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Preface

In this book I examine the transfer of hazardous wastes and technologies from rich to poor countries. I look at forces that contribute to that transfer, as well as the political responses to it. The phenomenon is a product of economic globalization in the context of a highly unequal world, and it has generated various political responses, ranging from efforts to halt exports of toxic waste to calls for the transfer of cleaner production technologies. These initiatives all have serious weaknesses, or are under threat of being weakened. The reason, I suggest, is that hazard transfer is both dynamic and multifaceted. Efforts to stop one form of toxic exports prompt new forms to emerge. The players in this cat and mouse game are not just states and the specific corporations they seek to regulate. Also important are increasingly powerful nongovernmental organizations and industry lobby groups operating at the international level.

This project had its origins in my travels in West Africa in the late 1980s, when the region was the recipient of numerous shipments of hazardous waste from rich countries. My early research into the issue quickly made clear to me that these shipments were part of a broader trend. I am grateful to Gwyn Prins and the MacArthur Foundation for giving me the chance to explore this issue in depth, on a postdoctoral fellowship at the University of Cambridge. Prins's guidance and enthusiasm for the project helped launch what was initially a relatively small research program into a much larger and longer-term study.

In subsequent years, many other people contributed to this project in ways that I would like to acknowledge. I owe my deepest gratitude to Eric Helleiner, for his untiring intellectual and emotional support throughout. Special thanks are also due to those who took time out of their busy schedules to speak with me, including Harvey Alter, Julie Gourley, Scott Horne, Janice Jensen, Katharina Kummer, Klaus Lingner, Pierre Portas, Jim Puckett, Mary Clock Rust, Ellen Spitalnik, Kevin Stairs, and Jim Vallette. Jim Puckett in particular was extremely generous with his time, and provided helpful comments on last-minute drafts. I also thank a number of colleagues for their feedback and support on various papers presented at conferences of the International Studies Association and the American Political Science Association. They are Ken Conca, Peter Dauvergne,

Matthias Finger, Virginia Haufler, Jonathan Krueger, David Levy, Ronnie Lipschutz, Marian Miller, Kate O'Neill, Tom Princen, Gene Rochlin, Ian Rowlands, Paul Wapner, Marc Williams, and Mark Zacher. Two anonymous reviewers deserve thanks for their insightful comments on earlier drafts. I also owe thanks to an extremely impressive group of research assistants who have helped with this project. They are Matt Griem, Christopher Mahood, Shawn Morton, Nancy Palardy, Rolie Srivastava, Eric Verreault, Ken Watt, David Wallbridge, and Jacob Wilson. I am grateful to Roger Haydon for shepherding the manuscript through the publication process. The generous financial support of the Social Sciences and Humanities Research Council of Canada made this project possible. Finally, thanks are due to my family, friends, and colleagues for their patience and support, particularly in the final stages of this project.

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Acronyms

ACP	African, Caribbean, and Pacific (nations)
ASEAN	Association of Southeast Asian Nations
BAN	Basel Action Network
BIR	Bureau of International Recycling
BRC	Business Recycling Council
CAC	command and control
CARICOM	Caribbean Community
CFCs	chlorofluorocarbons
COP	Conference of the parties
DTIE	Division of Trade, Industry, and Economics (UNEP)
EC	European Community
ECLAC	Economic Community of Latin American Countries
ECOWAS	Economic Community of West African States
EMAS	Environmental Management and Audit Scheme (EU)
EMS	environmental management system
EPA	Environmental Protection Agency (U.S.)
ESM	environmentally sound management
EU	European Union
FDI	foreign direct investment
FPG	Formosa Plastics Group
G-77	Group of 77 (developing countries)
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GNP	gross national product
HCB	hexachlorobenzene
IAEA	International Atomic Energy Agency
ICC	International Chamber of Commerce
ICME	International Council on Metals and the Environment
IMLI	Indo Era Multa Logam (battery recycling plant)
IPMI	International Precious Metals Institute
ISO	International Organization for Standardization
ISRI	Institute of Scrap Recycling Industries
ITWAN	International Toxic Waste Action Network
MEA	multilateral environmental agreement

NAFTA	North American Free Trade Agreement
NAM	Non-Aligned Movement
NGO	nongovernmental organization
OAU	Organization of African Unity
OECD	Organization for Economic Cooperation and Development
PCBs	polychlorinated biphenols
PRI	Philippine Recyclers Incorporated
PRTR	pollution release and transfer register
PVC	polyvinyl chloride
SAGE	Strategic Advisory Group on the Environment
SMEs	small- and medium-scale enterprises
TBT	technical barriers to trade
TNC	transnational corporation
TWG	Technical Working Group
UNCED	United Nations Conference on Environment and Development
UNCTAD	United Nations Conference on Trade and Development
UNCTC	United Nations Centre on Transnational Corporations
UNEP	United Nations Environment Programme
USAID	United States Agency for International Development
WBCSD	World Business Council on Sustainable Development
WHO	World Health Organization
WTO	World Trade Organization

Toxic Exports

Hazard Transfer from Rich to Poor Countries

Just between you and me, shouldn't the World Bank be encouraging *more* migration of the dirty industries to the LDCs [less developed countries]?... I think the economic logic behind dumping a load of toxic waste in the lowest wage country is impeccable and we should face up to that... I've always thought that under-populated countries in Africa are vastly *under*-polluted.

—Lawrence Summers, 1991, then chief economist at the World Bank, excerpts from leaked internal memo¹

Larry Summers's memo caused quite a stir. It was written to colleagues while he was leading a team of economists in drafting a major report on development and the environment. The memo provoked strong opposition among the general public to the idea of promoting a transfer of hazards from richer to poorer countries. After the leak to the press in early 1992, Summers felt the need to apologize. He said that his comments had been only tongue-in-cheek. Transfers of the most hazardous wastes and technologies from rich to poor countries may be "perfectly logical" in an economic sense, but many observers see them as "totally

¹ This memo was reprinted in *The Economist*, February 8, 1992, p. 66. Summers would later become U.S. treasury secretary.

insane," José Lutzenberger, then secretary of the environment in Brazil, told Summers.² This sentiment has been the basis for international efforts to control the waste trade since the mid-1980s. But while there is widespread agreement, at least on the surface, that transfers of hazardous wastes and industries from richer to poorer countries should not be sanctioned, they persist in various forms. Why is this so?

Much of the international trade in hazards takes place among rich industrialized countries, where the wastes originated.³ But a significant portion of hazards have found their way to less industrialized countries. Notorious cases in the late 1980s, such as the Italian toxic waste in Nigeria and the voyage of the *Khian Sea*, which attempted to dump toxic waste of U.S. origin in several developing countries, are now the stuff of legend. Other forms of hazard transfer have since emerged, among them the export from industrialized countries of toxic wastes destined for recycling operations in the developing world. Another troubling trend is foreign direct investment in hazardous manufacturing facilities, using outdated equipment and techniques. Because they lack financial resources, poorer countries are unlikely to be able to manage hazards in ways that protect the environment and human health. The transfer of hazards is also delaying the adoption of clean production in both rich and poor countries.

Economic globalization is related to this transfer of hazards from richer to poorer countries because global networks for trade and investment facilitate the relocation of hazards. But as the public response to Summers's memo indicates, the global community has not accepted this practice as an unavoidable consequence of globalization. Wider recognition of the hazard transfer problem has led to international cooperation that ostensibly aims to halt it. The countertrends include international agreements such as the Basel Convention and industry efforts to clean up their acts. Non-state actors, including environmental nongovernmental organizations (NGOs) and business lobby groups, have been extremely influential in shaping these countertrends.

If globalization encourages environmental problems but also leads to countertrends that address them, optimists might expect the system to be self-correcting. Unfortunately, the problem is much more complex. International regulation may put a damper on certain forms of hazard transfer,

² Quoted in Jim Vallette, "The Tragic Rise of the New Treasury Secretary," *International Trade Information Service*, May 13, 1999.

³ Kate O'Neill, *Waste Trading among Rich Nations: Building a New Theory of Environmental Regulation* (Cambridge, Mass.: MIT Press, 2000), offers an excellent analysis of this trade among OECD countries.

but the practice finds new outlets in response. Various types of hazard transfer, it turns out, are related, and the problem is a dynamic one. Plugging one hole in the dike tends to create a new one elsewhere.

A brief history of the problem reveals its dynamic nature. In the 1980s it became apparent that hazardous wastes generated in industrialized countries were being shipped to developing countries for final disposal. Cost differentials between rich and poor countries were too attractive for waste dealers to ignore, and global trade and communications networks made this disposal feasible. The practice affected countries in nearly every region of the developing world. When environmental NGOs and the media first publicized the practice, many saw it as morally wrong and demanded international action. In 1989, in response to the growth of the waste trade, states came together to negotiate and sign the Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal. Agreement on this treaty was relatively swift, as both industrialized and less industrialized countries acknowledged that hazardous wastes should not be subject to free trade. There was much disagreement, however, over whether the practice should be outlawed entirely. The end result was a treaty that sought to control, rather than ban, the trade in hazardous waste. Following an NGO campaign in the developing world, regional and national laws also emerged to ban imports of waste.

By the mid-1990s, the export of toxic wastes for final disposal in developing countries had slowed down markedly, in large part as a result of the various regulations and negative media attention. But the problem of hazard transfer did not disappear. Rather, it evolved. A growing number of firms in richer countries began to export toxic waste to recycling operations in poorer countries. Wastes destined for recycling operations are technically covered by the Basel Convention. But there is a loophole: when wastes are not labeled as wastes for recycling, they are difficult to regulate. Though recycling infers environmental stewardship over these wastes, in most cases the recycling of imported hazardous waste in developing countries has proved just as harmful as outright disposal. Environmental NGOs called attention to this new phenomenon and led efforts to stop it. Developing countries were largely in agreement that the Basel Convention should incorporate explicit measures to address hazard transfer via recycling. But several key Organization for Economic Cooperation and Development (OECD) countries, as well as increasingly vocal industry lobby groups, put up a fight. A heated debate lasted several years, and the global community finally adopted, in 1995, an amendment to the Basel Convention that bans the export of toxic wastes from OECD to non-OECD

countries for both disposal *and* recycling. This amendment represents a pre-emptive move on the part of the global community to avoid a major waste transfer crisis before it became full-blown.

