member states have been extremely slow adopting the necessary implementing legislation and regulations. As of the fall of 1988, most EC members had not enacted the necessary statutes to implement the 1984 Directive.[98] The failure of

92. *Id.* art. 4 (stating that a transfrontier shipment of hazardous waste covered by the Hazardous Waste Directive may not be executed before the competent authority of the member state has acknowledged receipt of the notification).

93. *Id.*

94. *Id.* art. 8(1).

95. *Id.* art 13. These records must contain information on: (1) "shipments of waste arising from major accidents"; (2) "any significant irregularities in transfrontier shipment of waste covered by this Directive which has involved or may yet involve serious hazards for man or the environment"; and (3) the quantity and type of waste imported to and exported from the member state. *Id.*

96. *Id.*

97. *Parliament Condemns Commission's Failure to Ensure Implementation of Waste Directive*, 7 Int'l Env't Rep. (BNA) 132 (May 9, 1984).

98. *Clinton Davis Hits Lack of Enforcement as Contributing to 'Democrats Deficit'*, 12 Int'l Env't Rep. (BNA) 580 (Dec. 13, 1989); *Clinton Davis Demands Nine Countries Carry Out EC Toxic Waste Export Legislation*, 11 Int'l Env't Rep. (BNA) 469 (Sept. 14, 1988) (discussing how Clinton Davis, the European Community's Environmental Affairs Commissioner, urgently demanded rapid nation implementation of European Community legislation on toxic waste exports); *EC Rules on Waste Exports Often Ignored; Ministers Disagree on Tightening Standards*, 11 Int'l Env't Rep. (BNA) 375 (Sept. 14, 1988) [hereinafter *EC Rules*] (detailing how European Community Commissioner proposed steps to curb the abuses including: implementing European Community Directives 84/631 and 86/279 with "maximum stringency"; supervising their full implementation; proposing stronger implementing requirements; and examining whether further European Community legislation is needed for management of the sites).

the members to adopt implementing language is significant in that the 1984 Directive itself has no binding effect on an exporter of hazardous waste. Each member country must impose requirements to regulate the export of hazardous waste. As a practical matter, therefore, for the past several years, exporters of hazardous waste in the EC have not been subject to limitations on the transfrontier movement of hazardous waste.

The 1984 Directive makes the definition of hazardous waste discretionary for member states. Although the 1984 Directive identifies a list of hazardous wastes, each individual country is to determine what quantity and concentration of the listed waste constitutes a hazardous waste. In fact, most countries have defined such wastes differently. As a result, there has been considerable confusion and little uniformity in application of the program throughout the EC.[99] Such lack of definition throws the whole program into disarray. Some countries have pointed to such inconsistencies and other potential problems to justify their failure to implement the 1984 Directive.[100]

Not surprisingly, the EC has proposed to modify its 1984 Directive to address the problems posed by inconsistent and different definitions of hazardous waste within the EC, and to modify its notification scheme.[101] The EC proposed to modify its program to clarify the definitions of the terms hazardous waste, mixtures, and disposal.[102] It would define hazardous waste by listing precise criteria in terms of materials and properties of the waste.[103] In addition, the EC has proposed to create an EC wide information bank which would track wastes and the capacity of various facilities to handle certain types of waste.[104] Finally,

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99. *ECC to Revise Notification Scheme for Transboundary Shipment of Wastes*, 12 Int'l Env't Rep. (BNA) 531 (Nov. 8, 1989) [hereinafter *ECC to Revise Notification Scheme*].

100. *Britain to Pressure EC Member States for Clarification of Movement of Wastes*, 12 Int'l Env't Rep. (BNA) 443 (Sept. 13, 1989) [hereinafter *Britain to Pressure*].

101. *ECC to Revise Notification Scheme*, *supra* note 99, at 531-32; *Environmental Ministers Fail to Agree on Proposal to Amend Waste Directive*, 12 Int'l Env't Rep. (BNA) 484 (Oct. 11, 1989); *EEC Looking at Waste Control Methods, Including Revisions of Existing Directives*, 12 Int'l Env't Rep. (BNA) 478 (Oct. 11, 1989) [hereinafter *EEC Looking*]; Claveloux, *Tighter Control of Waste Management, Disposal of Toxic Waste Envisioned in Proposals Made by European Community Commission*, 11 Int'l Env't Rep. (BNA) 449 (Aug. 10, 1988); *EC Rules*, *supra* note 98, at 375. The European Community is concerned that different definitions of hazardous waste will result in different standards and thus unequal competition within the market. To date, the EC members have been unable to reach agreement on these matters.

102. *EEC Looking*, *supra* note 101, at 478-79.

