

Journal of Natural Resources & Environmental Law

Volume 8
Issue 1 *Journal of Natural Resources &
Environmental Law, Volume 8, Issue 1*

Article 9

January 1992

The Koko Incident: Developing International Norms for the Transboundary Movement of Hazardous Waste

Sylvia F. Liu
Harvard University

Follow this and additional works at: <https://uknowledge.uky.edu/jnrel>



Part of the [Environmental Law Commons](#), and the [International Law Commons](#)

[Right click to open a feedback form in a new tab to let us know how this document benefits you.](#)

Recommended Citation

Liu, Sylvia F. (1992) "The Koko Incident: Developing International Norms for the Transboundary Movement of Hazardous Waste," *Journal of Natural Resources & Environmental Law*: Vol. 8: Iss. 1, Article 9.
Available at: <https://uknowledge.uky.edu/jnrel/vol8/iss1/9>

This Article is brought to you for free and open access by the Law Journals at UKnowledge. It has been accepted for inclusion in *Journal of Natural Resources & Environmental Law* by an authorized editor of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.

The Koko Incident: Developing International Norms for the Transboundary Movement of Hazardous Waste

SYLVIA F. LIU*

I. INTERNATIONAL NORMS OF HAZARDOUS WASTE

The export of hazardous wastes to developing countries garnered world attention in 1988 when, after a series of well publicized "garbage barges" laden with wastes sailed around the world seeking disposal sites, the barges were rebuffed by both developing and industrial countries alike.¹ In one of the most widely discussed cases, 3,800 tons of toxic wastes were dumped in a dirt lot in Koko, Nigeria between August 1987 and May 1988, in a deal arranged by an Italian waste trader. When authorities discovered the wastes in June 1988 after receiving reports of local residents falling ill, the Nigerian government ordered Italy to retrieve the wastes. A West German freighter, the *Karin B*, picked up part of the waste in late July and attempted to find Western European countries that would accept

* Staff editor, HARVARD ENVIRONMENTAL LAW REVIEW; J.D., Harvard Law School, Class of 1994; B.A., Yale University, 1991. The author wishes to thank Andrew R. Willard at the Yale Law School for his helpful comments and assistance.

¹ See *Dirty Job, Sweet Profits*, U.S. NEWS & WORLD REP., Nov. 21, 1988, at 54-56; Jean-Paul Dufour & Corinne Denis, *The North's Garbage Goes South*, WORLD PRESS REV., Nov. 1988, at 30-31; *Exporting Hazardous Waste*, TECH. REV., April 6, 1989, at 6-7; *The Global Poison Trade*, NEWSWEEK, Nov. 7, 1988, at 66-68.

For a detailed overview of the international trade in hazardous waste, see CENTER FOR INVESTIGATIVE REPORTING & B. MOYERS, *GLOBAL DUMPING GROUND: THE INTERNATIONAL TRADE IN HAZARDOUS WASTE* (1990) [hereinafter *GLOBAL DUMPING GROUND*]; GREENPEACE INTERNATIONAL WASTE TRADE PROJECT, *THE INTERNATIONAL TRADE IN WASTES: A GREENPEACE INVENTORY* (J. Vallete & H. Spaulding, eds., 5th ed. 1990) [hereinafter *GREENPEACE INVENTORY*].

Although this paper refers to the "export" of hazardous wastes, strictly speaking, industrialized countries do not sell their wastes to developing countries. Rather, in most waste trade deals, a representative of a developing country will sell the service of disposal to the firm or city seeking disposal of its wastes (through waste trade brokers).

the waste. Nine weeks and six country refusals later, it returned to the Italian port of Livorno to face hostile dockworkers who refused to unload the waste for more than two months. In mid-1990 the *Karin B* wastes were repackaged and sent to the U.K. for incineration. Another vessel, the *Deepsea Carrier*, loaded the rest of the waste from Koko in August 1988, and faced similar series of national rejections. After a year of bobbing outside ports, waiting for permission to dock, the vessel finally unloaded the waste in Livorno.²

The international reaction that followed incident reaffirmed and clarified at least three international norms regarding the international trade in hazardous wastes. First, where it was once a largely unregulated business conducted between private traders, exporting states are now considered the main agents of responsibility for the transfer and disposal of toxic wastes. Second, the trade in hazardous wastes requires public sector regulation, consisting of the duty of prior notification by the exporting state and the duty to obtain prior consent from the importing state and states of transit. Third, the authority of a state to control its natural resources now includes the sovereign right to ban the import of hazardous substances. A close examination of the "Koko incident" and the international appraisal that followed illustrates the development of these international norms.

II. DEFINING HAZARDOUS WASTE

Every country defines hazardous waste differently. The definition provided by the March 1989 U.N. Environment Programme ("UNEP") Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal reflects the standard definition.³ The Convention identifies

² See GREENPEACE INVENTORY, *supra* note 1, at 336-37; *Crew Fall Sick on Toxic Waste Ship*, THE TIMES (LONDON), Sept. 3, 1988, at 1; *Dirty Job, Sweet Profits*, *supra* note 1, at 155; *End of Karin B's Odyssey Finds Italian Port Up In Arms*, THE TIMES (LONDON), Sept. 20, 1988, at 9 [hereinafter *Up in Arms*]; *Waste Dumpers Turning to West Africa*, N.Y. TIMES, July 17, 1988, 1, at 1, col. 2 [hereinafter *Waste Dumpers*]; *West Africa in Toxic Waste Dumping Furor*, FACTS ON FILE, Aug. 12, 1988, at 584-85 [hereinafter *Waste Dumping Furor*].

³ Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal, Mar. 22, 1989, ____ U.S.T. ____, ____ U.N.T.S. ____, reprinted in 28 I.L.M. 649 (1989) [hereinafter *Basel Convention*].

eighteen categories of waste streams from industrial production,⁴ twenty-seven hazardous chemicals,⁵ and fourteen characteristics that must be present (e.g., inflammability, corrosiveness, and toxicity) in order for a substance to be "hazardous waste."⁶ The Convention excludes household wastes or residues arising from the incineration of household wastes,⁷ or radioactive materials⁸ from its definition.⁹

III. THE REGULATORY ENVIRONMENT OF PREVIOUS INCIDENTS

The first reported incidents of toxic waste exports occurred in the United States, after the U.S. government enacted the Resource Conservation and Recovery Act in 1978, which made domestic regulations for the proper disposal of hazardous wastes more stringent and expensive, providing the incentive for waste traders to seek cheaper and unrestricted markets abroad.¹⁰ In October 1979, the State Department learned that a Colorado firm had offered President Shiaka Stevens of Sierra Leone "up to \$25 million" for permission to dispose of hazardous waste in

⁴ Basel Convention, Annex I (listing "Categories of Wastes to Be Controlled," which include, for example: "Clinical wastes from medical care in hospitals, medical centers and clinics;" "Wastes from the production, formulation and use of biocides and phytopharmaceuticals;" "Waste substances and articles containing or contaminated with polychlorinated biphenyls (PCBs) and/or polychlorinated terphenyls (PCTs) and/or polychlorinated biphenyls (PBBs);" "Wastes from production, formulation and use of inks, dyes, pigments, paints, lacquers, varnish;" "Residues arising from industrial waste disposal operations").

⁵ *Id.*

⁶ *Id.*, Annex III. In the United States, the term "hazardous waste" is defined in the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601(14) (1988).

⁷ See Basel Convention, Annex II (listing "Categories of Wastes Requiring Special Consideration"); Art. 1(2) ("Wastes that belong to any category contained in Annex II that are subject to transboundary movement shall be "other wastes" for the purposes of this Convention").

⁸ *Id.* Increasingly, nations are including radioactive wastes in their legislation dealing with the trade of hazardous wastes, which have been traditionally regulated under separate protocols.

⁹ One commentator has pointed out that existing waste definitions are deficient because they do not facilitate the monitoring of international waste management and suggests that a description of wastes accompanied by an analysis of the best available technology for its treatment would better regulate the movement of wastes. Eli Louka, *The Transnational Management of Hazardous and Radioactive Wastes*, OCCASIONAL PAPER No. 1 (Orville H. Schell, Jr. Center for International Human Rights, Yale Law School, 1992), at 21.

¹⁰ PILLS, PESTICIDES AND PROFITS: THE INTERNATIONAL TRADE IN TOXIC SUBSTANCES, (Ruth Norris, ed., 1982) at 71 [hereinafter PILLS, PESTICIDES AND PROFITS].

that country.¹¹ Under pressure from its citizens and neighboring countries Nigeria and Ghana, as well the U.S. State Department and Sierra Leonean students in the United States, Stevens announced in February 1980 the plan was "fool-hardy" and rejected it outright.¹² Other early waste trade deals, once made public, also elicited rejection.¹³

By the late 1970s, governments publicly denounced the trade in toxic wastes in various international forums. At a May 1977 meeting of the UNEP, Dr. J. C. Kiano, a Kenyan minister, called for international regulations and warned that Third World countries would no longer tolerate being "dumping grounds for products that have not been adequately tested."¹⁴ Recognizing the international scope of this issue, the Governing Council of UNEP addressed the issue for the first time in 1979, when it called upon member states "to exchange information on hazardous chemicals and unsafe pharmaceutical products that have been banned in their territories and to discourage, in consultation with importing countries, the exportation of such products to other countries."¹⁵ In 1980 and 1981, the UNEP adopted several resolutions that requested exporting nations to recognize their obligations to provide their trading partners the opportunity for informed consent. All of these recommendations were strictly voluntary, however.¹⁶

Western European countries and Japan also exported hazardous wastes in the 1970s. In 1984, the European Commission (EC) issued a directive that required exporting countries to notify recipient countries of intended waste shipments.¹⁷ A 1986 EC directive required that exporters ensure that a written agreement

¹¹ GREENPEACE INVENTORY, *supra* note 1, at 101.

¹² *Id.*

¹³ In 1980, for example, Haiti and Antigua both turned down a proposal for building a disposal facility for sewage sludge from Washington, DC, and in March 1981, Mexican authorities arrested a U.S. citizen, Clarence Niguent, charging him with illegally importing hazardous wastes, which included the highly toxic polychlorinated biphenyls (PCBs), from companies in Texas and Kentucky. PILLS, PESTICIDES AND PROFITS, *supra* note 10, at 73.