The adoption of the Basel Ban Amendment brought a sense of victory to environmental NGOs and states fighting against international transfers of toxic waste. The amendment requires ratification by 62 parties to the convention before it comes into effect, however, and this may take some time. Though the ban amendment is not yet in force, the fact that it was adopted by the parties to the Basel Convention has in practice substantially reduced the transfer of hazardous waste, both for disposal and recycling, between rich and poor countries. It has not completely ended the transfer of hazardous wastes, which is why environmental NGOs argue that it is important that the ban amendment be ratified. But there are forces working against this goal. Immediately after the adoption of the ban amendment in 1995, a further aspect of the hazard transfer problem became apparent. The global recycling industry began to try to weaken the ban. They tried to redefine hazardous waste in the context of the Basel Convention, to ensure that its business in these wastes was not harmed by the ban. Moreover, these groups also began trying to reverse the Basel ban in an attempt to pave a legal channel for the transfer of recyclable hazardous waste.

Even if the Basel Ban Amendment does come into force soon, some environmental groups fear that it will only accelerate an existing and potentially more damaging form of hazard transfer: the migration of entire hazardous waste-generating industries and production processes to developing countries. The question of whether industries migrate for environmental reasons has been debated in recent decades. But there is much documented evidence that the *most* hazardous activities of multinational firms have *already* relocated to developing countries. Environmental NGOs have campaigned against such transfers of hazardous industry. If the waste trade for both disposal and recycling is banned, NGOs expect that hazardous technology transfer will grow in the future, particularly in the newly industrializing countries of Latin America and Asia, as well as in Eastern Europe. For this reason they are now calling for measures to clean up global industry.

The transfer of clean production technologies from richer to poorer countries is widely perceived to be the most promising solution to both the problems of hazardous waste disposal and the migration of hazardous industry. Even business associations now argue that transnational corporations (TNCs) will recognize that it is more economically efficient to trans-

fer clean production processes to developing countries than it is to continue with dirty or hazardous practices. TNC representatives promised at the Rio Earth Summit to enhance their efforts to transfer cleaner technologies to developing countries to rectify this problem. But the result in many instances has been a transfer of cleanup technologies to deal with existing hazardous wastes rather than a shift to cleaner production technologies. The problem has taken on yet another form.

Local and international environmental NGOs, as well as business organizations and multinational firms, are increasingly recognizing this problem. This time TNCs and industry lobby groups have dominated the political response. Efforts are being made to address the problem through voluntary industry standards for environmental management, such as ISO 14000, which seek to create incentives to install clean production technologies globally.⁴ This may be a preemptive move by industry players to capture the control of market and voluntary initiatives so as to maintain their ability to transfer hazards globally while at the same time appearing to be "green." In emphasizing these voluntary measures, industry players are able to avoid more stringent regulation of technology through legally binding instruments. But it is not at all clear that the ISO 14000 standards will help to transfer cleaner technology to developing countries or reduce hazardous waste generation. This uncertainty has prompted environmental NGOs and other critics to challenge the usefulness of these measures.

This history shows that hazards have been transferred from rich to poor countries in today's global economy and that various political countertrends that ostensibly aim to regulate the hazard transfer problem have also emerged. But that is not all. There have also been responses to the political countertrends by those in toxic waste-generating industries and waste disposal firms, as well as by lobby groups representing these industries. The global economy has facilitated the ability of these groups to respond in ways that allow hazards to be transferred via new outlets that are as yet unregulated. The result is a global cat and mouse game of hazard transfer.

The global environmental politics literature offers useful insights into some aspects of this story. The two subfields that should have the most to say about this problem are the trade and environment literature, on the one

⁴ Charles Hadlock, "Multinational Corporations and the Transfer of Environmental Technology to Developing Countries," *International Environmental Affairs* 6, no. 2 (1994): 149-74; Naomi Roht-Arriaza, "Shifting the Point of Regulation: The International Organization for Standardization and Global Lawmaking on Trade and the Environment," *Ecology Law Quarterly* 22, no. 3 (1995): 479-539.

hand, and the nonstate actor literature, on the other. But the former has paid insufficient attention to the features of the global economy that facilitate the continual evolution of the hazard transfer problem. And the latter has not paid adequate attention to the role of business actors in global environmental policy-making. Moreover, while the broader global environmental politics literature has tended to see the trade and environment issue as somewhat separate from that of nonstate actors, the case of rich-to-poor country hazard transfer demonstrates that they are closely linked.

The Global Economy and Hazard Transfer

There has been a great deal of discussion in recent years on the interface between the operation of the global economy—particularly trade and investment—and the natural environment. A heated debate among policy-makers, economists, and activists has emerged and is polarized by two very separate views. This debate encompasses broader discussions on the environmental implications of economic growth that may result from global economic integration. It also includes more specific discussions regarding global economic relationships and the environment. Because this debate is explained in detail by others, I will provide only a brief overview of it here and discuss its relevance to the issue of hazard transfer.⁵

Liberal economists have tended to dominate one side of these debates. They argue that the liberalization of trade, investment, and financial rules—what many say is the driving force behind economic “globalization”—is beneficial to the natural environment because it encourages economic growth. Growth causes rising incomes, which encourage two things. First, higher incomes are associated with a higher demand for a cleaner environment. Second, rising incomes mean that more economic resources are available which can then be spent on environmental protection.⁶ But before this stage is reached, poorer countries are seen to have a higher capacity to absorb pollution, which explains their less stringent environmental regulations. It is also considered to be a part of their comparative advantage.⁷

⁵ For an overview of the debate, see, for example, Daniel Esty, *Greening the GATT* (Washington, D.C.: IIE, 1994); Marc Williams, “International Trade and the Environment: Issues, Perspectives and Challenges,” in *Rio: Unraveling the Consequences*, ed. Caroline Thomas (Ilford: Frank Cass, 1994), 80–97.

⁶ Gene Grossman and Alan Krueger, “Economic Growth and the Environment,” *Quarterly Journal of Economics* 40 (1995): 353–77.

⁷ For an overview, see Gareth Porter, “Pollution Standards and Trade: The ‘Environmental Assimilative Capacity’ Argument,” *Georgetown Public Policy Review* 4, no. 1 (1998): 50–52.

Those coming from this dominant perspective argue that despite poor countries’ advantage in pollution absorption, TNCs are unlikely to relocate in developing countries in order to take advantage of lax environmental laws.⁸ In other words, industry does not take “flight” to developing countries in response to more stringent regulations at home, and thus developing countries are not “pollution havens.” Rather, they argue, TNCs that do set up shop in developing countries tend to be more environmentally sound than their local counterparts.⁹ It is argued that it is in TNCs’ best economic interests to go green. The “race to the bottom” phenomenon, through which countries lower environmental regulations to gain competitiveness, is seen by this view to be highly unlikely. Instead, the global economy encourages an upward movement of environmental regulations, or a “race to the top.”¹⁰ Following this line of reasoning, many have argued that free trade agreements should take precedence over multilateral environmental agreements (MEAs). Trade restrictions contained in MEAs are seen to constitute potential trade barriers that will have negative implications both for economic growth and for the environment.¹¹

Though this dominant view among liberal economists has received a great deal of attention in policy circles, there has been a growing chorus of opposition. Environmentalists, activists, and ecological economists have argued that economic liberalization and globalization are at the root of environmental destruction around the globe today. A key argument these groups make is that free trade, while it may bring economic growth, has also increased physical throughput in the economy. This is the case even after taking into account any increases in efficiency that may have been gained through technology improvements.¹² Moreover, some have argued

⁸ Patrick Low and Alexander Yeats, “Do ‘Dirty’ Industries Migrate?” in *International Trade and the Environment*, ed. Low (Washington, D.C.: World Bank, 1992), 89–103. Muthukumar Mani and David Wheeler, “In Search of Pollution Havens? Dirty Industry in the World Economy, 1960 to 1995,” *Journal of Environment and Development* 7, no. 3 (1998): 215–47.

⁹ Norman Bailey, “Foreign Direct Investment and Environmental Protection in the Third World,” in *Trade and the Environment*, ed. Durwood Zaelke et al. (Washington, D.C.: Island Press, 1993), 136.

¹⁰ See, for example, with respect to the mining industry, Gordon Clark, “Global Competition and Environmental Regulation: Is the Race to the Bottom Inevitable?” in *Markets, the State and the Environment: Towards Integration*, ed. Robyn Ekersly (South Melbourne: Macmillan, 1995).

¹¹ Jagdish Bhagwati, “The Case for Free Trade,” *Scientific American*, November 1993: 42–49.

¹² See, for example, Herman Daly, *Beyond Growth* (Boston: Beacon, 1996); Wolfgang Sachs, “Global Ecology and the Shadow of Development,” in *Global Ecology*, ed. Sachs (London: Zed, 1993), 3–21.

that the liberal economic theory which claims that environmental improvements will be enjoyed as economies' incomes rise is flawed. A key reason is that this relationship is based on the experience of the already industrialized countries and may not apply to less industrialized countries in the current global economy.¹³

From this alternative perspective, trade and investment liberalization is also seen to give extraordinary powers to TNCs. This power encourages a regulatory race to the bottom, as TNCs can threaten to leave jurisdictions that do not conform with corporate demands for less environmental regulation.¹⁴ From this perspective, industry flight and pollution havens are real threats. For these reasons, it is argued that international trade and investment need to be reined in with strong global-level regulatory measures to protect the environment. These measures should also incorporate assistance for developing countries to help them avoid environmental mistakes made by industrialized countries. Following this line of reasoning, many from this perspective argue that trade restrictions for environmental reasons, whether in MEAs or imposed by states unilaterally, are beneficial and necessary. But they are also skeptical of the ability of multilateral agreements alone to protect the environment. Thus these thinkers also call for a new human ethic based not on global competition and economic growth but rather on community development at the local level.¹⁵

Within this broader debate, three specific strands of inquiry have direct relevance to the problem of hazard transfer. These are, first, the impact of environmental regulations on countries' trade competitiveness. Second is the role environmental regulations play in industrial location. And third is the compatibility of trade rules with trade measures incorporated into multilateral environmental agreements. Each of these bodies of literature, on both sides of the debate, has important insights to add to our understanding of the hazard transfer problem. But as I explain below, they do not adequately probe its dynamic nature.

The debate over whether a country's international economic competitiveness is enhanced by relaxing its environmental regulations is important

for the hazard transfer question. Relaxed regulations with respect to hazardous waste management might make a country a favored destination for the import of waste, and would earn the country foreign exchange. Tighter international environmental agreements that call for national regulatory strengthening in one area might lead countries to relax regulations in another area in order to improve competitiveness. But literature on this topic has tended to focus almost exclusively on the impact of domestic environmental regulations on countries' export performance.¹⁶ It pays little attention to the impact of weak domestic regulations on the inward movement of hazards such as waste imports. This is partly because much of the literature on this question is focused on the implications of a potential race to the bottom for environmental quality in rich industrialized countries, rather than its potential impact on developing countries. The literature also fails to analyze the response of firms to more stringent international, as opposed to domestic, environmental regulations. This is an important distinction in the case of hazards because focusing only on firms' response to domestic regulations fails to capture the broader response to the tightening of international rules such as the Basel Convention.