103. Claveloux, *supra* note 101, at 449-52.

104. *Id.*

the EC has proposed to clarify its enforcement authority to enable member states to punish violators and to enforce the requirements of transfrontier movement of hazardous waste.[105]

C. OECD REQUIREMENTS

The Organization for Economic Co-operation and Development (OECD)[106] has adopted several decisions and recommendations concerning the export of hazardous waste.[107] In its first action relating to transfrontier movement of hazardous waste, the OECD directed each of its members to control the movement of hazardous waste and ensure that authorities in countries affected by the waste are provided with adequate and timely information about the wastes.[108] The OECD further recommended that for transactions between member states, an agreement from the receiving nation should precede export and the exporter is to provide information on the origin, nature, composition, and quantity of the waste.[109]

Subsequently, the OECD extended the same program to exports to nonmember countries. The specific requirements for its members are: first, to provide for authority to prohibit exports when necessary; second, to apply controls to non-OECD countries at least as stringent as those applicable to OECD members; third, to prohibit export of hazardous wastes to non-OECD countries without consent of the country and without notice to transit nations; and fourth, to prohibit the export of hazardous waste to non-OECD members, unless the wastes are to be disposed of at an adequate disposal facility.[110] The OECD's definition of hazardous waste adheres to the definition given to the term by the

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105. *Id.*

106. Convention on the Organization for Economic Cooperation and Development, Dec. 14, 1960, 12 U.S.T. 1728, T.I.A.S. No. 4891 (entered into force Sept. 30, 1961). OECD members include: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. *Id.*

107. Comment, *U.S. Controls on International Disposal*, *supra* note 6, at 780 n.52 (stating that OECD decisions are binding on its members, recommendations are not); *see infra* notes 108-13 (discussing the several OECD legislative actions concerning the export of hazardous waste).

108. *Decision and Recommendation of the Council on Transfrontier Movements of Hazardous Waste*, OECD Doc. C(83) 180 (Feb. 13, 1984), *reprinted in* 23 I.L.M. 214 (1984).

109. *Id.*

110. *Council Decision-Recommendation on Exports of Hazardous Wastes from the OECD Area*, OECD Doc. C(86) 64 (June 5, 1986), *reprinted in* 25 I.L.M. 1010 (1986).

country through or to which the waste was going.[111] In 1988, the OECD modified its definition of hazardous waste to include a core group of specifically listed wastes.[112] In addition, hazardous waste refers to any waste defined as hazardous by the exporting or importing member country.[113]

The OECD program prescribes general guidance, but does not specify the details for its implementation. As a result, considerable debate has surrounded the scope of the program's requirements.[114] For example, similar to the United States manifest[115] and the EC consignment note,[116] the OECD program calls for tracking documentation. There has been much discussion about the form of such documentation.

Similarly, as with other export programs, much debate surrounded the extent and type of notification to be provided to transit and importing countries. Although the OECD program calls for consent before shipment, the nature of such consent is unclear. Potentially, it could include: prior informed consent (actual consent); prior informed choice (implied if no response within a certain time period); or prior notification (right to reject wastes only if required by laws of importing country). Because of the volume of transfrontier shipments of hazardous waste to other OECD members, prior informed consent could be dis-

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111. *Id.* at 1,013.

112. *Council Decision on Transfrontier Movements of Hazardous Wastes*, OECD Doc. C(88) 90 (May 27, 1988) *reprinted in* 28 I.L.M. 257 (1989).

113. *Id.*

114. *See, e.g., Canadian Officials Confused by U.S. Position on Negotiating Acid Rain Treaty*, 11 Int'l Env't Rep. (BNA) 115 (Feb. 10, 1988); *Pace Slow on Proposed OECD Agreement on Transfrontier Toxic Waste Movement*, 11 Int'l Env't Rep. (BNA) 220 (Apr. 13, 1988); *OECD's Environmental Focus Remains on Four Major Areas, Environmental Chief Says*, 11 Int'l Env't Rep. (BNA) 282 (May 11, 1988); *Group Proposes Notification Procedures for Trans-border Hazardous Waste Shipments*, 10 Int'l. Env't Rep. (BNA) 57 (Feb. 11, 1987); *OECD Policy Group Backs 30-Day Notice on Transfrontier Hazardous Waste Exports*, 10 Int'l Env't Rep. (BNA) 154 (Apr. 8, 1987); *OECD System on Transborder Waste Shipments Faces Legal Snags from U.S., EEC Systems*, 10 Int'l Env't Rep. (BNA) 199 (May 13, 1987); *Governing Council Endorses Blueprint for Development into Twenty-First Century*, 10 Int'l Env't Rep. (BNA) 314 (July 8, 1987); *U.S. Position Seen Jeopardizing Work on Transboundary Waste Shipments*, 10 Int'l Env't Rep. (BNA) 371 (Aug. 12, 1987); *No Progress Reported From OECD Session on Regulating Transport of Hazardous Waste*, 10 Int'l Env't Rep. (BNA) 580 (Nov. 11, 1987); *Lykke, Outgoing OECD Official, Urges Change in Viewing Transboundary Problems*, Int'l Env't Rep. (BNA) 651 (Dec. 9, 1987). OECD officials have recently termed the Basel Convention an interim step, with the real goal being waste minimization. *OECD Official Says Basel Convention Interim Step in Governments' Waste Efforts*, 12 Int'l Env't Rep. (BNA) 542 (Nov. 8, 1989).