¹⁴ *Id.*, at 88.

¹⁵ *Id.*, at 89-90. As early as 1957, the United Nations has issued Recommendations of the U.N. Committee of Experts on the Transport of Dangerous goods, updated biennially, but this was the first reference to the trade in toxic wastes. *Id.*

¹⁶ *Id.*, at 90.

¹⁷ *Directive on the Supervision and Control Within the European Community of the Transfrontier Shipment of Hazardous Waste*, (84/631/EC), 27 O.J. EUR. COMM. (No. L. 326) 31 (1984).

with the importing country exists and that the recipients have the technological capability to handle the wastes in environmentally safe ways.¹⁸ Until the Koko incident in 1988, only three countries, Denmark, Greece and Belgium, had made the directive part of national law.¹⁹ In 1987, UNEP met and issued the Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous wastes,²⁰ which promotes the transfer of environmental protection technology.²¹

Despite these early initiatives at regulating the international transfer of toxic wastes, by 1987 exports of toxic wastes soared. Officially recorded exports in the United States increased by approximately sixteen times since 1980, according to the U. S. Environmental Protection Agency ("EPA"), and that figure did not include wastes such as incinerator ash (not classified as hazardous) or the many deals that go unrecorded. In both Europe and the United States, disposal costs climbed to around \$2,500 a ton, which caused industrialized countries to turn increasingly to developing nations, where disposal methods averaged \$20 a ton and cost as little as \$3 a ton.²² In 1989, Western Europe produced approximately 30 to 40 million tons of waste a year and exported approximately 2.5 million tons, of which 125,000 goes to the Third World, according to Organization for Economic Cooperation and Development (OECD) figures.²³ According to EPA, the United States produces approximately 275 million tons of hazardous waste a year,²⁴ and exports approximately 2.2 million tons, most of which go to Mexico or Canada.²⁵

¹⁸ *Amending Directive 84/631 EEC on the Supervision and Control within European Community of the Transfrontier Shipment of Hazardous Waste*, (86/279/EC), 29 O.J. Eur. Comm. (No. L. 181) 13 (1986).

¹⁹ Steven Greenhouse, *Europe's Failing Effort to Exile Toxic Trash*, N.Y. TIMES, Oct. 16, 1988, 4at 6 [hereinafter *Europe's Failing Effort*].

²⁰ *Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes*, U.N. Doc. UNEP/GC.14/17, Annex II (1987)

²¹ *Id.* See also Basel Convention, preamble ("Recognizing the need to promote the transfer of technology for the sound management of hazardous wastes and other waste produced locally, particularly to the developing countries in accordance with the spirit of the Cairo Guidelines and decision 14/16 of the Governing Council of UNEP").

²² Waste Dumpers, *supra* note 2.

²³ Steven Greenhouse, *U.N. Conference Supports Curbs on Exporting of Hazardous Waste*, N.Y. TIMES, Mar. 23, 1989 [hereinafter *U.N. Conference Supports*], at A1, col.1.

²⁴ GREENPEACE INVENTORY, *supra* note 1, at 286.

²⁵ *Dirty job, sweet profits*, *supra* note 1, at 54.

The shady character of exporting waste arises in almost all transactions. Often poorly monitored, waste traders set up phony export-import companies, create vague documents, and constantly switch destinations and ship names. For small-size deals, a waste trader will often send the toxic waste to a false address, to a port where the cargo sits until someone notices the smell or people get ill, by which time a few months have usually gone by and the original shipper is impossible to trace. For middle-size deals, a waste trader pays a poor person with a large, empty plot of land to store the wastes (as in the Koko incident), and for a "big deal," the trader deals directly with a poor government, wielding contracts that often promise a disposal that will follow international standards that are "100% ecological."²⁶

The financial incentive to participate in this global market is enormous for all parties. For the exporting nations, disposal costs average six times less than at home. Waste traders, according to a Belgian environmentalist, "earn fabulous profits without the risk of drug smuggling or running guns."²⁷ In an ad placed in the May 25, 1988 issue of *The International Herald Tribune*, this message was clearly underscored:

Thinking about making money? Hazardous toxic waste a billion-dollar-a-year business. No experience necessary. No equipment needed. No educational requirements.²⁸

The OECD estimated that in 1987 waste disposal was a \$20-billion-a-year business. In just the one Koko incident, Italian businessman Gianfranco Raffaelli stood to gain \$4.3 million in profits. Developing countries also face financial incentives to take the wastes, as the prospect of hundreds of millions of dollars for merely storing hazardous wastes will often outweigh anticipated environmental or health damages to the nation.²⁹ In almost all cases, the developing countries do not possess adequate facilities or administrative structures to properly dispose of the wastes.³⁰

²⁶ Jean-Paul Dufour, *supra* note 1, at 31; U.N. Conference Supports, *supra* note 23, at B11, col. 1.

²⁷ *The Global Poison Trade*, *supra* note 1, at 67.

²⁸ Jean-Paul Dufour, *supra* note 1, at 32; GLOBAL DUMPING GROUND, *supra* note 1, at 4.

²⁹ *Dirty Job, Sweet Profits*, *supra* note 1, at 55.

³⁰ See Burton Bollag, *Hazardous Waste is a Foreign Matter*, CHEMICAL WEEK, Dec. 7, 1988, at 45 (describing that "[v]irtually all hazardous waste sent to developing countries goes into landfills").

Despite these incredible financial pressures, developing countries have increasingly rejected toxic wastes, and have even accused the industrialized nations of practicing a new form of imperialism, that of spreading "toxic terror."³¹ In the immediate years preceding the Koko incident, four incidents occurred in which the growing international norms emerged: governments proclaimed their right to refuse imports of toxic wastes, and some went as far as taking punitive actions against their own and other country's citizens. The governments that rejected the wastes primarily asserted that prior notification and informed consent were required before the import of the wastes would be permitted. Because the vessels carrying the wastes had no set destinations once their original disposal sites rejected their cargos, country after country denied the ships ingress.

The first highly publicized waste trading vessel was New York's "garbage barge," the *Mobro*, which travelled for five months and 6,000 miles along the coast of the United States and around the Caribbean, carrying 3,186 tons of solid waste from Long Island.³² On March 22, 1987, the vessel left Islip, New York, and six U.S. states, North Carolina, Alabama, Florida, Louisiana, Mississippi and Texas rejected the cargo. In the following months, the ship confronted still more refusals: the Mexican government banned the vessel after a deal was nearly completed; the Beize government placed its defense forces on alert for the vessel; and the Bahamas police put out an alert for the vessel after a land developer attempted to unload the garbage on a nearby, uninhabited island, Little San Salvador.³³ On September 1, the barge returned to New York City, where the garbage was unloaded and incinerated.³⁴ The responses of the U.S. states point to a "not in my backyard" reaction that many citizens in industrialized countries adopt. The responses of the three Caribbean countries reinforced the growing suspicion and hostility toward foreign ships bearing industrial wastes.

A more dramatic case, one that illustrates the truly global nature of the trade, involved the around-the-world voyage of three ships carrying 2,200 tons of toxic wastes to four continents

³¹ Jean-Paul Dufour, *supra* note 1, at 584.

³² GREENPEACE INVENTORY, *supra* note 1, at 294.

³³ *Id.*, at 295.

³⁴ *Id.*, at 111; Steven Greenhouse, *Toxic Waste Boomerang: Ciao Italy!*, N.Y. TIMES, Sept. 3, 1988, 1, at 4, col 1 [hereinafter Toxic Waste Boomerang].

during a 14-month period.³⁵ The wastes, which included resins, pesticides and PCBs, were collected by an Italian waste trade broker named Jelly Wax, one of the same firms that handled the Koko wastes.³⁶ In February 1987, a Maltese vessel, the *Lynx*, loaded the wastes and set sail to Djibouti where the authorities prevented the unloading of the wastes.³⁷ The vessel then sailed to Venezuela, where it unloaded the wastes in Puerto Cabello in April. The waste was left above ground for six months until reports of dockworkers becoming sick, fires breaking out, drums leaking, and children dying from exposure prompted the Venezuelan government to order the wastes to be removed.³⁸ In November 1987, the *Makiri* removed the wastes and a month later dumped them in Tartous, Syria, where Jelly Wax had paid a Syrian company \$200,000 to accept the wastes.³⁹ In February of the following year, the Syrian government ordered the removal of the wastes, and a Syrian ship *Zanoobia* carried the waste back to Italy, after attempting but failing to unload the waste in Greece. The ship arrived in Marina di Carrara—the same port from which the wastes originated—but permission to unload was denied, because the vessel did not carry the necessary permits. In late May, the Italian government agreed to take the wastes at the port city Genoa, but dockworkers went on strike rather than unload the wastes.⁴⁰ Half of the wastes eventually was unloaded in Italy late 1988, and the rest was sent to disposal sites in England and France. Later, two British waste companies inexplicably backed out of their contracts, leaving the fate of those wastes in the air.⁴¹ The Syrian sailors, meanwhile, suffered skin diseases, breathing problems, and were constantly dizzy throughout their trip; nine crew members were hospitalized; and one had died en route, possibly from contact with the wastes.⁴² The whole sequence of events accorded “leper” status to the ships, with every government they encountered overriding its private corporations that arranged any waste deals.

³⁵ GREENPEACE INVENTORY, *supra* note 1, at 332.

³⁶ *Id.*, at 334.

³⁷ *Id.*, at 332.

³⁸ *Id.*

³⁹ *Id.*, at 333.

⁴⁰ *Id.*

⁴¹ *Id.*, at 334.

⁴² *Outcast Ship Finds No Port in a Poison Storm*, THE TIMES (LONDON), May 27, 1988, at 2; *Third World Awakes to Toxic Trade Perils*, THE TIMES (LONDON), June 17, 1988, at 12.