The related debate on industry flight and pollution havens has important implications for the question of hazard transfer. If firms do in fact relocate to developing countries in order to take advantage of relatively more relaxed environmental regulations, we would expect to see increased foreign direct investment in hazardous industries in those countries. Interestingly, most of the literature on this topic acknowledges that a transfer of the most hazardous industries from rich to poor countries has occurred as a response to more stringent environmental regulations in industrialized countries. But this phenomenon is listed in most studies as an exception to the general trend, which is that the broader category of "polluting" industries generally do not relocate for environmental reasons.¹⁷ There is very little discussion in this literature of why this exception for the most hazardous industries continues to exist or what should be done about it. There is also little connection made between the industry location issue and the

¹³ Kenneth Arrow et al., "Economic Growth, Carrying Capacity and the Environment," in *Debating the Earth*, ed. John Dryzek and David Schlosberg (Oxford: Oxford University Press, 1998), 35-39.

¹⁴ See, for example, Joshua Karliner, *The Corporate Planet* (San Francisco: Sierra Club, 1997); David Korten, *When Corporations Rule the World* (West Hartford, Conn.: Kumarian Press, 1995); Pratap Chatterjee and Matthias Finger, *The Earth Brokers* (London: Routledge, 1994).

¹⁵ See, for example, numerous chapters in Edward Goldsmith, ed., *The Case against the Global Economy* (San Francisco: Sierra Club, 1996).

¹⁶ Candice Stevens, "Do Environmental Policies Affect Competitiveness?" *OECD Observer*, no. 183 (August-September 1993): 22-25; Richard Stewart, "Environmental Regulation and International Competitiveness," *Yale Law Journal* 102, no. 8 (1993): 2039-2106; Cees van Beers and Jeroen C. J. M. van den Bergh, "An Empirical Multi-Country Analysis of the Impact of Environmental Regulations on Foreign Trade Flows," *Kyklos* 50, Fasc. 1 (1997): 29-46.

¹⁷ See, for example, H. Jeffrey Leonard, *Pollution and the Struggle for the World Product* (Cambridge: Cambridge University Press, 1988), 111.

increasing number of regulations on the international trade in wastes, at both the domestic and international levels. This is important because as regulations on the hazardous waste trade become more strict, firms may seek to relocate entire manufacturing plants that produce those wastes in significant quantities.

Several studies have explored the compatibility of trade agreements and environmental agreements, some of which deal directly with the hazard transfer issue. Considerable debate has emerged as to whether the trade restrictions incorporated in the Basel Convention, in particular the Basel Ban Amendment, contravene global trade rules as set by the World Trade Organization (WTO).¹⁸ The literature on this subject is extremely important in laying out the legal aspects of attempting to regulate global transfers of hazards. But this debate tends to focus on legal issues and does not analyze the dynamic nature of the global liberal trade order, now enforced by the WTO, that gave rise to the hazard transfer problem in the first place.

None of these debates fully captures the importance of the increasingly global nature of the world economy as a key factor in hazard transfer. The closest they come is to point out the role of local incentives. In the industrialized countries, increased environmental concerns have brought rising disposal costs for hazardous wastes, creating an incentive to export wastes and hazardous manufacturing facilities to countries with lower disposal costs. In developing countries, a weak capacity for regulation and monitoring has resulted in little if any control on the disposal of hazardous wastes. But these factors, while important, are not alone sufficient to explain the existence of hazard displacement from rich to poor countries. The transfer could not easily happen were it not for the globalization of the world economy. Economic globalization has created a setting in which hazards escape regulations on a global scale and their transfer takes advantage of economic inequalities between countries. It is not a case of a race to the top or to the bottom but rather, a problem of entrenched regulatory differences and their exploitation through global economic channels. Gareth Porter has identified part of this problem in his investigation of what he calls the "stuck at the bottom" phenomenon among rapidly indus-

trializing developing countries.¹⁹ So what is it about the global economy that facilitates the dynamic response of hazards to new regulations on a global scale? Three key aspects of the global economy play a role.

Rapidly growing levels of international debt over the past two decades have increased the vulnerability of poor countries to global economic trends. Many developing countries implemented policies of structural adjustment under the tutelage of the IMF and World Bank in the 1980s and 1990s in return for the rescheduling of some of this debt by donor countries and banks. These policies generally called for the liberalization of trade and investment policies in adjusting countries. This situation, combined with the not unrelated domestic political and institutional weakness in many poor countries, has made developing countries ideal targets for rich countries' unwanted hazards because they came with a promise of much needed foreign exchange. But these countries were not begging for hazards to be transferred. Other aspects of the global economy enabled hazard traders to take advantage of developing countries' vulnerable economic position.

The increased fluidity of trade in today's global marketplace has been a particularly important channel for the movement of hazardous wastes. Lower transportation and communication costs, the relative ease with which trade routes are established and abandoned, and the difficulties involved in checking every import container have facilitated the transfer of hazards. This increased fluidity of trade has emerged as states, rich and poor alike, have adopted more liberal trade policies over the past twenty years. These qualities of global trade have made the export of hazardous waste to less industrialized countries a simple and lucrative business for waste entrepreneurs, both legal and illegal. As wastes have been increasingly disguised as other products or are sent abroad for recycling, detection of these shipments has become more difficult.

The globalization of the production process and the footloose nature of transnational investment have also facilitated the movement of hazards around the world. The globalization of trade has enabled firms to sell their products on the global market, regardless of where they are produced. As a result, investment has become increasingly global to take advantage of cost differentials. Growing levels of investment by TNCs since the 1970s have been connected with the wholesale migration of hazardous industry to poor countries, particularly as environmental regulations in industrialized

¹⁸ Jonathan Krueger, *International Trade and the Basel Convention* (London: Earthscan, 1998); David Wirth, "International Trade in Wastes: Trade Implications of the Recent Amendment to the Basel Convention Banning North-South Trade in Hazardous Wastes," draft report, January 19, 1996; Maria Isolda P. Guevara and Michael Hart, *Trade Policy Implications of the Basel Convention Export Ban on Recyclables from Developed to Developing Countries* (Ottawa: International Council on Metals and the Environment, 1996).

¹⁹ Gareth Porter, "Trade Competition and Pollution Standards: 'Race to the Bottom' or 'Stuck at the Bottom'?" *Journal of Environment and Development* 8, no. 2 (1999): 133-51.

countries became more stringent. Firms that have experienced serious decline in rich industrialized countries or have been subjected to severe and costly environmental and health regulations have a history of moving to poorer and less regulated countries. The developing world's share of inward investment from abroad in pollution-intensive industries has been rising in the past two decades, while at the same time investment in these industries elsewhere has declined.²⁰ Though this pattern of foreign direct investment (FDI) in highly polluting industries has affected both developed and developing countries, the latter are much more vulnerable to this type of investment because they have weaker environmental regulations and/or lack of enforcement of such regulations. The liberalization of investment regulations in countries pursuing structural adjustment policies has played a role in opening up these countries to new investment of this sort.

Given these factors in the global political economy, new regulatory measures can easily be circumvented by hazardous waste-producing industries. The problem of hazard transfer or displacement then reappears but as a new problem, in another form. Though many see the issues of hazardous waste exports, multinational investment in dirty industries, and barriers to clean technology transfer as separate issues that require independent consideration, they are closely related. The ease with which hazards move in a fluid global economy and the low monetary costs associated with their displacement to poor countries have contributed to a situation in which the real costs of such industrial activity are severely undervalued and environmental hazards persist. The problem is merely being displaced to countries that have difficulty containing the environmental impact. The result is that there is little incentive for firms to transfer clean production technologies when it is much cheaper, at least in the short run, to transfer hazards.

Nonstate Actors and the Political Response to Hazard Transfer

The study of nonstate actors has been a growth area in international relations broadly and in global environmental politics in particular over the past decade. Emphasis on nonstate actors arose mainly out of the realization by many international relations scholars at the end of the Cold War

that a focus on states alone did not adequately reflect the reality of transnational politics.²¹ Most of the attention in the global environmental politics literature that has centered on nonstate actors has been on international environmental NGOs, mainly because these actors were highly visible in international environmental negotiations in the 1990s. At the United Nations Conference on Environment and Development (UNCED) they participated in unprecedented numbers and gained legitimacy as important players in international environmental politics.²² Important contributions have been made by scholars writing on NGOs, particularly with respect to the reasons behind the recent rise in the numbers of these actors, their influence on states in global environmental policy-making, and their broader role beyond interstate politics in raising peoples' consciousness regarding global environmental issues.

Several explanations for the recent surge in numbers and influence of nonstate actors, particularly environmental NGOs, have been put forward. Some have linked the rise of non-state actors in global environmental politics to the process of economic globalization. Ronnie Lipschutz, for example, argues that a "global civil society" of interconnected and like-minded NGOs working on various issue areas has emerged as a reaction to economic globalization. That is, the global nature of the world economy, which has been characterized by the hegemony of liberal economic values, has prompted individuals to resist it. They joined the campaigns of NGOs with both local and global agendas that are attempting to regain some control over the economic forces that govern their everyday lives.²³ The spread of technology that has helped to foster global NGO linkages has both encouraged and been driven by the globalization of the world economy. Others have disagreed as to the extent to which globalization is linked to the rise of these actors. Margaret Keck and Kathryn Sikkink argue, for example, that transnational advocacy networks are based more on compassion and morality than simply on a response to globalization.²⁴ Both of these explanations are useful in understanding the emergence of environmental NGOs that are seeking to halt hazard transfer. Clearly

²⁰ United Nations Transnational Corporations and Management Division, Department of Economic and Social Development, *World Investment Report, 1992* (New York: United Nations, 1992), 231.

²¹ James Rosenau, *Turbulence in World Politics* (Princeton: Princeton University Press, 1990); Jessica Tuchman Mathews, "Power Shift," *Foreign Affairs* 76, no. 1 (1997): 50-66.

²² Tom Princen and Matthias Finger, *Environmental NGOs in World Politics* (New York: Routledge, 1994).

²³ Ronnie Lipschutz, "Reconstructing World Politics: The Emergence of Global Civil Society," *Millennium* 21, no. 3 (1992): 389-420.