115. *See supra* notes 38-39 and accompanying text (explaining that the manifest must describe the waste and accompany it at all times).

116. *See supra* notes 88-89 and accompanying text (describing the contents of the consignment note, including destination route, and source).

ruptive as it could delay or interfere with shipments. At the same time, the Basel Convention mandates such consent.[117] To accommodate both concerns, some OECD officials have proposed applying different rules for shipments outside the OECD from those within the OECD.

D. WORLD BANK REQUIREMENTS

The World Bank provides developing countries with loans to assist in economic development projects. As part of each loan, the World Bank prescribes environmental guidelines. Failure to satisfy these requirements can result in the termination of funding. World Bank regulations forbid the export of hazardous waste in any project that it funds.[118] The Bank will not finance any project that involves disposal of hazardous waste from another country, nor will it pay for the shipment or disposal of any hazardous waste in any developing country.[119] The World Bank further urges that others limit hazardous waste exports to those instances in which environmentally sound transportation and disposal requirements will be met and only after prior informed consent has been provided by the receiving country.[120]

III. BASEL CONVENTION

A. HISTORY OF ITS DEVELOPMENT

In 1987, UNEP adopted the Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes (Cairo Guidelines), which set forth recommendations regarding the export of hazardous waste.[121] The Cairo Guidelines call for notification to receiving and transit nations of any export and consent by those nations prior to export. The exporter is to ensure that the disposal site is adequate to handle the hazardous waste and that disposal complies with requirements at least as stringent as those in the exporting nation.[122]

Following the adoption of the Cairo Guidelines, UNEP sought to embody similar principles in a Convention.[123] Work began with an or-

117. BASEL CONVENTION, *supra* note 1, art. 6, para. 4.
118. World Bank News Release 89/51.
119. *Id.*
120. *Id.*
121. *Cairo Guidelines and Principles for the Environmentally Sound Management and Disposal of Hazardous Wastes,* UNEP/WG. 122/3 (Dec. 1985) [hereinafter *Cairo Guidelines*].
122. *Id.*
123. At the time it adopted the Cairo Guidelines, the UNEP Governing Council authorized the formation of an *ad hoc* working group of legal and technical experts to develop a Convention on hazardous waste export.

ganizational meeting in Budapest, Hungary, in October 1987. Conflicting views on major matters impeded reaching an agreement. Some countries pressed for a complete ban on the trade of hazardous waste, while others urged for minimal regulation.[124]

The debate ultimately focused, however, on several issues, the primary one being the nature of regulation. In particular, considerable discussion addressed what waste to regulate. Views differed substantially as to what notice or information about the waste should be provided to receiving nations. The participants also disagreed over what consent was required before an export occurred. While some countries pushed for written consent before export, others maintained that such consent should be implied if no response was received within a certain time period. The member states also debated what rights to extend to transit nations. Should such nations be required to provide written consent, implied consent, or no consent? In defining the territory of a transit state, how are territorial waters to be determined? Finally, the participants struggled with enforcement alternatives. How would the Convention be enforced? Who would oversee enforcement? What sanctions should be imposed?

B. TERMS OF THE CONVENTION

The Basel Convention regulates, rather than bans, the export of hazardous waste. The Convention provides for a management scheme very similar to the approach employed in the United States and the EC. Accordingly, implementation may encounter many of the same shortcomings these other export programs have confronted.

The Basel Convention applies to the export of "hazardous wastes" and "other wastes."[125] Hazardous wastes are defined to include certain listed wastes and waste streams.[126] Such a listed waste is not a hazardous waste, however, unless it displays one of the "hazardous characteristics" delineated in an Annex III to the Convention.[127] A waste, therefore, must be both a listed waste and have some hazardous characteristic to be defined as a hazardous waste. In addition, any waste defined by law in an exporting, importing, or transit country as a

124. *See supra* note 3 and accompanying text (stating that most developing countries demanded prior informed consent before allowing transhipment).

125. BASEL CONVENTION, *supra* note 1, art. 1, para. 1, 2.

126. *Id.* at Annex I (defining waste streams—such as medical wastes, pharmaceutical wastes, mining wastes, chemical wastes— and specific wastes—such as lead, asbestos, inorganic cyanides).