The third case involved the journey of the highly publicized ship, the *Khian Sea*. In August 1986, a Bahamas-owned cargo ship, *Khian Sea*, set out from Philadelphia loaded with more than 14,000 tons of toxic incinerator ash,⁴³ attempting to dump its cargo in the Bahamas after failing to find a U.S. state to accept the waste.⁴⁴ The Bahamas refused to import the ash, and the *Khian Sea* began a twenty-seven month saga of travelling around the world, and was rejected by at least fifteen countries on five continents.⁴⁵ The Bahamas, Bermuda, Cape Verde Islands, Chile, Costa Rica, Honduras, and the Dominican Republic rejected the wastes, and in December 1987, the ship dumped the ashes in Haiti, which had issued an import permit for "fertilizer."⁴⁶ After discovering the ash, Haiti ordered the ship to reload in January 1988, but an estimated 2,000 to 4,500 tons of the ash were left behind on a beach.⁴⁷ In March 1988 the *Khian Sea* returned to Philadelphia, but did not receive permission to unload the remaining ash; in June, the vessel crossed the Atlantic Ocean.⁴⁸ After facing further rejections from Guinea, Guinea-Bissau and Senegal, the ship arrived in Yugoslavia in early July, where the vessel was renamed the *Felicia*.⁴⁹ In the fall, the boat planned to land in Sri Lanka, the Philippines, Indonesia and

⁴³ The United States does not classify incinerator ash as toxic waste, even though it often contains toxic dioxins and other toxic chemicals, and is classified as hazardous waste in the Basel Convention. Basel Convention, Annex I ("Residues arising from industrial waste disposal operations.") An EPA report indicated that the ash aboard the *Khian Sea* contained high levels of lead and cadmium and significant traces of dioxins. Global Dumping Ground, *supra* note 1, at 20, and is classified as hazardous waste under the Basel Convention.

⁴⁴ GREENPEACE INVENTORY, *supra* note 1, at 21.

⁴⁵ *Id.*, at 21, 23.

⁴⁶ *Id.*, at 21.

⁴⁷ *Id.* Four years later, the ash still remains on the beach. In an effort to clean the shores, two Haitian environmental groups sent 500 envelopes containing the toxic incinerator ash to the Mayor of Philadelphia, Wilson Goode, and to the administrator of EPA, William Reilly in 1991. EPA's position was that the cleanup was now Haiti's responsibility. *Philadelphia and U.S. EPA get Unexpected Ash Packets*, GREENPEACE WASTE TRADE UPDATE, Mar. 22, 1991, at 15. In July 1992, the U.S. Justice Department indicted two men who shipped the ash, on grounds that they lied to a Grand Jury. *Indictments Announced in Philadelphia's Haiti Ash Scandal*, GREENPEACE TOXIC TRADE UPDATE 5.2 (1992), at 9.

⁴⁸ *10,000 Tons of Toxic Ash Disappear in the Indian Ocean*, GREENPEACE WASTE TRADE UPDATE, Jan. 15, 1989, at 1.

⁴⁹ GREENPEACE INVENTORY, *supra* note 1, at 23; *Dirty Job, Sweet Profits*, *supra* note 1, at 67 (map). The owners of the *Khian Sea* claimed they had sold the vessel to a firm named Romo Shipping that was incorporated in the Caribbean island of Nevis. GREENPEACE INVENTORY, *supra* note 1, at 23.

Singapore, but each of these governments also denied entry to the boat.⁵⁰ In November, the vessel showed up off the coast of Singapore with its hold empty, and under a new name, the Pelicano, prompting suspicions that the cargo was dumped somewhere in the Indian Ocean.⁵¹

The last incident resulted in the arrest of a European diplomatic officer. In March 1988, a Norwegian shipping company, Bulkhandling, dumped 15,000 tons of Philadelphia incinerator ash in an abandoned quarry in Kassa, a resort island of Guinea.⁵² The substance was listed as "raw material for bricks," but the few bricks that were made from it were unusable. When the government discovered in July that the local vegetation had started to shrivel, and that the waste was the first installment of a contract to dispose of 85,000 tons of chemical wastes, it ordered the removal of the waste. The government response was exceptionally harsh, as evidenced by General Lansana Conte's statement, "[w]e will make them regret their actions so that society will know that they are at fault. This will discourage others from doing the same thing."⁵³ The government announced that four government officials, two from the trade ministry, were sentenced to four years of imprisonment each. The government also arrested Norway's honorary consul, Sigmund Stromme, as the administrator of the company involved in the waste transfer, Guinomar. Stromme was released on the basis of diplomatic immunity, fined \$600, and placed on a six-month suspended sentence.⁵⁴ In June of that year, a Norwegian cargo ship removed the waste.⁵⁵

These incidents occurred concurrently with the Koko incident. International reactions in 1988 and 1989 and the growing international norms were responses to the proliferation of the waste trade in general, rather than specifically to this incident. However, the Koko incident illustrates particularly well the emergence of these norms—the Nigerian state held Nigerian and

⁵⁰ *10,000 Tons of Toxic Ash Disappear in the Indian Ocean*, *supra* note 48, at 1.

⁵¹ *Id.*; *Dirty Job, Sweet Profits*, *supra* note 1, at 56; *The Global Trade in Poisons*, *supra* note 1, at 68.

⁵² GREENPEACE INVENTORY, *supra* note 1, at 79.

⁵³ *Id.*, at 80.

⁵⁴ *Waste Dumpers*, *supra* note 2, at A1; *Conakry Domestic Service in French Officials Arrested in Toxic Waste Case*, F.B.I.S.-A.F.R., June 16, 1988, at 18.

⁵⁵ *Paris Associated Foreign Press, Norwegian Ship Arrives to Remove Toxic Waste*, F.B.I.S.-A.F.R., June 23, 1988, at 20.

Italian individuals accountable; the exporting country took responsibility for retrieving the wastes; industrial countries rejected the waste as well; and the international reaction that resulted (which is not entirely separable from the reaction to the other cases) represented the emerging international consensus on the issue.

IV. THE FACTS OF THE KOKO INCIDENT

Between August 1987 and May 1988, five ships transported 3,800 tons of hazardous wastes, collected from various European countries and the United States, to Koko in the then Bendel State, now Delta State, Nigeria, under an agreement in which Italian waste trader Gianfranco Rafaelli persuaded a retired lumber worker, Sunday Nana, to store the wastes in a dirt lot near his home for \$100 a month.⁵⁶ Nigerian authorities did not learn of the scheme until June 2, 1988, after some Nigerian students in Italy sent copies of the articles to their home country. The next day, Gianfranco Rafaelli skipped town.⁵⁷

On June 7, 1988, the External Affairs Minister, General Ike Nwachukwu, asked the United Nations to intervene and to send a clear message to transnational corporations to stop dumping wastes in Africa.⁵⁸ On June 9, Nigerian authorities seized a Danish cargo ship, the *Danix*, suspected of having helped ship the waste to Koko and an unrelated Italian ship, the *Piave*, in Lagos harbor to press Italy to act.⁵⁹ The same day, Nigerian President Ibrahim Babangida recalled the Nigerian ambassador from Italy for "immediate consultations," a move which fell short of severing diplomatic relations, and asked the Italian government to recall its charge d'affaires in Lagos.⁶⁰ The following day, the Italian Foreign Ministry denied that the Nigerian government had asked for the recall of its envoy.⁶¹ Nigeria's ambassador returned to Italy at the end of August after Italy

⁵⁶ GREENPEACE INVENTORY, *supra* note 1, at 90; Jean-Paul Dufour, *supra* note 1, at 583.

⁵⁷ Waste Dumpers, *supra* note 2, at A1.

⁵⁸ *Toxic Waste Importers Face Execution*, WEST AFRICA, June 20, 1988, at 1133.

⁵⁹ *London BBC World Service in English, Authorities Seize Danish Vessel in Toxin Case*, F.B.I.S.-A.F.R., June 17, 1988, at 23.

⁶⁰ *Toxic Waste Importer Face Execution*, *supra* note 58, at 1133.

⁶¹ *Rome ANSA in English, Ministry Denies Nigeria Asks Envoy's Recall*, F.B.I.S.-A.F.R., June 14, 1988, at 4.

helped removed the wastes.⁶² Nigeria also considered legal action against Italy. According to the Justice Minister, Prince Bola Ajibola, Nigeria would take the matter to the International Court of Justice.⁶³

President Babangida warned that anyone found guilty of importing radioactive waste would be shot. By June 13, the Nigerian government had arrested fifteen people, including Raffaelli's Italian partner, Desiderio Perazzi, set up a special tribunal to try them, and ordered Italy to retrieve the wastes.⁶⁴ On June 13, Nigerian health officials reported three workers had suffered from severe chemical burns while moving the wastes.⁶⁵ The Danish ship was only held briefly, while the *Piave* was not released until the end of July. In the months following the discovery, reports surfaced of premature deaths, dockworkers becoming paralyzed or suffering severe chemical burns, and nineteen deaths from contaminated rice.⁶⁶

At the end of June, Italy agreed to remove the wastes, and a subsidiary of an Italian government oil company chartered two West German ships, the *Karin B* and the *Deepsea Carrier*, to pick up the wastes.⁶⁷ More than 150 Nigerian workers were employed to repackage the wastes. The Nigerian government provided the mechanical equipment, protective clothing and gas masks, and the United States, through the Environmental Protection Agency, donated some gear as well. The British government also indicated its willingness to donate cleanup gear.⁶⁸ However, many workers were hospitalized for chemical burns, nausea, vomiting blood, and partial paralysis.⁶⁹ On June 20, China and India announced that they would assist Nigeria by providing workers to help clear the waste.⁷⁰ The government

⁶² *Lagos International Service in English, Toxic Wastes Removed; Envoy to Italy Returns*, F.B.I.S.-A.F.R., Aug. 26, 1988, at 27.

⁶³ *Toxic Waste Importer Face Execution*, *supra* note 58, at 1133; *Red Alert Over Toxic Waste Ship*, WEST AFRICA, Sept. 5-11, 1988, at 1643.

⁶⁴ *Id.*

⁶⁵ *Waste Dumpers*, *supra* note 2 at A1, col. 2.

⁶⁶ *Dirty Job, Sweet Profits*, *supra* note 1, at 55.

⁶⁷ Loren Jenkins, *After Dumping on Nigeria, Italy Takes it All Back*, WASH. POST, Sept. 4, 1988, at A38.

⁶⁸ GREENPEACE INVENTORY, *supra* note 1, at 95; *Lagos Domestic Service in English, U.S. Donates Toxic Waste Protective Gear*, F.B.I.S.-A.F.R., July 27, 1988, at 27.

⁶⁹ *Lagos Domestic Service in English, Toxic Waste Removal Said to End in 2 Weeks: Workers Hospitalized*, F.B.I.S.-A.F.R., July 18, 1988, at 25.