²⁴ Margaret Keck and Kathryn Sikkink, *Activists beyond Borders* (Ithaca: Cornell University Press, 1998), 14.

these groups are reacting to the way in which the current global economy is facilitating hazard transfer. But they also make a key point about the injustice of the practice. It is important also to point out that the issue of hazard transfer highlights the dynamic relationship between economic globalization and global civil society. These groups are not just a one-time reaction to globalization. As the protests at the Seattle WTO meeting in 1999 and other anti-globalization protests since then have shown, NGOs are tracking globalization, moving with it, and reacting to it, just as it reacts to them.

Other studies on the role of NGOs in global environmental politics have focused on their key position as diplomatic actors. Environmental NGOs have been increasingly recognized by states as legitimate players in most stages of the international environmental treaty process.²⁵ They have been key in identifying issues that require action, as well as in the negotiation, monitoring, and enforcing of international environmental treaties. One of the key factors behind this legitimacy is the special knowledge and expertise on environmental issues that these groups possess.²⁶ These groups are very active in the negotiating sessions of environmental agreements. They are often key advisers on strategy to certain state decision makers behind the scenes, sometimes even participating on state delegations. They also have taken a key role in ensuring that states live up to their treaty obligations by publicizing their performance. Their role in monitoring compliance is extremely important, as it is a task that is easier for these groups to undertake than for treaty secretariats, who are more subject to state influence and take great pains to maintain neutrality. In the case of hazard transfer, NGOs played a key role in the identification of the waste trade and in the negotiation and monitoring of global and regional waste trade agreements. Although NGOs have been major actors in setting the tone and terms of the international debate on toxic transfer, surprisingly little has been written on their role in it. This neglect represents a failure to recognize their strong influence in setting the terms of the debates and drafting international treaties on the waste trade.

²⁵ Thomas Princen, "NGOs: Creating a Niche in Environmental Diplomacy," in *Environmental NGOs in World Politics: Linking the Local and the Global*, ed. Thomas Princen and Matthias Finger (London: Routledge, 1994).

²⁶ Steve Breyman, "Knowledge as Power: Ecology Movements and Global Environmental Problems," in *The State and Social Power in Global Environmental Politics*, ed. Ronnie Lipschutz and Ken Conca (New York: Columbia University Press, 1993); Sheila Jasanoff, "NGOs and the Environment: From Knowledge to Action," *Third World Quarterly* 18, no. 3 (1997): 579-594.

Attention has also been paid to the role of international environmental NGOs outside of the state-based international environmental treaty process. Paul Wapner, for example, has highlighted the importance of these groups in environmental politics more broadly. They have enormous influence through, for example, their role in the mass media in raising the general public's sensibility to environmental issues. This publicity has a profound impact on peoples' consumption patterns and the demands that they make of their states to act on environmental issues. Environmental NGOs also put pressure directly on corporations to change their environmental behavior.²⁷ In the case of hazard transfer, environmental NGOs have directed their campaigns not just at states but also at public awareness. They have also attempted to influence industry players directly through campaigns planned to embarrass specific corporations.

Each of these dimensions of the nonstate actor literature is extremely important to our understanding of the role of environmental NGOs in global politics and in the case of hazard transfer in particular. What the studies on nonstate actors are lacking, though, and what the hazard transfer case highlights, is the efforts of other nonstate actors, specifically TNCs and business lobby groups, to influence the process. This situation is only now changing. Growing interest in these players can partly be explained by their increased visibility at global environmental negotiations since UNCED, where they were encouraged by the organizers of that conference to participate openly in the international dialogue on environment and development.²⁸

Focus on these actors is not entirely new. Global firms have, to varying degrees, been on the research agenda in the field of international political economy for the past 30 years. The expanding reach of global corporations in the 1970s led many to study their implications for the authority and power of states.²⁹ A strong resurgence of interest in these actors has occurred, as their numbers and economic power have grown phenomenally over the past decade, raising anew concerns about state capability to

²⁷ Paul Wapner, *Environmental Activism and World Civic Politics* (Albany: SUNY Press, 1996).

²⁸ Chatterjee and Finger 1994; Harris Gleckman, "Transnational Corporations' Strategic Responses to 'Sustainable Development,'" *Green Globe Yearbook* (Oxford: Oxford University Press, 1995); Matthias Finger and James Kilcoyne, "Why Transnational Corporations Are Organizing to 'Save the Global Environment,'" *Ecologist* 27, no. 4 (1997): 138-42.

²⁹ Robert Gilpin, *US Power and the Multinational Corporation* (New York: Basic Books, 1975); Raymond Vernon, *Sovereignty at Bay* (New York: Basic Books, 1971).

control their activities.³⁰ The influence of TNCs in the global political economy has reached unprecedented levels. There now exist some 38,000 TNCs with a total of over 250,000 affiliates worldwide.³¹ Production by these global firms is now worth more than global trade, while foreign direct investment stock in the early 1990s grew at twice the pace of trade.³² Recognizing the power that arises from this presence, many scholars are asserting the need for further research on TNCs and their role in global politics.³³

Although most studies on TNCs in the field of international relations in the 1970s tended to ignore their impact on the environment, there is now rising concern over the role they play in this respect.³⁴ Indeed, growing attention has been paid to their direct contribution to global environmental problems. Industries with a high degree of environmental impact such as natural resource extraction, chemicals, and electronics tend to be dominated by TNCs. The global nature of TNCs has enabled them to access supplies around the world and to take advantage of cost differentials. Some authors claim that their profit-oriented focus and their global nature make it easy for them to ignore the environmental impacts of their business.³⁵ Others have argued that the situation is much more complex. Peter Dauvergne, for example, has argued that the combination of domestic political situations and the structure of Asian transnational timber companies makes it nearly impossible for them to act in an environmentally oriented fashion.³⁶

But global corporations are not the only ones whose economic activities have environmental consequences that influence global environmental politics. Industry lobby groups have grown in numbers in a way that mirrors the growth in environmental NGOs. By the late 1990s the pres-

ence of industry lobby groups at the negotiation of global environmental treaties had become routine, particularly negotiations with clear implications for industry. Some of the more prominent examples are negotiations regarding the waste trade, climate change, ozone depletion, biodiversity, and deforestation. Business actors traditionally have tried to influence global environmental matters by lobbying the state at the domestic level. Industry groups and corporations, for example, tend to influence government positions in global environmental negotiations, as occurred in the United States during the discussions leading up to the negotiation of the Montreal Protocol.³⁷ While this is an important aspect of industry's efforts to ensure that treaties which states enter into are in accordance with industry's desires, business actors are increasingly focusing their lobbying efforts directly at the international level. This shift is in part a response to a steadily increasing number of extranational environmental regulations. Perhaps more important, it is also a reaction to the rise in environmental NGO activity at this level. So while business may prefer to deal with national governments as the focus of its lobbying efforts because that terrain is more familiar to business interests, it is finding itself in the position of having to lobby at the global level as well, alongside environmental NGOs.³⁸

The analysis of industry's influence in global environmental governance has thus far mainly been directed at its role in persuading states to adopt positions that secure industry's economic interests. The power these players have by virtue of their weight in states' economies is seen by some to be key in explaining the influence that industry does indeed seem to have in global negotiations.³⁹ There has also been a growth in research on industry's attempts to self-regulate at the global level, through the adoption of voluntary codes of environmental conduct.⁴⁰ In putting the role of business actors at the center of the study of global environmental politics, this

³⁰ John Stopford and Susan Strange, *Rival States, Rival Firms* (Cambridge: Cambridge University Press, 1991); Mark Zacher, "The Decaying Pillars of the Westphalian Temple: Implications for International Order and Governance," in *Governance without Government*, ed. James Rosenau and Ernst-Otto Czempiel (Cambridge: Cambridge University Press, 1992).

³¹ UNCTAD Division on TNCs and Investment, *World Investment Report, 1995: Transnational Corporations and Competitiveness* (New York: United Nations, 1995), 9.

³² *Ibid.*, 3.

³³ James Rosenau, "Governance in the Twenty-first Century," *Global Governance* 1, no. 1 (1995): 13-43; Stopford and Strange 1991.

³⁴ Nazli Choucri, "Multinational Corporations and the Global Environment," in *Global Accord*, ed. Choucri (Cambridge, Mass.: MIT Press, 1993).

³⁵ Karlner 1997; Korten 1995.

³⁶ Peter Dauvergne, *Shadows in the Forest* (Cambridge, Mass.: MIT Press, 1997); see also Dauvergne, "Corporate Power in the Forests of the Solomon Islands," *Pacific Affairs* 71, no. 4 (1998-99): 524-46.

³⁷ David Levy, "Business and International Environmental Treaties: Ozone Depletion and Climate Change," *California Management Review* 39, no. 3 (1997): 54-71.

³⁸ This point is made by Levy and Egan in the case of the climate change regime. David Levy and Daniel Egan, "Capital Contests: National and Transnational Channels of Corporate Influence on the Climate Change Negotiations," *Politics and Society* 26, no. 3 (1998): 343.

³⁹ Peter Newell and Matthew Paterson, "A Climate for Business: Global Warming, the State and Capital," *Review of International Political Economy* 5, no. 4 (1998): 679-703; Levy and Egan 1998: 337-61.

⁴⁰ Riva Krut and Harris Gleckman, *ISO 14001: A Missed Opportunity for Sustainable Global Industrial Development* (London: Earthscan, 1998); Jennifer Clapp, "The Privatization of Global Environmental Governance: ISO 14000 and the Developing World," *Global Governance* 4, no. 3 (1998): 295-316.

research helps to explain outcomes and confirms the weakness of a state-centric regime-based approach to studying global environmental issues.

The hazard transfer issue highlights some key trends with respect to TNCs in global environmental politics. First, globally connected firms were the ones exporting toxic wastes in the first place, making the shift toward hazardous waste exports for recycling as well as transferring hazardous production processes and outmoded toxic equipment. They are thus contributing directly to the problem of hazard relocation and are the ones toward which regulations are ultimately directed. Yet they have been able to use the global economy to evade regulations by finding alternative channels for hazard transfer in the face of more stringent regulations. Second, business lobby groups have taken a key role alongside NGOs in the negotiation of environmental agreements regarding the waste trade. Not only are they involved in the more public diplomatic meetings, but they also aim to influence outcomes via less public technical meetings. The role of industry in more technical and less public aspects of global environmental politics, such as interpreting and implementing agreements, has received somewhat less attention in the literature. Yet this is an area in which these actors appear to have a great deal of influence. In certain issue areas where the regulation of industrial activity is at the center of international policy, such as in the case of the waste trade, industry's input into interpretation and implementation has been significant. Third, the hazard transfer issue highlights a trend toward the privatization of global environmental governance through the development of voluntary environmental management standards for industry. Environmental NGOs were excluded from the development of ISO 14000 standards and the majority of developing countries participated only marginally in the process.