127. *Id.* at Annex III (listing a variety of "hazardous characteristics"—such as flammability and toxicity).

hazardous waste is also a hazardous waste.[128] "Other wastes" include any specifically listed wastes on Annex II to the Convention.[129]

The Basel Convention forbids the export of any hazardous or other waste until the importing and transit nations have provided written authorization.[130] As part of that authorization, the importing nation must confirm the existence of a contract between the "exporter and the disposer specifying environmentally sound management of the wastes in question."[131]

To receive such authorization, an exporter must provide written notification to the designated "competent authority"[132] of the importing nation and of any other nation through which the waste will be transported.[133] The notification must include specified information about such things as the nature and amount of the waste, the waste generator, and the ultimate disposal.[134] The export may not commence until the transit and importing countries agree in writing to the export.[135] In addition to approving the request, the transit and importing countries are authorized to deny permission, request additional information, or approve subject to specified conditions.[136] Although a transit country is to respond within sixty days, a time deadline is inapplicable to the importing nation's response.[137]

Once export approval is provided, the export may occur. A document detailing the waste, comparable to the manifest or uniform consignment note, must accompany the waste at all times.[138] Insurance and other financial assurance requirements also apply to movement of the waste.[139] Once disposal is complete, the disposer must notify the exporter and the exporting nation.[140] If, for whatever reason, the waste is

128. *Id.* art. 1, para. 1(b). Every signatory is to provide a list of such wastes to UNEP within six months of signing the convention. *Id.* art. 1.

129. *Id.* at Annex II (listing two wastes: wastes collected from households and residues arising from the incineration of household wastes).

130. *Id.* art. 6.

131. *Id.* art. 6, para. 3(b).

132. *Id.* art. 5, (providing for each nation to identify a "competent authority," along with the "focal point" to act as the contact point for all matters, filings, and requests related to the export of hazardous waste).

133. *Id.* art. 6, para. 1.

134. *Id.* art. 6 (providing that an exporter is to provide the information identified on Annex V(A)). Annex V(A) contains twenty-one separate items. *Id.* at Annex V(A).

135. *Id.* art. 6, para. 3.

136. *Id.* art. 6.

137. *Id.* art. 6, para. 4, 3(b).

138. *Id.* art. 6, para. 9 (stating that the movement document must be signed upon delivery or receipt of wastes by each person who takes charge of such waste).

139. *Id.* art. 6, para. 11.

140. *Id.* art. 6, para. 9.

not or cannot be imported or disposed of, the exporting nation must accept the waste.[141]

The Basel Convention specifies that no country shall export to a country which has prohibited imports of particular wastes.[142] Signatories of the Convention are also precluded from exporting to nonsignatories.[143] Exports between countries that would otherwise be banned, however, may occur if a bilateral agreement permits such export.[144] In such cases, the agreements are to conform to sound waste management principles.

C. Implementation Considerations

Fundamental questions surround implementation of the Basel Convention. Any export program must address what waste is to be regulated, how it is to be regulated, what information is to be provided to other countries, and how to monitor and enforce any such program. Yet, in most respects, the Convention largely tracks the requirements of the United States and EC export programs. The perceived failures of these programs, however, was what triggered the adoption of the Convention. In fact, with the extension of the export program to additional countries, most of which lack the expertise and infrastructure found in the developed countries, the likelihood for confusion and problems may be expanded by the Convention.

1. Need for Harmonization of Definitions and Standards

Any international agreement must provide for uniform treatment of hazardous waste by its signatories. Varying interpretations and diverging export programs in different countries precludes the effective implementation of an international accord. Furthermore, harmonization of requirements and standardization of terminology aids implementation.[145] In an effort to provide such standardization, the OECD has proposed guidelines and standards for worldwide applicability to multinational corporations.[146] The Basel Convention has not achieved

141. *Id.* art. 8.
142. *Id.* art. 4, para. 1(b).
143. *Id.* art. 7.
144. *Id.* art. II.
145. Handl, *Environmental Protection and Development in Third World Countries: Common Destiny-Common Responsibility*, 20 N.Y.U. J. Int'l L. & Pol. 603, 619-20 (1988).
146. *Id.*; Comment, *U.S. Controls on International Disposal*, *supra* note 6, at 784-85 (stating OECD has developed specific guidelines for multinational enterprises to avoid environmental risks associated with hazardous waste); Bailey & Nanda, *supra*

such uniformity. As such, it will leave interpretation of the myriad requirements up to the discretion of the individual nation. In particular, the definition of hazardous waste is of paramount importance as it determines what wastes are subject to the Convention. The definition must not be so broad as to include products not appropriate for regulation nor so narrow as to exempt dangerous waste.

Unfortunately, virtually every existing export program has defined hazardous waste differently. What is a hazardous waste in one country is often not a hazardous waste for its neighbor. Even among the industrialized countries, the meaning of hazardous waste varies dramatically. For example, Canada, Denmark, France, Germany, Japan, the United States, and the United Kingdom all rely on different lists or criteria for determining what is a hazardous waste.[147] The different definitions of hazardous waste have hindered implementation of the EC directive on transboundary movement of hazardous waste. Some countries have pointed to confusion surrounding the definition of hazardous waste as the reason for failing to adopt implementing regulations. Other countries have dropped enforcement actions finding that the definition was sufficiently ambiguous to preclude effective enforcement. In short, without a certain definition of hazardous waste, the Convention will face severe implementation problems.