⁷⁰ *Lagos International Service in English, Foreign Assistance in Koko*, F.B.I.S.-A.F.R., June 22, 1988, at 23.

paid each worker a 500 naira (\$107) cash bonus, and the minister of works and housing ordered 50,000 naira (around \$10,000) worth of drugs, protective gear and medical equipment for the workers.⁷¹ Meanwhile, residents of Koko rejected plans to evacuate the town. The Nigerian Government also set up vigilante groups at all ports and jetties in the country in order to prevent further attempts at dumping.⁷²

On July 30, 1988, the *Karin B* picked up 2,100 tons of the waste, and headed to Ravenna, an Italian port off the coast of Africa. Officials in Ravenna had protested a week earlier, so the vessel attempted to dock at Cadiz, but Spanish authorities ordered it to leave.⁷³ On August 15, the *Deepsea Carrier* picked up the rest of the waste from Koko, and headed back to Italy. By the end of August, The Netherlands, the home of one of Europe's most advanced toxic disposal sites, also refused the *Karin B*, as well as West Germany, Britain and France. In England, on August 30, public pressure and heated debate among the British press and parliament members over the fate of the *Karin B* caused Mrs. Virginia Bottomley, the Under-Secretary of State at the Department of the Environment, to tell the Italian ambassador that it was Italy's problem.⁷⁴

Italy agreed to take back the toxic waste on September 2.⁷⁵ The Italian Cabinet approved a decree that banned waste exports to third-world countries and ordered every region in Italy to prepare waste treatment plans.⁷⁶ A French naval doctor was flown to the *Karin B*, while it floated off the coast of Le Havre, where the captain asked five of his ten crew to evacuate, since they had been suffering from chest and back pains.⁷⁷ On September 16, the Italian cabinet announced that the *Karin B*'s cargo would head to the Italian port Livorno, while the *Deepsea Carrier*'s load would head to Ravenna or Manfredonia. Local protests in each of these ports blocked the unloading, and several

⁷¹ GREENPEACE INVENTORY, *supra* note 1, at 95.

⁷² *Lagos Domestic Service in English, Vigilantes to Combat Dumping*, F.B.I.S.-A.F.R., June 23, 1988, at 25.

⁷³ Jenkins, *supra* note 67.

⁷⁴ See Nicholas Wood & Sheila Gunn, *Toxic Cargo Vessel is Banned From Entering Britain*, THE TIMES (LONDON), Aug. 31, 1988, at 1.

⁷⁵ *Italy Agrees to Take Back Toxic Waste*, FACTS ON FILE, Sept. 1988, at 700.

⁷⁶ At that point, experts estimated that Italy could only handle 10 to 15% of the five million metric tons generated there annually. *Toxic Waste Boomerang*, *supra* note 34, at A4, col. 3.

⁷⁷ *Crew Fall Sick on Toxic Waste Ship*, *supra* note 2, at 1c.

people were injured in Manfredonia when police clashed with the protesters.⁷⁸ The *Karin B* arrived in Livorno on September 19, but the mayor of Livorno issued an entry ban upon discovering that toxics were leaking from the ship.⁷⁹ The prefect overruled the ban; 1,400 port workers went on strike; and finally, on December 20, twenty-five Italian workers unloaded the ship. The wastes were transported to a temporary storage site in Emilia Romagna, repackaged, and shipped off again for incineration. In January 1989, the first ten containers of the repackaged wastes left Livorno. By mid-1990, the *Karin B* wastes were heading towards the U.K. for incineration.⁸⁰

Meanwhile, the *Deepsea Carrier* was anchored outside the port of Augusta, waiting for permission to dock. For the first half of 1989, the ship remained offshore and faced several confrontations with Greenpeace. This environmental group discovered that the boat contained 2,500 tons of wastes, and that the crew had been on board the whole time with no protective clothing or monitoring equipment.⁸¹ The *Deepsea Carrier* finally docked in Livorno harbor and unloaded the waste in August 1989. One hundred forty-nine containers of waste were stored in Livorno, as authorities searched for a suitable company to dispose of the waste.⁸²

On March 3, 1990, two years after the hazardous wastes were first discovered, Sunday Nana, the man who accepted the wastes in his backyard, died.⁸³ The official news agency of Nigeria reported that Nana's death was unrelated to the toxic dumping, and that he had developed tuberculosis before the waste had been dumped on his land.⁸⁴ Today, the former dump site has been turned into a research center for the study of toxic waste.⁸⁵

V. CONFLICTING CLAIMS

Relatively few conflicting claims arose in the Koko incident about what actually happened. In particular, Nigeria claimed

⁷⁸ GREENPEACE INVENTORY, *supra* note 1, at 335.

⁷⁹ *Up in Arms*, *supra* note 2, at 9.

⁸⁰ *Id.*, at 9; GREENPEACE INVENTORY, *supra* note 1, at 336-37.

⁸¹ GREENPEACE INVENTORY, *supra* note 1, at 336.

⁸² *Elsewhere in Europe*, GREENPEACE WASTE TRADE UPDATE, Dec. 1989, at 12; GREENPEACE INVENTORY, *supra* note 1, at 337.

⁸³ Obituary, GREENPEACE WASTE TRADE UPDATE, Mar. 22, 1991, at 16.

⁸⁴ *Id.*

⁸⁵ GLOBAL DUMPING GROUND, *supra* note 1, at 2.

that the wastes contained radioactive substances, which Italy denied. Claims for remuneration did not surface as each country took their burden seemingly willingly. As for conflicting conceptions of lawfulness, Italy briefly defended its citizens who arranged the trade, claiming that it was a legal agreement between two private companies, while Nigerian called the trade a crime against its people. Perhaps the absence of a claim should have surfaced but did not (and not surprisingly)—the wastes were actually collected from many industrial countries, not just Italy, yet none of these countries rose to claim any responsibility.

With regard to the factual claim over the radioactivity of the wastes, the Nigerian press reported that three drums contained a "highly radioactive material," citing experts they invited from the Japanese Atomic Energy Research Institute.⁸⁶ The Japanese report actually stated that the waste emitted low-level radiation that was not capable of immediately harming human lives.⁸⁷ The United States dispatched a three-person team to assess the dump, joined by two doctors from the Centers for Disease Control, and by experts from the United Kingdom. None of the experts identified radioactive wastes. The environmental group, Friends of the Earth, took representative samples of the waste in late June, and found the drums contained chlorinated solvents, waste resins and some highly toxic PCBs, which composed up to 28% of the waste. Although they found these drums to be in poor condition and leaking, they also did not mention the presence of radioactive substances.⁸⁸ Scientists from the British Atomic Energy Authority, who also inspected the wastes, reported no excessive radioactivity in the area.⁸⁹ Initially, however, the belief that the wastes were radioactive wastes prompted President Babangida to announce on June 14 that anyone found guilty of importing radioactive waste would be executed by firing squad.⁹⁰

When the wastes were first discovered, Italy defended the trade as a legal agreement between Sunday Nana's Irukep

⁸⁶ *Dakar PANA in English, Dumps Prove Poisonous*, F.B.I.S.-A.F.R. June 23, 1988, at 25.

⁸⁷ *Lagos Domestic Service in English, Japanese Experts Report*, F.B.I.S.-A.F.R., July 18, 1988, at 26.

⁸⁸ Peter Mulligan, *Cancer-causing Agents Found in Cargo*, THE TIMES (LONDON), Aug. 31, 1988, at 2; Jenkins, *supra* note 67, at A38.

⁸⁹ *London BBC Word Service in English, Waste Called "Dangerous"* F.B.I.S.-A.F.R., June 28, 1988, at 27.

⁹⁰ *Toxic Waste Importers Face Execution*, *supra* note 58, at 1133.

Construction company and Gianfranco Raffaelli's Jelly Wax.⁹¹ The wastes were imported under a permit that labelled the substances "related to the building trade," as "residual and allied chemicals" and as "non-explosive, non-radioactive and non-self combustible chemicals."⁹² From a Nigerian account, a Nigerian clearing agent repeatedly bypassed normal port procedures, Raffaelli forged incorporation papers and substituted twenty toxic and radioactive materials.⁹³ By September, Italy acknowledged its responsibility and agreed to remove the wastes, which reaffirmed Nigeria's claims.

VI. ITALIAN AND NIGERIAN RESPONSES: CLARIFYING RESPECTIVE RESPONSIBILITIES

The actions of the governments involved in the Koko incident—Italy and Nigeria—clarify some of the responsibilities of parties involved in a toxic waste cleanup. Italy helped with some of the cleanup, taking responsibility for removing and replacing the contaminated top soil and covering the lot with asphalt; scraping the immediate surroundings, including the port area, and shipping the debris out of the country.⁹⁴ Both Italy and Nigeria took independent tests of the soil and surrounding plants to monitor the contamination. Italy also covered the reshipment costs, which the Ministry of Environment estimated at \$14.3 million just for the *Karin B*, and \$75 million for treating the wastes once they returned to Italy. The Italian government sought to recoup some of these costs by pressuring producers and exporters of the waste to pay their share. For example, Minister Ruffolo summoned thirty-seven Italian companies to meet with him last December, and on September 20, 1988, Italian government officials went to court to force twenty-two producers and brokers to pay the \$75 million.⁹⁵

⁹¹ *Waste Dumping Furor*, *supra* note 2, at 585.

⁹² *Id.*, at 94; *Lagos Domestic Service in English, Government Findings Released*, F.B.I.S.-A.F.R., June 15, 1988, at 29 [hereinafter *Government Findings Released*].

⁹³ *Government Findings Released*, *supra* note 92, at 29.

⁹⁴ *Decontaminating Koko*, WEST AFRICA, Dec. 19-25, 1988, at 2399.

⁹⁵ Jim Vallete, *THE INTERNATIONAL TRADE IN WASTES: A GREENPEACE INVENTORY*, (4th ed., 1989), at 122; *see also Italy: Excerpt of Law on the Transfrontier Disposal of Industrial Waste*, reprinted in 28 I.L.M. 393 (1989), Art. 9(11) ("Costs borne in whatever way by the public authority for the disposal of special waste, as well as toxic and noxious waste, exported abroad shall be charged jointly and severally to the waste producer and carrier. . .").