Map of This Book

The second chapter of this book gives the history of the rise of the trade in hazardous wastes from rich to poor countries and the politics of the negotiation of the Basel Convention as the major international treaty seeking to address the problem. I argue that the emergence of the waste trade problem is intricately linked to global economic factors. I also argue that environmental NGOs carved out a significant role for themselves early on in the treaty negotiation process. In Chapter 3 I outline the way in which the weaknesses of the initial Basel Convention fostered new waste trade problems, such as the growth in the trade in toxic wastes for recycling purposes. I also trace the growing pressure by environmental NGOs and developing

countries to amend the convention to address those weaknesses. Here I argue that environmental NGOs had an instrumental role in achieving this outcome, in particular through their strong alliance with developing country states and their effective campaign strategies. In Chapter 4 I examine the growing participation of industry lobby groups in the Basel process. I argue that although these groups entered somewhat late into the political process, they have been able to exert considerable influence over Basel Convention politics through their effective lobbying on more technical issues such as the definition of what wastes are to be classified as hazardous under the convention. They also continue to wage battle to reverse the Basel Ban Amendment. I also outline the changes in the environmental NGO strategies after the Basel ban was adopted and their response to the growing importance of industry lobby groups in the process.

In Chapter 5, I look at another potential outcome of the increased regulation on the trade in hazardous wastes, that of the migration of hazardous industries from rich to poor countries. I argue that the mainstream literature on this topic has tended to underestimate the forces that push toward the relocation of hazardous industries to developing countries, particularly after the adoption of the Basel Convention. In Chapter 6 I examine the prospects for market-based and voluntary initiatives to promote cleaner production on a global scale and the transfer of cleaner production technologies to developing countries in particular. I argue that the growth of investment in the "environment industry" in developing countries has thus far focused more on cleaning up toxic messes than on preventing them in the first place. I also argue that discussion of a set of global-level performance standards for industry has been preempted by industry's embrace of voluntary environmental management system measures such as the ISO 14000 standards. Yet these latter standards have tended to reinforce, rather than reduce, the gap in regulations on hazardous waste and production processes between rich and poor countries. For this reason they are unlikely to lead to the types of changes necessary to install truly clean production in the developing world.

In the concluding chapter I discuss recent trends that illustrate the ongoing evolution of the hazard transfer problem, including the growing problem of hazard transfer between poorer countries. I argue that the most promising way to address the hazard transfer problem will be to avoid the generation of hazardous wastes in the first place. Toward this end I outline a strategy for the promotion of clean production on a global scale. I argue that a globally agreed framework that incorporates a number of features simultaneously will likely be the only way to achieve this goal.

These measures include commitment to strengthening the Basel Convention; active promotion of the concept of clean production in government regulations; global requirements for transnational corporations in hazardous industries with respect to environmental performance and information disclosure; and continued pressure from environmental NGOs to help monitor these efforts. Though many of these measures may be politically difficult to implement with the force necessary, they may be the only way to stop the dynamics of the global hazards problem in the context of a world on disparate economic planes.

The displacement of hazardous wastes and the technologies that generate those wastes from richer to poorer countries has been a disturbing feature of the global political economy. It is disturbing especially because its incidence emerged at the same time that concern for global environmental problems was growing. Since the mid-1980s an unprecedented number of international environmental agreements have been made. But the fact that agreements are being negotiated and signed and even implemented does not necessarily mean that the original problem that they seek to remedy is addressed satisfactorily. The case of hazard transfer from rich to poor countries illustrates this point very clearly. It seems that every 'victory' by the groups trying to halt the trade is tempered by yet another outlet for hazards that takes on more importance for both those trying to stop it, and those trying to maintain the opening. At each turn we are left wondering if we are on a path toward greener, cleaner production, or toward continued hazard migration in a new form.

2

The Hazardous Waste Trade and International Regulatory Measures

The 1980s were marked by an increasingly global economy, facilitated by the growing political thrust toward trade and financial liberalization in both rich and poor countries. This situation gave hazardous waste generators and handlers the ability to respond at a global level to factors that affected their costs of disposal and treatment. The weak position of developing countries in the global political economy made these countries especially vulnerable to waste exports from richer countries. Imports of wastes into these countries grew in this period, and they were extremely difficult to control. The political response to the growing cross-border trade in hazardous wastes was to put in place international regulations. The attempt to deal with the problem primarily at the national level was not sufficient to counteract a problem that was by nature transboundary.

As a recent report of the OECD has noted, "Hazardous waste management has become increasingly a globalized business, requiring global regulatory systems in light of the potential environmental effects of improper practices."¹ From early on in the process to develop an international set of rules to control the trade in toxic wastes, it was obvious that states were not the only actors who had a stake in the issue. Environmental NGOs, as well as industry groups involved in the waste trade, also were deeply involved in the negotiation process. The result, the Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal, as well as regional waste trade agreements, were the products not just of state bargaining but also of significant involvement by nonstate actors.

This chapter outlines the rise of the waste trade and the international political response to it. I argue that global economic factors played an important part in the rise of the waste trade. I then assert that the importance of nonstate actors in the political response to the waste trade can be partly explained by the global economic nature of the waste trade problem itself, which at the time it emerged was largely outside of the control of states. States were a large part of the focus of environmental groups for action on international rules. But these groups also launched a much broader campaign. They attempted to influence waste traders directly by embarrassing them through a public awareness campaign. This effort required a significant amount of research on their part, which in turn raised their credibility among states by giving them unparalleled expertise on the waste trade.

Toxic Waste and the Global Economy

The export of toxic waste to less industrialized countries can be best explained in the context of the current global economy. The cross-border trade in toxic waste began as a general practice in the late 1970s and continued to grow throughout the following decades. Just a handful of industrialized countries produce 95 percent of the world's hazardous waste.²

Most accounts of the waste trade focus on the push factors spurred by environmental concerns in industrialized countries. Following incidents

of mishandled hazardous wastes such as occurred at Love Canal in the United States and Seveso in Italy in the 1970s and early 1980s, the regulations accompanying hazardous waste disposal and the costs associated with it grew tremendously. As a manifestation of the NIMBY (not in my backyard) syndrome, people in industrialized countries were increasingly unwilling to have the dump sites located nearby unless they were strictly regulated to ensure that such incidents could not occur. The result was that regulations in hazardous waste-producing countries became very stringent. Landfill capacity for toxic wastes began to decline, and resistance to new landfills became more vocal.³ As a direct consequence of these developments, costs of local hazardous waste disposal in these countries soared. For example, in the United States landfill costs for dumping hazardous waste rose from U.S.\$15 per ton in 1980 to U.S.\$250 per ton in 1988.⁴

In addition to the push factors, there were also pull factors. Lower waste disposal fees in countries with less stringent environmental regulations encouraged the movement of waste across borders from rich to poor countries. The owners of dump sites in less industrialized countries generally charge much lower fees for disposal of imported waste than do those in more industrialized countries. The weak financial position of developing countries in the global political economy helps to explain why these countries had especially low waste disposal costs. The poorest and weakest countries burdened with international debts were desperate for foreign exchange and often were receptive to any proposal that would enable them to earn hard currency. Although the amount paid to recipients in the developing world was large compared to their need for foreign exchange, it was small compared to costs for disposal in advanced industrialized countries. In the mid-1980s, the disposal cost per metric ton of hazardous waste in Africa was around U.S.\$40, and in some cases as low as U.S.\$2.50 which was significantly lower than costs in the industrialized countries at the time.⁵ These costs were low because toxic waste disposal facilities and regulations governing toxic waste disposal were virtually nonexistent in developing countries. Most of these countries did not produce such waste themselves and therefore lacked expertise on its proper treatment. With the financial incentives for accepting it in place and little knowledge of its effects, the developing world did little to develop stringent waste disposal

¹ OECD, *Trade Measures in the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*, COM/ENV/TD(97)41/FINAL (Paris: OECD, 1998), 7.

² The per annum global generation of hazardous waste totals some 400 million tons per year. The United States generates 85 percent of the world's hazardous wastes, and the European Union countries generate 5–7 percent of the world total. "Basel Convention—More Action?" *Environmental Policy and Law* 23, no. 1 (1993): 14.

³ OECD 1998, 7.

⁴ Laura Strohm, "The Environmental Politics of the International Waste Trade," *Journal of Environment and Development* 2, no. 2 (1993): 133.

⁵ Mostafa Tolba, "The Global Agenda and the Hazardous Wastes Challenge," *Marine Policy* 14, no. 3 (1990): 205–206.

regulations. With the onset of a serious economic crisis among these countries in the 1980s, toxic waste soon made its way to nearly every corner of the developing world.

These push and pull factors might not have been so important had it not been for an increasingly global and fluid international trading system. Extensive transport and communications networks put in place for trade in commodities have facilitated the trade in toxic wastes. Lower transportation and communication costs, the relative ease with which trade routes are established and abandoned, and the difficulties in checking every import container, especially in developing countries, have encouraged the export of hazardous wastes. This fluidity of global trade has been enhanced as developed and developing countries alike have adopted more liberal trade policies over the past twenty years. These qualities of global trade today have made the export of hazardous waste to poorer countries a simple and lucrative business for waste trade entrepreneurs. Though they are underplayed in many accounts of the waste trade, the global economic factors have been extremely important in explaining the rise of the trade.

It is extremely difficult to quantify precisely the global generation of hazardous wastes and the extent of the international waste trade. Most of the export deals have been clandestine, and therefore difficult to track. In addition, no two countries have the same definition of exactly what constitutes a hazardous waste. As a result, recorded waste trade transactions do not follow a uniform standard. Despite these difficulties in measurement, the United Nations Environment Programme estimates that around 440 million metric tons of toxic waste were produced every year in the 1990s, up from around 300–400 million metric tons per year in the 1980s. Most of the world's toxic waste is generated in the United States and Western Europe.⁶ Table 2.1 gives an indication of the amounts of hazardous waste generated in various OECD countries. These hazardous wastes generally include substances such as PCBs, dioxins, asbestos, heavy metals, and certain plastics. Box 2.1 outlines some of the waste streams and compounds, along with accompanying health effects.

Roughly 10 percent of all toxic waste generated globally is estimated to make its way across international borders.⁷ Although this may seem to be a small proportion of all hazardous wastes generated, it is still a significant

⁶ Preface to 1999 version of the Basel Convention.

⁷ Christoph Hilz, *The International Toxic Waste Trade* (New York: VanNostrand Reinhold, 1992), 20. There are huge gaps in figures from the OECD. Recent data indicate that about 2 million tons of toxic waste were exported by the OECD countries in 1989 and 1990, but not all member countries reported. See *ENDS Report*, no. 223 (August 1993), 15.