Beyond what wastes are identified as hazardous, each program must wrestle with how much of any listed waste renders it a hazardous waste for purposes of regulation. Does any trace amount of a listed waste in a substance categorize that waste as a hazardous waste, or must the amount of the listed substance exceed some threshold level? Does it depend on the substance? Similarly, if a waste is mixed with a nonhazardous waste or if it is to be recycled, when does it cease to be a hazardous waste? Mixed and recycled wastes may not need to be regulated in the same fashion as hazardous waste. At the same time mixing or recycling classifications may exempt dangerous waste from regulation if not defined carefully. For example, the German company Weber,

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note 6, at 159-60 (discussing OECD rules for standard terminology and procedures to harmonize international requirements).

147. *See*, Yakowitz, *Identifying, Clarifying, and Describing Hazardous Wastes*, 11 INDUSTRY & ENV'T 3 (Jan.-Mar. 1980) (available from UNEP, Washington, D.C.); Prabhu, *Toxic Chemicals and Hazardous Wastes: An Overview of National and International Regulatory Programs*, 11 Int'l Env't Rep. (BNA) 692 (Dec. 14, 1988) (discussing the various definitions of hazardous waste among developed countries such as France, the United Kingdom, the United States, and West Germany); *see also Britain to Pressure*, *supra* note 100, at 443 (discussing Great Britain's efforts for clarification of movement of waste); Comment, *U.S. Controls on International Disposal*, *supra* note 6, at 776 n.8 (stating that nonuniformity of treatment and disposal standards causes exports of hazardous waste within Europe).

Ltd. lawfully mixed woodchips with hazardous waste, thereby transforming a "hazardous waste" into a "burn material" exempt from the definition of hazardous waste in Germany and allowing for vastly more inexpensive disposal.[148] This waste was exported to Turkey, where it sat in the open leaching PCB's mixed with woodchips into the ground.[149] Without clarity and uniformity in the Convention as to when wastes are hazardous mixtures or recycled, implementation will be difficult.

Similarly, the definition of hazardous waste must distinguish between those substances that are wastes and those that are products. Many products contain listed hazardous substances. A hazardous waste export program is not intended to regulate products.[150] Accordingly, the definition of hazardous waste must differentiate products from hazardous waste.

As part of the determination of wastes to be regulated, sampling and analysis methods for the waste must be specified. Differing laboratory protocols will produce different analytic results. Absent uniformity of such standards and measurement methods, a waste could be analyzed in two different countries with different conclusions as to whether it is hazardous.

Unfortunately, the Convention has not effectively resolved any of these questions. In particular, the meanings of waste, hazardous waste, and recycled materials are unsettled and, therefore, governed by the subjective determination of each individual country.[151] Standard analytic or sampling methodologies are not specified in the Convention.[152] As a result, it will be unclear whether many wastes are subject to the Convention.

The Basel Convention defines wastes as substances or objects which are intended to be or actually are disposed.[153] In turn, disposal refers to any operation listed on an Annex to the Convention.[154] That Annex lists fifteen different types of "disposal" activities (such as deposit into or onto land, land treatment, deep injection, or surface impoundment).[155] A waste, therefore, is any substance that is disposed of

148. Anderson, *supra* note 18, at 67.
149. *Id.*
150. *See* Lutz, *The Export of Danger: A View from the Developed World*, 20 INT'L L. & POL. 629, 644-43 (1988) (stating that the export of products is governed by a combination of federal statutes and agency regulations).
151. *Developed, Developing Countries*, *supra* note 3, at 376.
152. BASEL CONVENTION, *supra* note 1, art. 4, para. 8.
153. *Id.* art. 2, para. 1.
154. *Id.* art. 2, para. 4.
155. *Id.* Annex IV. The United States has struggled with the meaning of "discarded." Comment, *U.S. Controls on International Disposal*, *supra* note 6, at 783 n.83.

through one of the specifically identified activities. These specific activities listed, however, are not defined. Absent further guidance by UNEP, each country will determine whether a particular activity involves disposal. Different countries are likely to reach conflicting conclusions about whether a material is a waste because the descriptions of these activities are general.

The definition of hazardous waste is similarly flawed. "Hazardous waste" includes any waste that falls within a list provided in Annex I to the Convention, unless that waste does not possess any of the characteristics described in Annex III.[156] A "hazardous waste" also means any waste considered hazardous by law in the country of export, import, or transit.[157] In effect, the Convention defines hazardous waste as those wastes that fall within one of the specifically listed categories of waste in Annex I, or as defined by one of the countries affected by the export.

Annex I contains two lists: waste streams and specific substances.[158] First, the waste stream list includes such wastes as clinical waste from hospitals, pharmaceutical waste, and waste from wood preserving chemical operations.[159] No guidance or instructions, however, explain how to interpret these general categories. Thus, countries are likely to reach different conclusions about whether a waste is covered. Second, the specific substances include a number of constituents.[160] There is no indication, however, as to the amount of any of these substances that must be present in a waste in order for it to be hazardous.