Neither of the countries provided any monetary compensation for the injury to the environment or for diminished capacity or loss of life. The Nigerian government provided the workers, the protective gear (with help from the United States and Great Britain) and the wages for these workers. Since the Nigerian government did not press Italy for any monetary compensation, only removal of the wastes, the result was a sharing of the financial and physical burdens of the cleanup, which the Friends of the Earth estimated to be 8 million naira, or 1 million pounds. According to the *Xinhua* news service, by August 1988, the Nigerian government had already spent over \$1 million in the cleanup.⁹⁶

The Nigerian government was much more demanding in the diplomatic arena. When Nigeria discovered the wastes, it signaled to Italy and the international community that it would not tolerate the waste dump, and moved to the fore of the crusade against the export of toxic wastes to developing countries. Nigeria requested the Italian government recall its charge d'affaires in Lagos, recalled its own ambassador from Italy, appealed to the International Court of Justice and appeared before the U.N. General Assembly. Nigerian authorities also arrested the Italian businessman Perazzi and fifteen Nigerians, threatening them with execution.⁹⁷ In December 1988, Nigeria passed a decree outlawing the purchase, sale, import, transport or storage of toxic wastes, and made the penalty for any violations in this regard life imprisonment, and stated that the director of any corporate body and foreign officials involved in the trade will be "subject to severe punishment," whether or not they have diplomatic immunity.⁹⁸ Nigeria's claim of authority was significant for international law, since it is asserting its prerogative to punish offenders, whether they are nationals or not. Another significant move on Nigeria's part came in August, when the government gave full departmental status to the environment planning and protection division of the Ministry of Works, an indication of the seriousness and importance the country now attached to the protection of the environment.⁹⁹

⁹⁶ GREENPEACE INVENTORY, *supra* note 1, at 96.

⁹⁷ *Toxic Waste Importers Face Execution*, *supra* note 58, at 1133.

⁹⁸ GREENPEACE WASTE TRADE UPDATE, Mar. 1, 1989, at 3.

⁹⁹ *Last Batch of Toxic Waste Removed*, WEST AFRICA, Aug. 29-Sept. 4, 1988, at 1591.

While Italy assumed the costs because the managing firm was Italian, the wastes in fact originated from several different countries: Norway, Italy, the Netherlands, the United Kingdom and the United States. Even the shipment of the wastes to Koko was an international effort, since the five ships came from several different countries.¹⁰⁰

In September 1988, Italy responded to both Nigeria and the other Western European countries who refused the waste, by announcing a comprehensive plan to deal with the wastes. On September 1, the Italian Minister of the Environment, Giorgio Ruffolo, acknowledged Italy's responsibility, and the cabinet approved a decree temporarily banning all shipments of wastes to developing countries. On September 16, the Italian Parliament proposed a weaker decree, that allowed the trade of wastes with EEC and OECD countries, and with any other country as long as that country agreed to the deal.¹⁰¹ Effective June 1989, the decree became Europe's most prohibitive waste export law, banning exports of hazardous waste from Italy to any non-OECD country.¹⁰² As part of the first decree passed by the cabinet, each region of Italy had to accept industrial waste for treatment. Previous to the incident, Italy only had five waste disposal units in the country, and had no industrial plan other than exporting the wastes to other countries. Italy's response indicated that it, as an exporter country, claimed responsibility for the final disposal of the wastes, reaffirming the emerging international norm. As Minister Ruffolo stated, "[d]isposing of wastes is the responsibility of those who have produced them. We cannot pass off this responsibility to third countries and delays can only be blamed on us."¹⁰³

In this respect, the Koko incident clarified the specific responsibilities of nations involved in cleanup. The exporting government, rather than producing ones, assumes most of the financial and physical burdens of removing the contamination, but does not recompense any individuals or the importing government for damages. The exporting government may seek to recuperate the costs from the waste managers or carriers.

¹⁰⁰ GREENPEACE INVENTORY, *supra* note 1, at 95.

¹⁰¹ Jim Vallete, *supra* note 95, at 119.

¹⁰² No. 475.; GREENPEACE INVENTORY, *supra* note 1, at 331.

¹⁰³ Toxic Waste Boomerang, *supra* note 34, at A4, col. 1.

VII. INTERNATIONAL APPRAISAL

The international response to the Koko incident was uniform. Countries, international governmental and nongovernmental groups, and individuals all excoriated the dumping of wastes in Nigeria. The response to the broader issue of the waste trade, however, varied with time. Most developing countries called for a total ban on the trade of toxic wastes, while industrialized countries agreed to such a ban "in principle." World attention focused increasingly on this issue since the late 1970s; still, it wasn't until the Koko incident and the other incidents publicized in 1988 that governments seriously worked toward achieving an international consensus on the issue. By March 1989, the previous year's calls for action had culminated in the Basel Convention, where the previously established international norms of prior notification and informed consent were most clearly reaffirmed. In December, 1989, for the first time, the European Economic Community ("EC" or "EEC") agreed to ban all toxic and nuclear waste exports to sixty-eight former European colonies that form the African, Caribbean and Pacific ("ACP") countries.¹⁰⁴ With the EC's first commitment to ban exports to developing countries, a new international norm banning the global trade in wastes seems to be emerging.

The reaction of countries and governmental bodies initially divided into two groups: those who favored more stringent regulations such as prior notification by the exporting nation and written consent from the importing one, and those who condemned the entire trade and who called for a ban on all toxic waste exports. Most governments supported the aspirational norm that it was the responsibility of the producer country to dispose of their wastes properly without resorting to exporting them, but it was not until the end of 1989 that exporting nations took steps to significantly limit the international trade in toxic wastes.

In 1988, the main exporters, Europe and the United States, advocated more stringent regulations rather than an outright ban of the trade in hazardous wastes. Britain, for example, introduced rules to increase safety procedures for importing dangerous chemical wastes, and Prime Minister Margaret Thatcher

¹⁰⁴ See Fourth ACP-EEC convention, signed in Lomé, Dec. 15, 1989, reprinted in 29 I.L.M. 809 (1990); *Waste Shipments to 68 African, Caribbean and Pacific Countries will be prohibited*, GREENPEACE WASTE TRADE UPDATE, Dec. 1989, at 2.

introduced to Parliament legislation that would turn the 1986 EC directive (calling for a written agreement between the exporter and importer) into law.¹⁰⁵ In an October 1988 meeting of twelve EC environment ministers, toxic waste disposal was a major concern, but only France and Netherlands called for treatment of toxic wastes in the country of origin, rather than allowing waste exports.¹⁰⁶ In November, the twelve environment ministers adopted a resolution urging all industrialized countries to reduce waste exports, and to warn developing countries about the dangers of toxics.¹⁰⁷ In late May 1988, the European Parliament in Brussels unanimously passed a resolution calling for a ban on large-scale exports of hazardous waste from Europe to developing countries.¹⁰⁸

The United States considered several waste trade bills in Congress—some of which called for a ban in trades and others which would place new restrictions on waste exports. All of the bills languished in committee and did not come up for a vote.¹⁰⁹ At that point, the responses of the industrialized countries reaffirmed the prevailing norm of requiring regulations for the international trade, but did not wholeheartedly support the plan emerging from the developing nations—that of a complete ban on the export of dangerous wastes.

The demand for a global ban on the waste trade gathered momentum in 1988, mainly from developing countries. Just

¹⁰⁵ *Europe's Failing Effort*, *supra* note 19, 4, at 6.

¹⁰⁶ *New Developments in International Fora*, GREENPEACE WASTE TRADE UPDATE, Jan. 15, 1989, at 3.

¹⁰⁷ *Id.*

¹⁰⁸ GREENPEACE INVENTORY, *supra* note 1, at 303; for the document, see Official Journal of the European Communities, No. C 158/239, June 26, 1989.

¹⁰⁹ GREENPEACE INVENTORY, *supra* note 1, at 287-88; Waste Export Control: Hearing on H.R. 2525 Before the Subcomm. on Transportation and Hazardous Materials, 101st Cong., 1st Sess. 3 (1989); see H.R. 5018, 100 Cong., 2d Sess. (1988) (Waste Export Prohibition Act of 1988, introduced by John Conyers (D-MI), banning all U.S. exports of toxic waste, solid waste, incinerator ash, and oil wastes beyond North America and imposing fines up to \$50,000 for the first offense and up to \$100,000 for 2d offenses); S. 2598, 100 Cong., 2d Sess. (1988) (Waste Export Control Act, sponsored by Sen. Robert Kasten (R-WI), requiring disposal abroad of wastes be in accordance with U.S. environmental standards, establishing a permit process); S. 2773, 100 Cong., 2d Sess. (1988) (RCRA reauthorization bill, introduced by Sen. Max Baucus (D-MT), which contained a provision that would allow waste exports to countries that agree to establish "notice, export, and enforcement procedures and standards protective of human health and the environment"); H.R. 5434, 100 Cong., 2d Sess. (1988) (introduced by Rep. John Porter (R-IL), allowing waste exports if exporter could demonstrate that the foreign waste operations could be conducted in accordance with U.S. environmental standards).

before the discovery of the wastes at Koko, the Organization of African Unity (OAU) was already responding to the other incidents. At a summit ending May 28, 1988, the OAU unanimously passed a resolution condemning the transnational disposal of nuclear and other hazardous wastes, and declared it a "crime against Africans."¹¹⁰ The OAU also called on waste dumpers to clean up the areas already polluted.¹¹¹ On June 25, after the Koko incident was made public, the Economic Community of Western African States (ECOWAS) agreed to make it a criminal offense to facilitate toxic waste dumping and agreed to set up a regional "dump watch," at the urging of President Babangida.¹¹² The "dump watch" would be a monitoring system where countries could pool and share information on the movements of ships carrying hazardous wastes. At this conference, several strong statements were made condemning the industrial exporters.¹¹³

Other regional groups met and issued similar statements. At the end of June, for example, sixty-six ACP states, in a joint assembly with the EEC, condemned the international trade in wastes and demanded "a ban in principle."¹¹⁴ In July, twenty-two members of the States of the Zone of Peace and Cooperation of the South Atlantic met in Rio, again strongly condemning the transfer of hazardous wastes.¹¹⁵ By mid-July, the Organization of Eastern Caribbean States had also agreed to ban foreign waste dumping; and in August a convention in Cartagena urged the same for its members.¹¹⁶ In September, the foreign ministers from 101 Non-Aligned Movement ("NAM") nations endorsed a resolution calling for all NAM members to participate in monitoring and exchanging information on ships and companies participating in hazardous waste trade.¹¹⁷

Several developing countries remained silent about the whole issue of hazardous wastes, apparently tempted by the much needed foreign currency. In Angola, for example, President Jose

¹¹⁰ *Organization of African Unity: Council of Ministers Resolution on Dumping of Nuclear and Industrial Waste in Africa*, reprinted in 28 I.L.M. 567, 568 (1989) (promulgated on May 23, 1988) [hereinafter OAU Resolution].