Table 2.1 Generation of Hazardous Wastes in Select OECD Countries

Country ^a	Year	(1,000 metric tons)
Australia	1992	426
Austria	1995	915
Belgium ^b	1994	27,530
Canada	1991	5,896
Denmark*	1993	91
Finland	1992	367
France	1992	7,000
Germany	1993	9,020
Greece*	1992	450
Ireland*	n.d.	66
Italy*	1991	3,387
Japan	n.d.	666
Netherlands ^c	1993	2,600
New Zealand	1990	110
Norway	1991	220
Portugal	1994	1,365
Spain*	1987	1,708
Sweden	1985	500
Switzerland*	1993	837
Turkey*	1989	300
United Kingdom*	1993	1,957
United States ^d	1993	258,000

Source: OECD, *Transfrontier Movements of Hazardous Wastes, 1992–93 Statistics* (Paris: OECD, 1997).

n.d.: no data provided

^a Most of these data have been communicated directly to the Secretariat of the Waste Management Policy Group with the exception of a few countries (marked with an asterisk) for which the source of the data is the Compendium 1995 of OECD Environmental Data.

^b The figure for the generation of hazardous wastes in Belgium includes all wastes produced in the Wallonia region only by the industry sector such as residues from mining operations (about 3 MT), glass, wood, paper, food, and ferrous and nonferrous metals.

^c Netherlands hazardous wastes generation includes 845,000 metric tons of contaminated soil.

^d The difference between the waste generation figures for the United States and Europe arises largely because the United States defines large quantities of dilute dishwater as hazardous wastes while in Europe, these materials are managed under water protection regulations.

Box 2.1 The Health Impacts of Toxic Waste: Some Examples

Commonly Exported Waste and Waste Components	Health Impact
Polychlorinated Biphenols (PCBs)	Reproductive dysfunction, immune system suppression
Asbestos	Lung disease, cancer, can lead to asbestosis causing disability or death
Chlorine	Respiratory problems, skin irritant
Dioxins	Reproductive disorders, immune system suppression
Chromium	Liver and respiratory problems, causes allergic responses to skin
Chlorinated Solvents	Neurological damage, liver problems
Banned Pesticides	Most are carcinogenic, highly poisonous
Incinerator Ash: often contains metals such as lead, mercury, arsenic, chromium	Lead: Neurological disorders, kidney and nervous system damage Mercury: Neurological, liver, and kidney damage, coma and death, dangerous during pregnancy Arsenic: Lung and tissue damage, liver and kidney injury, potentially fatal
Lead-acid batteries	Contains lead
Metal waste and scrap: often contains lead, mercury, copper, cadmium	Copper: Liver damage Cadmium: Kidney damage, respiratory problems, cancer, irritates digestive tract
Plastic wastes: often contains polyvinyl chloride (PVC)	Packaging waste: danger from toxins or bacteria from residues of previous contents, releases highly toxic fumes when recycled or incinerated PVC: liver and nerve damage, cancer. Generally contains additives such as toxic metals like cadmium, lead, phthalate plasticizer
Scrap tires	Long-lasting respiratory difficulties. Shredding or recycling can lead to exposure to carcinogenic hydrocarbons, incineration releases highly toxic fumes.

Computer and electronic scrap: contains PVC, heavy metals, and other materials such as PCBs	Releases highly toxic fumes when recycled
Cable scrap: often sheathed in lead, copper, or PVC	Immune system suppression, reproductive dysfunction, contains human carcinogens
Sewer sludge: often contain mercury, lead, cadmium, PCBs and dioxins	Can be a transporter for parasites and human disease Can interfere with body hormone balances
Furnace dust: electric arc furnace steel dust contains zinc, lead, nickel, and dioxins; copper smelter furnace dust contains lead and cadmium	Respiratory problems, lung cancer from dust inhalation

amount. For example, a shipment of toxic waste is estimated to cross a border within the Organization for Economic Cooperation and Development states alone every five minutes, twenty-four hours a day, 365 days a year.⁸ The bulk of the waste trade is conducted among industrialized countries themselves. Table 2.2 shows the amounts of hazardous waste traded by OECD countries from 1989 to 1993. Estimates of the amount of the trade in toxic waste to countries outside of the OECD vary. Some have estimated in the early 1990s that around 20 percent was with non-OECD countries, including some 10–15 percent to Eastern Europe and the rest to developing countries.⁹ But others have estimated that over half of the trade in toxic wastes at that time was with non-OECD countries, with about 20 percent going to developing countries.¹⁰ Though these estimates represent a wide range, they signal that a significant proportion of waste exports has made its way to countries that lack the economic resources and regulations to ensure that they are disposed of properly. Table 2.3 gives an indication of the number and fate of these waste movements from OECD to non-OECD countries. It is important to note that some have downplayed the magnitude of the waste trade with developing countries in the late 1980s and early 1990s, pointing out that many of the proposed shipments were turned back and not completed. For this reason some have

⁸ William Long, "Economic Aspects of Transport and Disposal of Hazardous Wastes," *Marine Policy* 14, no. 3 (1990): 199.

⁹ Jonathan Krueger, *International Trade and the Basel Convention* (London: RIIA, 1999), 14.

¹⁰ Hilz 1992, 20–21; Christoph Hilz and Mark Radka, "Environmental Negotiations and Policy: The Basel Convention on Transboundary Movement of Hazardous Wastes and Their Disposal," *International Journal of Environment and Pollution* 1, no. 1–2 (1991): 56.

Table 2.2 Summary of Transfrontier Movements of Hazardous Wastes from 1989 to 1993 in OECD Countries (in metric tons)

	Exports					Imports				
	1989	1990	1991	1992	1993	1989	1990	1991	1992	1993
Australia ^a	500	1,000	3,200	275	0	0	0	0	0	0
Austria ^b	86,773	68,162	82,129	70,023	83,998	50,981	19,180	111,595	79,107	28,330
Belgium ^c	176,983	491,784	645,636	37,278	34,073	1,036,260	1,070,496	1,021,798	208,052	236,010
Canada ^d	101,083	137,818	223,079	174,682	229,648	150,000	143,811	135,161	123,998	173,416
Denmark	8,120	9,214	21,758	15,858	n.d.	11,401	16,376	15,200	100,244	n.d.
Finland	64,665	19,174	24,174	21,757	20,628	7,565	9,889	4,605	5,145	4,770
France	n.d.	10,552	21,126	32,309	78,935	n.d.	458,128	636,647	512,150	324,538
Germany ^{e,1}	990,933	522,063	396,607	548,355	433,744	45,312	62,636	141,660	76,375	78,219
Greece	n.d.	305	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Iceland	n.d.	90	151	n.d.	n.d.	0	0	0	n.d.	n.d.
Ireland	13,808	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Italy ^f	10,800	19,968	13,018	21,627	19,365	0	0	0	n.d.	n.d.
Japan	40	0	n.d.	n.d.	n.d.	5,125	397	n.d.	n.d.	n.d.
Luxembourg	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Netherlands ^g	188,250	195,377	189,707	172,906	163,180	88,400	199,015	107,251	250,355	236,673
New Zealand ^h	200	0	21	208	10,469	0	0	0	0	n.d.
Norway ⁱ	8,078	16,535	14,636	14,545	16,639	0	0	2,415	640,701	81,207
Portugal ^j	n.d.	1,954	292	457	815	n.d.	0	1,147	5,638	7,195
Spain ^k	280	20,213	6,578	15,803	13,943	27,413	82,269	81,597	66,356	104,716
Sweden	45,015	42,636	63,801	22,185	22,484	33,863	47,223	34,195	61,725	82,933
Switzerland	108,345	121,420	126,564	132,138	125,840	7,684	6,688	6,416	10,471	8,360
Turkey	0	0	n.d.	n.d.	n.d.	0	0	n.d.	n.d.	n.d.
United Kingdom ^l	0	496	857	0	0	40,740	34,983	54,074	44,673	66,294
United States ^m	118,927	118,416	108,466	145,556	142,709	n.d.	n.d.	n.d.	n.d.	n.d.

Source: OECD, *Transfrontier Movements of Hazardous Wastes, 1992-93 Statistics* (Paris: OECD, 1997)

n.d.: no data provided

Because of differences in national definitions of hazardous wastes, great caution should be exercised when using these figures.

^a Australian data refer to fiscal year (from July 1 to June 30) and concern permits for final disposal.

^b Austria enforced its new ordinance on hazardous wastes in 1991.

^c Belgium data include toxic wastes as well as household refuse, and recyclable nonferrous metals.

^d Canada enforced its new legislation on transfrontier movements of hazardous wastes in November 1992.

^e Differences between 1989 and 1990 data are largely due to German unification in 1990.

^f Export data for 1989 are an estimate based on figures available for the last three months of the year.

^g Dutch data excludes imports and exports of nonferrous metals waste destined for recycling.

^h Until 1992: PCBs exports only. In 1993: exports of hazardous wastes going to recovery only.

ⁱ The increase of imports in 1992 is due to huge amounts of aluminium salt slag being now sent to Norway to be recovered.

^j Portugal enforced its new legislation on transfrontier movements of hazardous wastes in 1992.

^k Spain changed its regulations concerning hazardous wastes between 1989 and 1990.

^l Only wastes going to final disposal have to be notified.

^m Until new legislation is passed to implement the Basel Convention, the United States requires written notice and consent for exports only.

Table 2.3 Number of OECD to Non-OECD Waste Trade Schemes by Year

Year	Further use claimed	Final disposal	Total where fare/pretext is known	Fate/pretext unknown	Total of all schemes	Percentage of "further use" known schemes
1989	54	17	71	5	76	76%
1990	92	19	111	7	118	83%
1991	94	14	108	5	113	87%
1992	238	30	268	17	285	88%
1993	123	15	138	8	146	89%
Totals	601	95	696	42	738	86%

Source: Greenpeace, *Database of Known Hazardous Waste Exports from OECD to Non-OECD Countries, 1989-March 1994* (Amsterdam: Greenpeace International, 1994).

Note: For the purpose of this table, schemes listed as having taken place in multiple years are listed for each year. This explains why the totals are greater than those found in the other tables. Also this table does not include schemes for 1994.

This table lists schemes that have been claimed to be destined for recycling or some form of "further use," those claimed for final disposal, and those that are unknown. It is significant to note the percentage of those schemes claimed for recycling or further use of the total where the fate is known.

questioned the extent to which the problem was a "crisis" at that time.¹¹ However, the fact that there were so many attempts to ship the waste to poor countries, even if not all of them were carried out, indicates there were strong incentives to transfer hazards via this method.