Moreover, a specifically listed waste stream or hazardous substance is not hazardous if the waste does not display any of the characteristics identified in Annex III.[161] Annex III lists a number of hazardous characteristics, such as flammability, corrosivity, and explosiveness.[162] As with the other definitions, these are general and imprecise. The failure to identify analytic and measurement methodologies is particularly troublesome in this area. The determination of such qualities as flammability and corrosivity is not clear cut. Without guidelines to interpret these characteristics, countries will reach varying conclusions about whether or not a waste is hazardous.

Hazardous materials that are to be recycled are exempted from the

156. BASEL CONVENTION, *supra* note 1, art. 1, para. 1.
157. *Id.*
158. *Id.* at Annex I.
159. *Id.*
160. *Id.*
161. *Id.* art. 1, para. 1(a).
162. *Id.* Annex III.

definition of hazardous waste.[163] As with the other key terms, UNEP provides a list of activities to define recycled.[164] Similarly, the absence of clarity about the meaning of recycled will impede implementation of the Convention. Finally, the Convention does not address the dilemma posed by distinguishing products from wastes.

In short, the definition of hazardous waste is imprecise. Without certainty on this fundamental point, the Convention may be unenforceable.

2. *Disclosure of Information*

The Convention requires the exporting nation to give written notification to the importing nation and the latter to consent to receive the waste.[165] The notification must identify the nature and quantity of the waste to be exported.[166] The nature of the waste is to be described with reference to its most hazardous substance concentrations.[167] The applicable hazardous categories listed in Annex I are to be identified.[168]

Notification may be insufficient to enable a receiving country to determine the desirability of accepting the waste. Mere reference to the categories of waste streams and substances listed in Annex I raises the comparable concerns discussed with respect to the definition of hazardous waste. Describing a waste as a pharmaceutical waste does not convey sufficient information to determine the disposal needs of the waste.

Disclosure of the most hazardous components of the waste provides some additional insight into the proper method of disposal of the waste. However, even this information may be lacking. For example, of the 48,000 chemicals listed with EPA, little is known about the toxicity of 38,000 of them.[169] In effect, the appropriate handling and disposal for many wastes may not be clear. Further, even if the dangers of the substances are known, without assessing them in relation to the remainder of the composition of the waste, the recipient may be misled about the disposal needs for the waste. Moreover, if there are risks, notice about how to handle the waste may not filter down to the disposal facility because the notice is provided to the government and not to the facility.[170]

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163. *Id.* Annex IV(B).
164. *Id.*
165. *Id.* art. 6, Annex V.
166. *Id.*
167. *Id.* Annex V(A)(17).
168. *Id.*
169. Langone, *supra* note 14, at 47.
170. BASEL CONVENTION, *supra* note 1, art. 6; *see* Halter, *Regulating Information*

Conversely, the receiving country is to assure the exporting nation that the facility is competent to accept the wastes.[171] The information that must be communicated back to the exporting nation, however, provides little basis to evaluate the ability of the facility to handle the waste. The information flow in both directions, therefore, is not sufficient to allow for reasoned judgment.

Moreover, even if the content of the required notices is adequate, the developing countries may be unable to act on the information. Many developing countries lack the resources, expertise, or infrastructure to make a proper assessment.[172] Similar information disclosure and labeling requirement programs, including those of the United Nations, have been found wanting.[173] Without transferring the technology to the developing world to evaluate the information, "informed" consent may be a mirage. In light of the difficulties experienced in the other United Nations information programs and the expertise gap between exporter and importer, the hazardous waste export program is likely to encounter a similar fate. Partly because of this problem, developing countries have pushed for the transfer of technology of the waste exporting country to ensure for proper disposal.[174] The Convention does not impose such a requirement.

In short, the Convention provides inadequate assurances that the exporting country will provide sufficient meaningful information to the receiving nation to allow for an informed decision about the proper disposal of the waste. Similarly, the importing country may not know or disclose enough information about the disposal facility to enable the exporting nation to conclude that it is a proper facility. Without disclosure of such necessary information and the capacity to evaluate it, there is a high likelihood of disposal in facilities ill-equipped to handle

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Exchange and International Trade in Pesticides and Other Toxic Substances to Meet the Needs of Developing Countries, 12 COLUM. J. ENVTL. L. 20 (1987) (noting that in developing countries, governments often lack the resources to supply necessary information about hazardous substances to the facility handling the materials).

171. BASEL CONVENTION, *supra* note 1, art. 4, para. 2(b).

172. *UNEP Transboundary Transport Draft*, *supra* note 3, at 660; Handl, *supra* note 145, at 616.