¹¹¹ *Waste Dumping Furor*, *supra* note 2, at 583.

¹¹² *ECOWAS says no to toxic waste*, WEST AFRICA, July 4, 1988, at 1196.

¹¹³ *Id.*

¹¹⁴ Jim Vallete, *supra* note 95, at 11.

¹¹⁵ GREENPEACE INVENTORY, *supra* note 1, at 64.

¹¹⁶ *Id.*, at 122.

¹¹⁷ *Non-Aligned Movement Condemns Waste Trade*, GREENPEACE WASTE TRADE UPDATE, July 15, 1989, at 4.

Eduardo dos Santos entered into a preliminary agreement with a major Swiss arms trader, Arnold Keunzler, in 1988, to bring over five million tons of western industrial waste to Angola for incineration and storage in exchange for \$2 billion and the construction of a new city, port and airfield which would provide 15,000 jobs.¹¹⁸ The Angolan government denied that the bill had been signed, but Keunzler insisted that "the deal is clinched."¹¹⁹ Even though Angola has been silent in the condemnation of the practice, it was aware of the international norms against the trade.

Guinea-Bissau reluctantly acceding to the international consensus. In February 1988, it signed a five-year \$600 million contract to bury 15 million tons of toxic wastes from European tanneries and pharmaceuticals in large holes.¹²⁰ The country would have received a yearly payment of \$120 million, an amount nearly equal to its yearly gross national product of \$150 million and, when totalled, triple its foreign debt. Later Guinea-Bissau did withdraw the plan, under pressure from its West African neighbors, but said it was doing so "regretfully." The Tourism and Trade Minister Manuel Maria Dos Santos acknowledged the social costs of the transaction, but stated, "[w]e need the money."¹²¹ In June 1988, President Joao Bernardo Vieira appealed to the international community for development aid, "Send us what we can use to overcome under-development, not what can kill us."¹²²

On March 22, 1989, thirty-five states and the European Commission signed the UNEP Basel Convention, the first comprehensive effort to regulate the international trade in wastes, at the close of the 116-nation convention. The Basel Convention, instead of supporting a total ban of wastes, clearly reaffirmed the norm of requiring exporting nations to give prior notification and to receive written, informed consent from receiving nations.¹²³

¹¹⁸ *Regional Updates on International Waste Trade Schemes*, GREENPEACE WASTE TRADE UPDATE, Jan. 15, 1989, at 5.

¹¹⁹ GREENPEACE WASTE TRADE UPDATE, Mar. 1, 1989, at 4.

¹²⁰ GREENPEACE INVENTORY, *supra* note 1, at 82.

¹²¹ *The Global Poison Trade*, *supra* note 1, at 66.

¹²² Paris AFP in English, *Vieira Requests Aid After Canceled Toxin Deal*, F.B.I.S.-A.F.R., June 17, 1988, at 22.

¹²³ Basel Convention, Art. 4(1)(a),(c). Dr. Mostafa Tolba, executive director of the UNEP, explained in an opening speech what he considered were the four major principles

First, it defined hazardous wastes through two lists, one listing hazardous chemicals and the other listing hazardous properties.¹²⁴ The convention excluded radioactive materials and household wastes, but emphasized that any state can define what wastes it considers hazardous.¹²⁵ The convention also included other obligations, which reflected the prevailing norms: states must ensure minimum waste generation and availability of adequate disposal facilities;¹²⁶ states may not export hazardous or other wastes to parties which have prohibited the import of such wastes;¹²⁷ the illegal traffic of wastes is criminal,¹²⁸ only authorized citizens may dispose of or transport wastes, which must be clearly packaged and labelled according to international standards;¹²⁹ wastes must be disposed of in an environmentally sound manner¹³⁰ and it is the responsibility of the exporting state;¹³¹ when a movement of wastes can't be completed, the exporter has the duty to re-import the wastes;¹³² states must cooperate in developing new environmentally sound low-waste technologies, in transferring technology and waste management systems and in developing rules on liability and for compensation for damage resulting from the movement of wastes.¹³³ One important article (which environmentalists denounce as a "loophole") specified that bilateral, multilateral and regional agreements can be made for which the convention does not apply, so long as the parties ensure environmentally sound management of the wastes.¹³⁴ The

behind the convention:

1. It is the sovereign right of all countries to ban imports of hazardous waste.
2. Hazardous wastes must be reduced. The chief short-term goal of the Convention is minimum waste generation.
3. Hazardous wastes should be disposed of in the country of their origin. Their transboundary movement should be reduced to a minimum, and allowed only under very specific conditions.
4. Developing countries must have help to build the capacities for the most effective waste management possible.

Diane Brady, *New curbs on the commerce in poison*, 1 OUR PLANET 18 1989.

¹²⁴ *Id.*, Art. 1(1).

¹²⁵ *Id.*, Art. 1(3); Art. 3(a).

¹²⁶ *Id.*, Art. 4(2)(a),(b),(c).

¹²⁷ *Id.*, Art. 4(1)(b).

¹²⁸ *Id.*, Art. 4(3).

¹²⁹ *Id.*, Art. 4(7)(a),(b).

¹³⁰ *Id.*, Art. 4(8).

¹³¹ *Id.*, Art. 4(10).

¹³² *Id.*, Art. 8.

¹³³ *Id.*, Art. 10 (1),(2); Art. 12.

¹³⁴ *Id.*, Art. 11.

Convention would enter into force when a minimum of twenty countries ratified it.¹³⁵

The international responses to the convention varied, illustrating the conflicting claims. The nations which signed the convention hailed its provisions as a significant first step towards dealing with the global trade in wastes. Giorgio Ruffolo, Italy's Minister of Environment stated, "[i]t's the first serious international effort to regulate waste. We think it should allow us to control this type of traffic."¹³⁶ Dr. Tolba emphasized, "[o]ur agreement has not halted the commerce in poison, but it has signaled the international resolve to eliminate the menace hazardous wastes pose to the welfare of our shared environment and to the health of the world's peoples."¹³⁷ Venezuela's statement, for example, commented that "this Convention constitutes a first important step in the direction sought by the developing countries to ensure the protection of the environment and lay down a general international legal framework to regulate transboundary movements of hazardous wastes and minimize the generation of hazardous wastes and ensure their environmentally sound management."¹³⁸

The rest of the responses to the Basel Convention, predominantly reservations, pointed to its rapidly eroding grasp of the emerging international norms. Some signatory nations issued reservations or called for more action. For example, Colombia, Uruguay and Mexico urged the adoption of a protocol that would establish appropriate procedures with regard to responsibility and compensation for any damages that result from the trade.¹³⁹ Turkey called for a mechanism for effective control and prevention of illegal traffic in hazardous wastes.¹⁴⁰ That these measures were not included in the Basel Convention points to the as yet incomplete nature of the emerging international consensus.

African nations refrained as a bloc from signing the convention until the Organization of African Unity (OAU) had taken a position. While Senegalese delegate Moctar Kebe said, "[w]e

¹³⁵ *Id.*, Art. 25(1).

¹³⁶ *U.N. Conference Supports*, *supra* note 23, at B11, col.1.

¹³⁷ Brady, *supra* note 123, at 20.

¹³⁸ Declaration of Venezuela, (Basel Convention materials).

¹³⁹ Declaration of Colombia, (Basel Convention materials); declaration of Uruguay, (Basel Convention Materials); declaration of Mexico, (Basel Convention materials).

¹⁴⁰ Declaration of Turkey, (Basel Convention Materials).

think it is a good Convention that has solved most of the essential points," other African officials worried that industrialized nations would not do enough to apply the treaty, partly because it gives receiving nations little in way of enforcement mechanisms.¹⁴¹ "We are unhappy because the treaty has been watered down," Ahmed Mohammed Taylor-Kamara, Sierra Leone's Minister of Environment, commented.¹⁴² Previously, the treaty had called for signatories to prohibit the shipment of waste to countries that have less strict waste disposal policies, but this provision was stricken mainly due to American and West German pressure. Ghana also mentioned reservations on the article that made importing states responsible for disposing of the wastes if they are found to be responsible for illegal trafficking of the wastes.¹⁴³

Environmental groups such as Greenpeace also found problems with the UN Basel Convention. Their concerns were that the convention failed to define incinerator ash as a "hazardous" substance, did not mention radioactive wastes, and allowed bilateral and multilateral treaties that do not need to conform to any of the provisions of the convention.¹⁴⁴

In March 1990, President Bush signed the Basel Convention.¹⁴⁵ On May 5, 1992, the Convention finally came into force, when Australia became the 20th country to ratify the convention.¹⁴⁶ Mostafa Tolba, director of the U.N. Environment Programme severely criticized 11 of the 12 EC member states, the United States, Canada, and Japan for failing to ratify the Convention.¹⁴⁷ Soon afterwards, however, some of these countries ratified the Convention or moved to do so.¹⁴⁸

¹⁴¹ Brady, *supra* note 123, at 18.

¹⁴² *U.N. Conference Supports*, *supra* note 23, at B11, col. 3.

¹⁴³ Declaration of Ghana, (Basel Convention Materials).

¹⁴⁴ *Greenpeace Analysis of the Basel Convention*, GREENPEACE WASTE TRADE UPDATE, July 15, 1989, at 3.

¹⁴⁵ Briefly, LOS ANGELES TIMES, Mar. 22, 1990, at D2, col. 1.

¹⁴⁶ *Senate Committee Votes to Ratify Treaty, Implementing Legislation Still Needed*, BNA INT'L DAILY, May 11, 1992 (available in LEXIS Nexus Library).