The serious discrepancies in the data on the waste trade between rich and poor countries are somewhat understandable given the nature of this trade. Much of the toxic waste trade with developing countries has taken place along what many consider to be dark and illegal channels of the global economy. Most generators of waste contract out disposal of their toxic by-products to waste dealers. Some dealers involved in waste shipments between rich and poor countries in the 1980s worked through umbrella companies based in tax havens with bogus company directors. Once a transaction was complete, the firm in question was often dissolved, and the waste traders simply created another for the next waste deal. These fly-by-night operations made tracing the waste to the dealer, much less to the generator, nearly impossible. Waste dealers from industrialized countries who sought to dispose of wastes in non-OECD countries were careful to keep their operations somewhat covert. If the true nature of the export was discovered, they might be held liable for damages and be responsible for the waste's removal. Such firms sought anonymity and protected one another in maintaining their secrecy.¹² Waste import deals were for the most part contracted by individual entrepreneurs in recipient countries who have also sought to maintain anonymity.

Despite the difficulties in tracking all of the trade that has taken place, there are hundreds of documented cases of toxic waste exports and attempted exports from rich to poor countries in the late 1980s to the early 1990s. This traffic in hazardous wastes was a major reason behind the huge push to negotiate international rules to govern it. A number of cases have highlighted the serious problems associated with this trade. As these cases came to light, concerns were raised. Many argued that it was unjust to send hazardous wastes to countries that had nothing to do with their generation, and that did not receive direct benefits from the goods produced which resulted in these wastes, yet had to bear the environmental and health consequences from those wastes in exchange for much needed foreign exchange. It was on these grounds that environmental groups and

¹¹ Mark Montgomery, "Reassessing the Waste Trade Crisis: What Do We Really Know?" *Journal of Environment and Development* 4, no.1 (1995): 1-28.

¹² François Roelants du Vivier, "Control of Waste Exports to the Third World," *Marine Policy* 14, no. 3 (1990): 5.

developing countries labeled the waste trade with developing countries as "toxic colonialism," and "toxic terrorism."

Developing Country Targets for Waste

Africa and other less industrialized countries became favorite targets for waste traders in the mid-1980s, as shown in Tables 2.4 and 2.5. These countries generally had weak environmental laws and very limited state control over customs officials who approved import shipments. The marginal position of Africa in particular in the global economy encouraged waste exports to the continent. African countries, many gripped by poverty, war, and famine, were in desperate need of the foreign exchange to be gained from offering dump sites in the 1980s. Over half of the countries on that continent had been approached to accept hazardous wastes by 1990.¹³ Other regions also targeted for waste exports in the late 1980s were the South Pacific, the Caribbean, and Latin America. When opposition to the waste trade emerged from these regions by the early 1990s, Asia and Eastern and Central Europe were increasingly targeted by waste traders.¹⁴ According to data compiled by the environmental group Greenpeace, between 1989 and early 1994, there were 299 known attempted or completed toxic waste dumping incidents in Eastern and Central Europe and 239 such incidents in Asia, compared with 148 incidents in Latin America and the Caribbean, 30 in Africa, and 12 in the Pacific for that same period.¹⁵

Not all of the attempts to export waste to non-OECD countries were completed. But of those that were, the conditions under which the wastes were dumped were more often than not far from ideal. The industrialized countries had enough problems making their own landfills safe, and most dump sites in the developing world were not even regulated.¹⁶ Much of the

¹³ On the African case, see Charles Anyinam, "Transboundary Movements of Hazardous Wastes: The Case of Toxic Waste Dumping in Africa," *International Journal of Health Services* 21, no. 4 (1991); Mutombo Mpanya, "The Dumping of Toxic Waste in African Countries: A Case of Poverty and Racism," in *Race and the Incidence of Environmental Hazards*, ed. Bunyan Bryant and Paul Mohai (Boulder: Westview, 1992); Jennifer Clapp, "Africa, NGOs, and the International Toxic Waste Trade," *Journal of Environment and Development* 3, no. 2 (1994): 17-46.

¹⁴ See Jim Puckett, "Disposing of the Waste Trade: Closing the Recycling Loophole" *Ecologist* 24, no. 2 (1994): 54.

¹⁵ Greenpeace International, *Database of Known Hazardous Waste Exports from OECD to Non-OECD Countries, 1989-March 1994* (Amsterdam: Greenpeace International, 1994).

¹⁶ On the problems and risks in toxic waste production and disposal, see, for example, Robert Allen, *Waste Not, Want Not: The Production and Dumping of Toxic Waste* (London: Earthscan, 1992); Brian Wynne, *Risk Management and Hazardous Waste* (Berlin: Springer-Verlag, 1987).

Table 2.4 Number of Schemes Proposed for Exports by Receiving Region and Year

Region	1989	1990	1991	1992	1993	Totals
Baltics and Eastern/Central Europe	32	50	43	113	61	299
Africa	11	4	4	7	4	30
Pacific	1	4	1	2	4	12
East Asia	4	14	22	50	22	112
Southeast Asia	0	2	10	46	26	84
South Asia	2	3	2	24	12	43
Middle East	0	0	1	12	1	14
Latin America/Caribbean	27	43	30	32	16	148
Totals	77	120	113	286	146	742

Source: Greenpeace, *Database of Known Hazardous Waste Exports from OECD to non-OECD Countries, 1989-March 1994* (Amsterdam: Greenpeace International, 1994).

Note: For the purposes of this table, schemes listed as having taken place in multiple years are listed for each year. This explains why the totals are greater than those found in other tables. Also this table does not include schemes for 1994.

waste that was exported to less industrialized countries was dumped either in flimsy containers or in no containers at all. In the hot and wet climates of tropical countries, the waste could easily leach into the soil and the water table. Wastes shipped to Eastern and Central Europe have also been poorly contained. In some cases wastes were shipped in corroded barrels that subsequently ruptured under extreme weather conditions.¹⁷

One of the first and most notorious examples of waste traders seeking to offload their toxic cargo is the voyage of the ship the *Khian Sea*. This ship set sail from the United States in 1986 loaded with nearly fourteen thousand tons of toxic fly-ash from Philadelphia's municipal waste incinerator. After an unsuccessful attempt to dump the ash in the Bahamas, the ship sailed the Caribbean Sea in search of a port that would accept the waste. After months of searching, the ship was authorized to unload the cargo in Haiti, under the label of fertilizer. When the government became aware of

¹⁷ See, for example, Andreas Bernstorff and Katherine Totten, *Romania: Toxic Assault* (Hamburg: Greenpeace Germany, 1992); Andreas Bernstorff and Jim Puckett, *Poland: The Waste Invasion* (Amsterdam: Greenpeace International, 1992); A. Bernstorff et al., *Russia: The Making of a Waste Colony* (Moscow: Greenpeace Russia, 1993).

Table 2.5 Results of Hazardous Waste Trade Proposals from OECD to Non-OECD Countries 1989-93

Status	1989	1990	1991	1992	1993	Total
Actual	5	16	30	155	72	278
Rejected	31	41	28	25	10	135
Stopped/returned	7	18	7	27	16	75
Proposed/planned	1	3	4	13	14	35
Other/unknown/abandoned	25	38	39	48	14	144
Total	69	106	98	268	126	

Source: Jonathan Krueger, "Prior Informed Consent and the Basel Convention: The Hazards of What Isn't Known," *Journal of Environment and Development* vol. 7, no.2 (1998), p. 126. Krueger's calculations are based on *Greenpeace, Greenpeace Database of Known Hazardous Waste Exports from OECD to non-OECD Countries, 1989-March 1994* (Amsterdam: Greenpeace International, 1994).

- Number of total known waste export schemes: 667.
- Number of shipments resulting in trade for disposal or recycling: 278 (41.7%).
- Number of shipments rejected by importing state: 135 (11.2%).
- Number of shipments stopped by exporting state or returned to exporting state: 75 (11.2%).
- Number of shipments proposed/planned (without final result): 35 (5.2%).
- Number of abandoned shipments or schemes with unknown/other results: 144 (21.6%).

the scheme, it ordered the waste to be removed. The ship left Haiti in search of an unsuspecting country to take the load but left behind an estimated four thousand tons of the ash on the beach in Haiti. The ship's crew tried in vain to unload the remainder of toxic ash in Africa, Europe, the Middle East, and East Asia. The wide publicity of the voyage by environmental groups and the media ensured that no government would accept it. After twenty-seven months of trying to find a dump site, the ash mysteriously disappeared from the ship in Southeast Asia. Many believed it was dumped at sea.¹⁸ The remainder of the waste continued to sit on the beach in Haiti where it was originally dumped. In 1998 efforts began to have the waste returned to the United States for proper disposal. It was not removed until April 2000, and as of early 2001 it still remained on a barge off the coast of Florida.¹⁹

¹⁸ See Jim Vallette and Heather Spalding, ed., *The International Trade in Wastes: A Greenpeace Inventory* (Washington, D.C.: Greenpeace, 1990): 21-25.

¹⁹ Ramona Smith, "New Ship Hauls Haitian Ash," *Philadelphia Daily News*, October 30, 1998; "Haiti: No Welcome Mat for Return of U.S. Toxic Waste," *Inter Press Service*, June 13, 1999; Victor Fiorillo and Liz Spiol, "Ashes to Ashes, Dust to Dust," *Philadelphia Weekly*, January 18, 2001. Available at <http://www.ban.org>.

Another of the early major scandals of waste dumping in the developing world involved an incident at Koko, Nigeria, in 1988. A local farmer, Sunday Nana, rented out his backyard for storage to an Italian waste firm. He was paid U.S.\$100 per month. The firm subsequently unloaded eight thousand barrels of chemical wastes, brought on the ship *Karin B*. These barrels subsequently burst open after sitting in the hot sun and contaminated the land. The farmer was told that the barrels contained fertilizer. In actual fact, they contained industrial waste contaminated with PCBs and asbestos fibers. Several villagers became extremely ill after they had stolen the barrels and emptied them to use for storage of drinking water. Local residents and Nigerian environmental NGOs were enraged by the incident. The revelation that the barrels contained toxic waste sparked an international scandal, and the Nigerian government eventually forced Italy to take back the wastes.²⁰

Other parts of the developing world also received waste exports from rich industrialized countries. Throughout the 1980s Mexico was used as a repository for much of the hazardous waste exported by firms in the United States. Wastes were often sent hidden in other cargo on trucks and trains that crossed the border into Mexico and were subsequently dumped into unregulated landfills.²¹ Much of this waste was not detected by border guards, who were more interested in stopping movement of illegal drugs and arms than in preventing toxic wastes from entering Mexico.