173. Judy, *supra* note 14, at 172-75; Comment, *Exporting Hazardous Industries: Should American Standards Apply*, 20 N.Y.U. J. INT'L L. & POL. 785 (1988); Comment, *Hazardous Exports to the Third World: The Need to Abolish the Double Standard*, 12 COLUM. J. ENVTL. L. 71 (1987) (discussing the benefits of a reciprocal system of regulating export of toxic and/or hazardous substances to other foreign nations). The United Nations and other international disclosure programs importing hazardous substances, chemicals, and pesticides have been criticized for the communication of complex information of little value.

174. *Developed, Developing Countries*, *supra* note 3, at 376; *Western, African Nations*, *supra* note 3, at 49; *UNEP Transboundary Transport*, *supra* note 3, at 660-61.

the wastes.

3. *Transit Nations*

Transit nations, through which the waste travels to its ultimate disposal, are to be notified of the export and must provide consent.[175] For purposes of the Basel Convention, the boundaries of the transit nation include territorial waters.[176] Where there are disputes concerning territorial waters, however, it is unclear which definition applies. A number of nations disagree over the scope of the territorial waters of individual nations.[177] Under the present plan, there may be disagreements as to whether notice must be provided and consent obtained for an export.[178]

4. *Monitoring and Enforcement*

Apart from the definition of hazardous waste, the most important potential shortcoming in the Convention involves the provisions for monitoring compliance and enforcement. The Convention provides for a Secretariat to oversee implementation of the Convention.[179] The extent to which the Secretariat is able to monitor compliance with the provisions of the Convention, however, is unclear. The principal responsibility of the Secretariat is to facilitate the flow of information, not to document compliance, even though much discussion centered on the need for the Secretariat to perform such a role.[180] Without such monitoring, countries may not comply with the Convention.

Even if the Secretariat did monitor for noncompliance, enforcement provisions within the Convention are inadequate. The Basel Convention directs parties to arbitrate disputes, including, presumably, noncompliance.[181] If dispute resolution fails, a party may pursue the matter by bringing it before the International Court of Justice.[182] Past experience, however, has found both the use of arbitration and the International Court of Justice to be wanting.[183] In addition to the low number of

175. BASEL CONVENTION, *supra* note 1, art. 6, para. 4.
176. *Id.* art. 2(9).
177. *UNEP Transboundary Transport*, *supra* note 3, at 660-61.
178. *Western, African Nations*, *supra* note 3, at 50.
179. BASEL CONVENTION, *supra* note 1, art. 16; *see Geneva Selected as Site for Agency to Monitor Toxic Waste Disposal Convention*, 12 Int'l Env't Rep. (BNA) 240 (May 10, 1989) (discussing the administrative procedures for establishing the Secretariat).
180. *Developed, Developing Countries*, *supra* note 3, at 376-77.
181. BASEL CONVENTION, *supra* note 1, art. 20, Annex VI, para. 1.
182. *Id.* art. 20, para. 2.
183. Doolittle, *Underestimating Ozone Depletion: The Meandering Road to the Montreal Protocol and Beyond*, 16 ECOLOGY L.Q. 407, 431 (1989); Comment, *Trans-*

environmental cases taken to the Court,[184] the Court may rule on a case only if the parties consent to such jurisdiction.[185] To date, only twenty-four nations have agreed to do so.[186] Thus, the dispute resolution mechanism is inadequate.

Conceivably, UNEP itself could function as a superenforcement agency. Others have urged that environmental groups function as guardians of international accords.[187] While environmental groups may have standing in various individual nations to bring suit, however, they lack standing in the International Court of Justice.[188] In this instance, the participants apparently prefer to resolve their disputes themselves.[189] Disputes and noncompliance problems arising under the Convention, at best, are likely to be handled by informal channels directly between the complaining countries. Such an arrangement, however, cannot reach all problems. If a transporter dumps waste during transit, but outside the territorial waters of any individual nation, it is unclear which nations could object to that disposal. Because of the ICJ's standing requirements, which predicates jurisdiction on injury to a "legally protected interest," few nations may be authorized to bring the offender to court.[190] Ultimately, countries will comply with the Convention only to the extent that any individual country chooses to abide by the terms of the Convention.

5. *Liability*

The Basel Convention sidestepped the question of liability for hazardous waste exports. The Convention provides that the parties are to cooperate to develop a protocol to establish rules and procedures for liability and damages arising from the transboundary movement of hazardous wastes,[191] but it does not answer the question of who should pay for any damages.

Ironically, the very problem that triggered enactment of the Conven-

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frontier Pollution and the International Joint Commission: A Superior Means of Dispute Resolution, 17 SW. U.L. REV. 43 (1987) [hereinafter Comment, *Transfrontier Pollution*].

184. Comment, *Transfrontier Pollution*, *supra* note 183, at 45.

185. *Id.* at 47.

186. *Id.*

187. Sands, *The Environment, Community and International Law*, 30 HARV. INT'L L.J. 393, 394 (1989). In fact, NRDC has been very active in seeking to enforce the Montreal Protocol. Doolittle, *supra* note 183, at 434-36.