¹⁴⁷ Randall Palmer, *U.N. Slams West for Not Ratifying Toxic Waste Pact*, The Reuter Library Report, Apr. 14, 1992 (available in LEXIS Nexus Library). The countries that ratified the Convention are: Argentina, Australia, China, Czechoslovakia, El Salvador, Finland, France, Hungary, Jordan, Liechtenstein, Mexico, Nigeria, Norway, Panama, Poland, Romania, Saudi Arabia, Sweden, Switzerland, Syria and Uruguay. *Id.*

¹⁴⁸ Japan's ruling Liberal Democratic developed compromise legislation; see *Compromise Reached on Ratifying Basel Treaty on Wastes*, BNA INT'L ENV'T DAILY, Apr.

Even as countries lagged in ratifying the Basel Convention, it rapidly seemed antiquated, as starkly contrasting efforts by the European Parliament, the Organization of African Unity, and others working for a global ban of all waste exports pushed forward. In May 1988, the OAU passed a resolution declaring the dumping of nuclear and industrial wastes in Africa to be a crime against the African people.¹⁴⁹ In July 1989, the OAU passed a resolution to begin drafting an African Convention that would ban the import of all toxic wastes into the African continent. The convention that resulted, the Bamako Convention on the Ban on the Import of All Forms of Hazardous Wastes Into Africa and the Control of Transboundary Movements of Such Wastes Generated in Africa,¹⁵⁰ expanded the definition of hazardous wastes beyond that found in the Basel Convention, and made the transport of wastes into Africa by non-party nations an illegal and criminal act.¹⁵¹ The Caribbean Community (CARICOM) summit produced an endorsement of the Port of Spain Accord, which, among other things, condemns the dumping of hazardous wastes. In October, forty-eight leaders of Commonwealth nations issued the "Langwaki Declaration," accusing wealthy nations of destroying the global environment, citing among other things the "dumping" of wastes in developing countries.¹⁵² The September summit of the 102 nations of the Non-Aligned movement also produced a resolution that called for a global ban in the waste trade.¹⁵³ As of March 1991, 83 countries officially have closed their borders to waste imports of all kinds.¹⁵⁴

28, 1992 (available in LEXIS, Nexus Library); the U.S. Senate ratified the Convention August 11, 1992, see Treaty Document 102-5; *Senate Ratifies Basel Convention, Treaty to Protect Salmon Stocks*, BNA INT'L ENVT DAILY, Aug. 18, 1992 (available in LEXIS, Nexus Library); Canada ratified the Convention in September; see *Basel Convention on Shipment of Hazardous Wastes Ratified*, BNA INT'L ENVT DAILY, Sept. 2, 1992 (available in LEXIS, Nexus Library).

¹⁴⁹ OAU Resolution, *supra* note 110.

¹⁵⁰ *The Bamako Convention on the Ban on the Import of All Forms of Hazardous Wastes Into Africa and the Control of Transboundary Movements of Such Wastes Generated in Africa*, reprinted in 20 ENVTL POL'Y & L. 173 (Sept./Oct. 1990) [hereinafter Bamako Convention]. For a discussion of the Bamako Convention, see Louka, *supra* note 9, at 10-11; *Africa Adopts Sweeping Measures to Protect Continent from Toxic Terrorism*, GREENPEACE WASTE TRADE UPDATE, Mar. 22, 1991, at 1.

¹⁵¹ Bamako Convention, Art. 4, para. 1; Art. 2.

¹⁵² *Langwaki Declaration*, INT'L HERALD TRIB., Oct. 19, 1989.

¹⁵³ GREENPEACE WASTE TRADE UPDATE, *supra* note 82, at 2-3.

¹⁵⁴ *Chile Becomes the 83d Country to Ban Waste Imports Outright*, GREENPEACE WASTE TRADE UPDATE, Mar. 22, 1991, at 7.

Most significantly, European countries began moving towards this goal as well. In June 1989, Italy placed into effect Europe's most prohibitive waste export law, which prohibits the export of municipal, special, toxic and hazardous wastes from Italy to non-EC or OECD countries, as well as requires waste exporters to pay a fee in order to export any wastes.¹⁵⁵ The French Ministry of the Environment announced its intent to ban the waste trade nationally, and on September 19, 1989, Britain's Secretary of the State for the Environment urged the EC governments to restrict the export of toxic wastes. West German Minister of the Environment, Klaus Toepfer stated a German commitment to cease waste shipments to East Germany, the country's first official statement to this effect. The London Dumping Convention ("LDC"),¹⁵⁶ which sets guidelines on ocean dumping of wastes, considered a resolution to ban exports of hazardous wastes from LDC to non-LDC countries at its 1990 annual summit.¹⁵⁷

In the summer of 1989, during the negotiations for the EEC/ACP Lome IV Convention, a trade and aid pact between the European Community and most of their former colonies, the EEC agreed to ban all toxic and nuclear waste exports to sixty-eight former European colonies in Africa, the Caribbean and the Pacific.¹⁵⁸ This agreement, known as the Lome Convention, became the most comprehensive ban on international waste trade, and was the EEC's first commitment to ban waste exports to any country. The Lome Convention only protects the sixty-eight signatories and not the other less-industrialized countries in Latin America, Asia, and the Middle East.¹⁵⁹

The latest expression of international norms in the area of transboundary movements of hazardous wastes emerged in the U.N. Conference on Environment and Development in Rio de Janeiro, in June 1992. For instance, one chapter of Agenda 21 dealt with the "[e]nvironmentally sound management of hazardous wastes, including prevention of illegal international traffic

¹⁵⁵ GREENPEACE INVENTORY, *supra* note 1, at 331.

¹⁵⁶ Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, London, Dec. 29, 1972, 26 U.S.T. 2403, T.I.A.S. No. 8165, 1046 U.N.T.S. 120, *reprinted in* 18 I.L.M. 510 (1979).

¹⁵⁷ GREENPEACE INVENTORY, *supra* note 1, at 18.

¹⁵⁸ Fourth ACPR-EEC convention, signed in Lomé, Dec. 15, 1989, *reprinted in* 29 I.L.M. 809(1990); GREENPEACE INVENTORY, *supra* note 1, at 11.

¹⁵⁹ *Id.*

in hazardous wastes.”¹⁶⁰ This chapter called for the prevention of waste generation, the promotion of institutional capacities in hazardous waste management, the international cooperation in the management of transboundary wastes, and prevention of illegal international waste trade.¹⁶¹ The chapter also specifically calls for the ratification of both the Basel Convention and the Bamako Convention, the elaboration of a protocol on liability and compensation, and the “[e]limination of the export of hazardous wastes to countries that, individually or through international agreements, prohibits the import of such wastes, such as, the contracting parties to the Bamako Convention, the fourth Lomé Convention or other relevant conventions, where such prohibition is provided for.”¹⁶²

An international consensus exists that generally denounces the trade in wastes. Countries seem to agree that each government should dispose of its own wastes, unless it lacks the technological capability to handle wastes. Regulations requiring exporting states to issue prior notification of waste exports and to obtain written consent from the importing states are the predominant international expectations. Following Koko and other incidents in late 1988 and early 1989, both waste exporters and importers began to call for a ban on the trade, especially between industrialized and developing countries. This emerging norm of requiring a complete or partial ban of the trade was even imbedded in the much disputed Basel Convention, in Article 15, Paragraph 7, which states that periodically the Conference

shall undertake . . . an evaluation of its [the Conference’s] effectiveness, and if deemed necessary, to consider the adoption of a complete or partial ban of transboundary movements of hazardous wastes and other wastes in light of the latest scientific, environmental, technical and economic information.¹⁶³

Certainly, if a country specifically prohibits the import of hazardous wastes, either unilaterally or by international agreements, the trade in wastes with that country is banned.

¹⁶⁰ Agenda 21, U.N. Conference on Environment and Development in Rio de Janeiro, June 3-14, 1992, U.N. Doc. A/CONF.151/4 (Part II), ch. 20.

¹⁶¹ *Id.*, at ch. 20.8.

¹⁶² *Id.*, at ch. 20.7.

¹⁶³ Basel Convention, Art. 15(7).

VIII. IMPLICATIONS

In the Koko incident, the surprising lack of conflicting claims and Italy's retrieval of the wastes following Nigerian and Western European protests reinforce the prevailing norms against the trade in toxic wastes between industrial and developing countries. Nigeria exercised its right to ban the waste as well as to punish the individuals involved, including a foreign businessman. The Western European countries reiterated the "not in my backyard" syndrome by denying the entry of the wastes. Italy, in retrieving the wastes, accepted its responsibility as an exporter nation.

Numerous difficulties still exist before an international norm truly representative of the world community can develop. One issue is the conflict that arises when international environmental concerns clash with a developing nation's historical right of sovereignty (for instance, the right to accept a waste trade in order to obtain much-needed money). The tension arises in the context of the North-South debate, which has been a constant issue in international environmental discourse—from the U.N. Conference on the Human Environment, held at Stockholm in 1972 to the Conference on Environment and Development, held in Rio in 1992.¹⁶⁴ Key among the sources of tension is the vastly different environmental priorities of the industrialized and developing countries due to their different stages of development. Developed countries are primarily concerned with environmental hazards of development, industrialism and consumerism: global warming, acid rain, clean air, and depletion of ozone, while developing countries are preoccupied by more basic environmental problems that stem from poverty and underdevelopment: safe drinking water, erosion of land, and desertification.¹⁶⁵ In the

¹⁶⁴ See generally Louis B. Sohn, *The Stockholm Declaration on the Human Environment*, 14 HARV. INT'L L. J. 411 (1973); Kuala Lumpur Declaration on Environment and Development, Second Ministerial Conference of Developing Countries on Environment and Development, April 1992; Rio Declaration on Environment and Development, A/CONF.151/5, May 7, 1992; Organization for Economic Co-operation and Development, TRANSFRONTIER POLLUTION AND THE ROLE OF STATES, (OECD, 1981); Brief Summary of the General Debate, REPORT OF THE UN CONFERENCE ON THE HUMAN ENVIRONMENT, at 45-46.

¹⁶⁵ See Jan Pronk & Mahbubul Haq, *The Hague Report*, Hague Symposium, Nov. 25-27, 1991 (March 1992), at 10-11.

Unfortunately, the transboundary movement of hazardous wastes is truly a global problem. Not only do developing countries suffer adverse environmental and health consequences, but industrialized countries may also re-import goods manufactured from

face of great poverty and financial pressures, developing countries claim it is their prerogative to choose their own priorities when it comes to development, especially with regard to the use of natural resources.