188. Sands, *supra* note 187, at 394.

189. Bailey & Nanda, *supra* note 6, at 159; *Waste Shipment Incidents*, *supra* note 3, at 472.

190. Comment, *Transfrontier Pollution*, *supra* note 183, at 47-48.

191. BASEL CONVENTION, *supra* note 1, art. 12.

tion—responsibility for inappropriate disposal of the waste—went unresolved. Although the exporting country must readmit the waste, the larger question of who will pay the cost associated with cleaning up of the problem remains unaddressed.[192] If the receiving country has consented to the acceptance of the waste, however, it would appear unreasonable to impose the cost of remedying any disposal problems on the exporting country. Thus, as would appear likely to happen when developing countries receive waste and are unable to dispose of it properly, the receiving country is likely to bear the cost of the clean up. The Convention, therefore, may not reduce the risk for receiving countries of accepting hazardous waste for disposal.

Increasingly, individual nations have been held responsible (and therefore liable) for conduct which injures neighboring nations.[193] Any such liability, however, terminates if the injured nation knows of or accepts the activity that resulted in the injury.[194] Once an importing country knowingly accepts a waste, that country is responsible for it. This shift in liability emphasizes the shortcomings of the definitions of hazardous waste and the completeness of the information provided to importing nations. The assumption of responsibility based on consent could disparately affect developing countries. It would appear unwise, however, to impose a different or double standard with respect to these countries.[195] In any case, nations are likely to disagree over the sufficiency of the information provided to an importing country, as a means to avoid financial responsibility.

Although the Convention regulates governmental action, some observers have questioned the wisdom of imposing fault on nations rather than on a multinational company that actually violates the Convention.[196] Alternatively, multinationals could be regulated directly. In this instance, however, each individual nation has the authority to regulate the companies within its jurisdiction. Therefore, each nation could effectively shift responsibility to a multinational company whose conduct exposed the nation to liability.

Finally, the Convention neglected to decide whether liability should be strict or based on fault.[197] Causation could impose unwarranted bur-

192. *Id.* art. 8.

193. Bailey & Nanda, *supra* note 6, at 159-60, 179-80; Judy, *supra* note 14, at 169-70.

194. Bailey & Nanda, *supra* note 6, at 159-60, 179-80.

195. Handl & Lutz, *An International Policy Perspective on the Trade of Hazardous Materials and Technologies*, 30 HARV. INT'L L.J. 351, 361-642 (1989).

196. *Id.* at 355; Handl, *supra* note 145, at 623-26; Lutz, *supra* note 150, at 638-40.

197. *Western, African Nations*, *supra* note 3, at 50. The failure to address the liability issues has led to difficulties in remedying recent transboundary damage dis-

dens on enforcement, but strict liability would dramatically modify the liability schemes of most countries and would have an impact far beyond the export of hazardous waste. As with other liability issues, the Convention needs to resolve the applicable liability theories.

6. *Bilateral Agreements*

The Convention allows for individual nations to reach bilateral agreements or multinational agreements to govern the export and import of hazardous waste between those nations.[198] Such agreements are to be consistent with the terms and principles of the Convention.[199] It is unclear, however, by what mechanism UNEP will assure that such agreements, in fact, conform to the Convention.[200] Moreover, it is even less clear how UNEP will insure that the shipments of waste actually conform to that bilateral agreement. Countries are likely to be unenthusiastic about UNEP or any other international entity intervening in bilateral agreements.

7. *Role of UNEP*

Pervading the concerns about implementation of the Convention is the matter of what role UNEP will perform with respect to the Convention. UNEP could function principally as an information facilitator providing data to countries about wastes and disposal methods. UNEP could also create an inspection and certification system. Additionally, UNEP could standardize definitions and interpretations. Moreover, UNEP could assist in the transfer of technology. Finally, UNEP could act as a superenforcement agency insuring and enforcing compliance. UNEP's decision with respect to its role will likely determine the effectiveness of the implementation of the Convention.

Certainly, UNEP has accomplished much by the Convention. Over 100 nations are in general agreement about the need for and nature of an international program to regulate the export of hazardous waste.[201] Despite its apparent shortcomings, the Convention will enhance exchange of information about the nature of hazardous wastes and technologies for their disposal and treatment. Ultimately, the Convention

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putes. Handl, *supra* note 145, at 626.

198. BASEL CONVENTION, *supra* note 1, art. 11.

199. *Id.*

200. *See Waste-Watching*, *supra* note 16, at 44 (stating that Western Europe presently ships substantial quantities of waste to East Germany). It is unclear how UNEP intends to oversee such arrangements.

201. *Thirty-four Countries*, *supra* note 1, at 160.

may expedite the transfer of treatment technologies. Most importantly, the Convention identifies hazardous waste movement as an important issue and begins the arduous task of tracking the global movement of hazardous waste.