Principle 21 of the Declaration of the United Nations Conference on the Human Environment held in Stockholm in 1972, highlights the conflict:

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.¹⁶⁶

This statement of state sovereignty, coupled with the "responsibility" clause, is repeated in identical language in the Rio Declaration on Environment and Development, and has now become Principle 2.¹⁶⁷ As this statement shows, the most difficult tasks in international environmental regulation and specifically in the case of hazardous transfers is that, as the OECD reports, "States . . . will have to reconcile what are in some cases conflicting such as the right to exploit their natural resources and their responsibility not to cause damage to the environment of other states."¹⁶⁸

Underlying the debate is perhaps the developing countries' resentment of the implication that their development somehow

or based on those hazardous materials, closing a "circle of poison." See DAVID WEIR & MARK SHAPIRO, *CIRCLE OF POISON: PESTICIDES AND PEOPLE IN A HUNGRY WORLD* (1981).

¹⁶⁶ United Nations Environment Programme, *Declaration of the United Nations Conference on the Human Environment*, REPORT OF THE UN CONFERENCE ON THE HUMAN ENVIRONMENT, UN Document A/CONF.48/14 (1974), at 5.

¹⁶⁷ See Rio Declaration on Environment and Development, United Nations Conference on Environment and Development, Rio de Janeiro, June 3-14, 1992, Principle 2.

¹⁶⁸ Organization for Economic Co-operation and Development, *TRANSFRONTIER POLLUTION AND THE ROLE OF STATES*, (OECD, 1981) at 6. But see Adeoye Akinsanya, *The UN Charter of Economic Rights and Duties of States: The International Protection of the Economic Independence of Third World Countries—a New International Economic Order*, in *THE FUTURE OF AFRICA AND THE NEW INTERNATIONAL ECONOMIC ORDER*, (Ralph I. Onwuka & Olajide Aluko, eds., 1986), at 76 (stating that one of the basic principles behind the New International Economic Order was the "full permanent sovereignty of every State over its natural resources and all economic activities. . . . No State may be subjected to economic, political or any type of coercion to prevent the free and full exercises of this inalienable right").

must be curtailed in the name of environmental protection, while in their eyes, industrialized countries were able to exploit their natural resources with impunity to achieve their present successes. Although a growing consensus among leading thinkers seems to be emerging that countries must embark on a new concept of sustainable development—economic growth that provides fairness and opportunity for everyone without destroying the earth's finite resources¹⁶⁹—developing countries still may try to seek the unfettered growth that industrialized countries enjoyed in the past.

The consequences of regulation of the waste trade versus the consequences of a ban must also be weighed to more fully appreciate the implications of the emerging international norms. One of the negative aspects of regulation is simply the practical difficulty of enforcing those regulations—waste trade deals occur anyway, since obtaining the “informed consent” from a competent authority is often as easy as a well placed bribe. Also, by regulating the business, environmentalists charge that an “international stamp of approval” is conferred upon the trade. However, these reasons overlook the very important benefits of regulation: keeping track of waste trades that do occur, ensuring that the disposal of those wastes comply with international standards of environmentally sound practice and therefore reducing possible harms, and perhaps most importantly, providing a means by which world attention on this issue can be focused and in which future expectations of authority and control may be shaped.

The problem with a global ban is also one of enforcement, raising questions of monitoring, enforcement, liability, compensation, and arbitration. A ban on the trade of wastes may even lead to more environmental damage. Unscrupulous exporters may decide to dump wastes in the ocean or incinerate them at sea, a problem that already occurs with the current regulations. Furthermore, a global ban on the waste trade could potentially harm those countries which do not have the technological capability of disposing of the wastes properly.¹⁷⁰ On the positive

¹⁶⁹ See generally The Hague Report, *supra* note 166 (summarizing a symposium on sustainable development, a model of economic development which focuses on people as the primary concern, that incorporates environmentally safe technologies, and that reflects the scarcity value of environmental resources into decision-making).

¹⁷⁰ See also Michelle M. Vilcheck, Comment, *The Controls on the Transfrontier Movement of Hazardous Waste From Developed to Developing Nations: The Goal of a "Level Playing Field,"* 11 Nw. J. INT'L L. & BUS. 643, 668-671 (1991) (discussing arguments against a complete ban on transfrontier movement of hazardous wastes).

side, a ban would force exporting and producing countries to look toward alternative technologies for waste disposal that would address the problem of waste generation in the first place.

Ultimately, the best policy for the environment and for sustainable human development is to recognize that the production of wastes is a continuum, and that regulation only focuses on the "back end," or the disposal of the wastes, instead of on the "front end," or the production of the wastes. Currently, waste production is weakly controlled, poorly defined, and little systematic knowledge exists about it.¹⁷¹ In order to truly deal with the problem of hazardous wastes, the entire production cycle of goods must be revised. If the waste trade is internationally banned, countries will be forced to think about the long-term solutions that the earth and its people require. Minimizing waste reduction would not be costless or easy, but the first step of holding waste generators accountable and financially liable for the safe disposal of their wastes is a good beginning.

The Koko incident brought to the world's attention, developing countries in Africa as well as the industrial Western European states, the international trade in hazardous wastes. The main lesson, however, is a practical one: while an international norm is emerging that condemns the waste trade and agrees on the need for more stringent regulations or even a ban, the individual waste traders and firms continue to face enormous financial incentives to trade. Because the Basel Convention, like most international agreements, has no enforcement mechanism, waste trade schemes continue to flourish.¹⁷²

An incident that illustrates the limited scope of the Basel Convention or even the Lomé Convention, occurred in October

¹⁷¹ Mary D. Uva & Jane Bloom, *Exporting Pollution: The International Waste Trade*, ENVIRONMENT, June 1989, at 15-16.

¹⁷² The trade in wastes continues to proliferate around the world, as documented continuously by Greenpeace. See generally GREENPEACE WASTE TRADE UPDATE, Mar. 22, 1991, Summer 1991; GREENPEACE TOXIC TRADE UPDATE 5.2 (1992). One illustration of the scope of the toxic trade business can be seen in the shipping records of one ship, the *Ever Guest*—from January 1991 to January 1992, the ship picked up the following inventory of toxic cargo from New York ports: 747,600 lbs. of hazardous pesticides for Taiwan and Korea; 2,249,000 lbs. of plastic waste for the Philippines, Indonesia, and Hong Kong/China; 1,561,000 lbs. of plastic for Korea, Taiwan, India, Jamaica, Thailand, Philippines, Singapore, Malaysia, and Indonesia; 3,933,000 lbs. of metal waste for Hong Kong/China, Taiwan, Korea, Pakistan, India and Singapore; 114,513 lbs. of asbestos for Indonesia and Malaysia; and 1,256,600 lbs. of hazardous cargo for six countries. *What Does a Waste Trading Vessel Really Carry?* GREENPEACE TOXIC TRADE UPDATE 5.2 (1992) at 18.

1989, when a Greek vessel, *N.V. Arion I*, sailed into Nigeria's territorial waters on its way to Lomé, Togo, carrying 546 tons of frozen meat contaminated by the 1986 Chernobyl accident.¹⁷³ The vessel was escorted out of Nigerian waters after being detained for seventeen days. Another ship, the *M.V. River Oli*, also attempted to land in Nigeria, carrying five containers of radioactive beef, and was also turned away.¹⁷⁴ In response to the radioactive meat incidents, the EC and the ACP countries drew up a special clause in the Lomé Convention, which would make illegal the dumping of poisonous wastes in Africa by EC countries. The EC reaction to the meat ban called for by Senegal, Ghana, Liberia, Sierra Leone, Togo, Côte d'Ivoire and Benin has been muted; perhaps the EC countries are truly beginning to respect statements such as that iterated by Ambassador Kane of Senegal, "[w]e do not want products—waste, meat or milk-powder—that have been refused entry elsewhere."¹⁷⁵

However, the latest incident illustrates that even while international norms have developed and countries around the world condemn it, the practice of trade in wastes continues unabated—even under the harshest circumstances. During the first week of September 1992, the UNEP discovered that Somalia, devastated by 20 months of famine and war, was to be the subject to twenty years of hazardous waste imports, under a contract valued at \$80 million signed by the former minister of health of the acting government, Nur Elmy Osman, and Italian and Swiss firms.¹⁷⁶ One of the warring faction's warlords, Ali Mahdi Mohamed, who declared himself interim president after rebels overthrew dictator Mohamed Siad Barre in January 1991, denied his officials had entered into the agreement, although unconfirmed reports alleged otherwise.¹⁷⁷

The international responses to the Koko incident reaffirmed norms developing since the late 1970s. Countries realize that while individual firms are the actual participants in the trade,

¹⁷³ *Radioactive meat wrangle*, WEST AFRICA 1862 (Nov. 6-12, 1989).

¹⁷⁴ GREENPEACE WASTE TRADE UPDATE, Dec. 1989, at 14.

¹⁷⁵ *Radioactive meat wrangle*, *supra* note 173, at 1862.

¹⁷⁶ Agence France Presse, Kenyan President Criticises Sending of Waste to Somalia, Sept. 13, 1992 (available in LEXIS, Nexis Library); NPR, *All Things Considered*, Sept. 10, 1992 (available in LEXIS, Nexis Library).

¹⁷⁷ *Toxic Dumping Plan?* NEWSDAY, Sept. 11, 1992, at 14; Aidan Hartley, *U.N. to Probe Toxic Waste Dumping in Somalia*, THE REUTER LIBRARY REPORT (available in LEXIS, Nexis Library).

the exporter state assumes responsibility for ensuring the proper disposal of the wastes. Countries now have the right to ban others' wastes. If waste trade is to occur, the exporter must provide prior consent and receive written consent; and if the wastes are exported but not properly disposed, the exporting country is responsible for retrieving these wastes. The international norm banning the transboundary movement of wastes is in its infant stages, but it is definitely emerging. Developing countries clearly call for an international ban on the export of wastes, and have indeed banned the wastes on regional levels. The Lomé convention that bans trade of wastes between EC and ACP countries is a positive sign that the international community is prepared to seriously consider a collective effort to control the international trade in wastes. The optimal solution of minimizing waste production is still beyond the horizon of prevailing international expectations, but perhaps in the next decade of increasingly environmentally conscious governments and people, first steps toward this goal may also ensue.