Waste traders sometimes took advantage of the weak economic and political situations of certain developing countries. For example, the government of Guinea-Bissau was offered four times the value of its GNP (equal to twice the value of its external debt) if it would accept up to 15 million tons of toxic wastes over a fifteen-year period. The government, which lacked other opportunities to earn hard currency, originally accepted the proposal.²² After strong pressure from other African governments, however, it officially withdrew from the contract. In 1991, in the midst of famine and war, Somalia received a proposal to accept a waste shipment. This proposal was initially accepted by the health minister of the deposed government, who was reportedly offered a large bribe for

²⁰ For further details, see Bill Moyers and Center for Investigative Reporting (CIR), *Global Dumping Ground* (Cambridge, U.K.: Lutterworth Press, 1991), 1-2; *New African*, no. 253 (October 1988): 22; Economist Intelligence Unit, *Nigeria Country Report*, no. 4 (1988): 8-9.

²¹ Moyers and CIR 1991, 41-42; "Enforcement Actions Taken against Polluters on U.S.-Mexico Border," *EPA Environmental News*, June 3, 1992.

²² Wynne 1989, 121.

letting in the wastes.²³ Although the deal was believed to have been stopped, it has been reported that several European waste trading firms had agreed to pay the Somalis U.S.\$80 million to take up to 500,000 metric tons of toxic waste over a period of twenty years. The firms stood to make U.S.\$8 to \$10 million per shipment.²⁴ Regarding the case, Mostafa Tolba, at the time executive director of the United Nations Environment Programme, lamented: "Hazardous wastes will always follow the path of lower costs and lower standards."²⁵

Some waste exported to the developing world was disguised or labeled as other products, making such shipments even more difficult to track, especially for developing countries. This was the case with the shipment to Zimbabwe in 1984 of over two hundred barrels of "dry cleaning fluid and solvents" which was actually hazardous waste. The waste, sent by a U.S. firm, was discovered by the U.S. Agency for International Development (USAID), which had financed the sale.²⁶ In another case, fifteen thousand tons of uncontained toxic incinerator ash of U.S. origin was shipped to Guinea in the late 1980s under the label of raw material for building bricks.²⁷ This waste was dumped on the Guinean island of Kassa, just off the coast of the country's capital, Conakry, by a Norwegian waste management firm. When the pile of ash killed off vegetation and the smell was no longer tolerable to the local residents, an investigation revealed that the material was actually toxic waste. The Norwegian consul general in Guinea was implicated in the incident and was placed under house arrest until the ash was removed. Four government officials were also jailed for their involvement. The waste eventually made its way back to the United States, where it was buried in a landfill.²⁸ In another case, several U.S. companies attempted to convince the Marshall Islands that imported wastes could be used to build up land mass to ensure the islands would survive possible sea-level rises caused by global warming. The firm that proposed this "land reclamation project" claimed that no hazardous wastes would be involved, but this could not be verified.²⁹

²³ "Toxic Waste Probe," *West Africa* no. 3917 (October 12-18, 1992): 1735.

²⁴ "Toxic Waste Adds to Somalia's Woes," *New Scientist* 135 (September 19, 1992): 5; "UNEP Official Urges African Nations to Approve Basel Accord on Waste Shipments," *International Environment Reporter* 15 (October 7, 1992): 654.

²⁵ "Transfrontier Waste Meeting Focuses on Exports, Liability," *ENDS Report*, no. 215 (December 1992): 37.

²⁶ Vallette and Spalding 1990, 113; Moyers and CIR 1991, 34-38.

²⁷ Third World Network, "Toxic Waste Dumping in the Third World," *Race and Class* 30, no. 3 (1989): 46-47.

²⁸ For further details, see Third World Network 1989, 46-47; Mpanya 1992, 205.

²⁹ Greenpeace USA, *Pacific Waste Invasion* (Washington, D.C.: Greenpeace, 1992).

In addition to the mislabeling of industrial waste, the export of banned or outdated chemicals and pesticides to developing countries has been a longer-term problem.³⁰ Some of these chemicals are sold to developing countries despite being banned in the country of export. For example, it has been estimated that the United States alone exported at least fifteen tons of banned pesticides per day in 1991.³¹ Many of these chemicals were given to developing countries by industrialized country governments as part of tied-aid packages, in quantities far in excess of the recipients' needs. Backlogs of toxic materials have accumulated because the chemicals have passed their use-by date or have since been banned by the country of import.³² Thousands of tons of such hazardous chemicals now exist in less industrialized countries and are in need of proper disposal. For example, in the early 1990s the Sudan had substantial stocks of DDT remaining from the 1960s, although the country banned that pesticide in 1980.³³

The cases of environmentally unsound dumping in poor, less industrialized countries cited above were not isolated incidents. They represent only a small portion of the many diverse schemes waste traders have undertaken or attempted to dispose of unwanted toxic waste. These examples show that the seemingly economic solution of dumping toxic wastes in poor countries, where regulations are few and costs are lowest, is not at all economically or environmentally beneficial for the recipients. The waste compromises economic development prospects in the long run, even if it has brought cash to some countries, or more often to just a few individuals, in the short run. The cleanup costs of hazardous waste dumps were far too expensive for poor countries to meet, as costs in some countries for hazardous waste dump-site cleanup have reached figures in the billions of dollars.³⁴ The result is that few cleanup efforts were undertaken in the developing world following these incidents.

The subsequent damage to the environment from the import of hazardous waste compromises the economic potential of these developing

³⁰ For an overview, see Barbara Dinham, *The Pesticide Hazard* (London: Zed, 1993), 11-37.

³¹ Carl Smith, "U.S. Pesticide Traffic—Exporting Banned and Hazardous Pesticides," *Global Pesticide Campaigner* 3, no. 3 (1993): 1.

³² Janice K. Jensen, "Pesticides Donations and the Disposal Crisis in Africa," *Pesticides News*, no. 14 (December 1991): 5-6.

³³ Pesticides Trust, "Hazardous Pesticide Dumps in Africa," *Pesticides News*, no. 14 (December, 1991): 3-4. Banned and obsolete pesticides have been identified in about twenty African countries. The Food and Agriculture Organization estimates that the total figures for Africa run into the tens of thousands.

³⁴ Paul Hagan and Robert Housman, "The Basel Convention," in *The Use of Trade Measures in Select Multilateral Environmental Agreements*, ed. Housman et al. (Geneva: UNEP, 1995), 132.

countries as the waste contamination effects begin to show themselves over the long term. These effects are seen in the diminished health of people from high rates of cancer and reproductive problems, soil contamination resulting in lower agricultural productivity of the land, contamination of the food chain and of groundwater, as well as harm to wildlife and biodiversity.³⁵ Some more specific health effects of hazardous waste exposure include leukemia, kidney cancer, and respiratory disorders, as indicated in Box 2.1.³⁶

The Political Response: Negotiation of the Basel Convention

When the extent of the international toxic waste trade with developing countries was widely publicized by environmental groups and the media in the late 1980s, there was public outcry. This concern prompted action to establish international mechanisms to control exports of hazardous waste to developing countries. In the 1980s there were no universally agreed international rules on the international trade in toxic waste. Some countries had begun to implement national laws on the trade, mainly the OECD countries that sought to protect themselves from unwanted imports. Since the late 1980s several international agreements have been reached regarding the need to regulate the waste trade internationally, as well as regionally.

In the negotiation of these agreements, nonstate actors played key roles alongside the more traditional state actors. The importance of these actors can be linked to the fact that the trade in toxic waste itself is closely tied to private economic activity in the global economy and not to state actions. Private economic actors such as industry and waste dealers were key in creating the problem. Environmental NGOs quickly formed campaigns around the issue. These campaigns had three main goals, all of which were related. First, they aimed to raise awareness about the issue among the general public. Second, they sought to stop waste traders by embarrassing them through a public awareness campaign. And third, they tried to influence state negotiations on an international regulatory framework. In this latter role environmental NGOs took key roles in formulating the text of the global agreements.

³⁵ See, for example, British Medical Association, *Hazardous Waste and Human Health* (Oxford: Oxford University Press, 1991), 93–138; Allen 1992, 206–11; Third World Network 1989, 51–53; Hilz 1992, 54–63.

³⁶ Hagan and Housman 1995, 132.

The international regulation of the toxic waste trade began in the early 1980s, when several international organizations began to establish rules for hazardous waste management and its trade across borders. The United Nations Environment Programme began in 1982 to draw up the Cairo Guidelines on Environmentally Sound Management of Hazardous Wastes, which were completed in 1985 and approved by the UNEP Governing Council as a nonbinding set of guidelines in 1987. The European Community (EC) and OECD each established regulations on hazardous waste movement across their own borders in the mid-1980s. The OECD in 1984 adopted a Decision and Recommendation on the Transfrontier Movements of Hazardous Wastes which was a binding agreement on OECD states regarding the trade in hazardous wastes among OECD members. In the EC, the 1984 Directive on Transfrontier Shipment of Hazardous Waste was adopted, which included binding rules on the trade in hazardous wastes among EC states. In 1986 the EC and OECD both amended these rules to apply to the export of wastes to third countries. These various sets of regulations all had in common a reliance on the principle of prior notification as a main provision. This principle stipulates that senders of waste must first inform importing countries in writing of their intended exports, and the importing country must give its consent before shipments are sent. Although these various sets of guidelines were in existence in the 1980s, they did not constitute a globally agreed-upon set of rules regarding the international waste trade. In 1985 the OECD began to draft a treaty for the control of transboundary movements of hazardous wastes between OECD member states.³⁷

When the Cairo Guidelines were approved in 1987 by the governing council of UNEP, Senegal, Switzerland, and Hungary proposed that the executive director of UNEP be requested to start drafting a global convention to be based on similar principles. This proposal was ratified by the UN General Assembly, and UNEP played a key role as the organizing agency for the negotiations.³⁸ Greenpeace officially launched its campaign to end the waste trade in 1987, at the same time these negotiations began. Five working group meetings were held between early 1988 and early 1989 to prepare the text of the global waste trade treaty, known as the Basel Convention. Ninety-six countries participated in one or more of these

³⁷ Details on these various regulations and directives can be found in Katharina Kummer, *International Management of Hazardous Wastes: The Basel Convention and Related Legal Rules* (Oxford: Clarendon Press, 1995), 38–39, 126–71.

³⁸ Mactar Kebe, "Waste Disposal in Africa," *Marine Policy* 14, no. 3 (1990): 252. Roelants du Vivier 1990, 265–67; Hilz and Radka 1991, 56.

working groups, of which sixty-six were from developing countries. Also participating as observers were four UN bodies, eight intergovernmental organizations, and twenty-four NGOs representing both environmental groups and industrial interests.³⁹ When work on the Basel Convention was nearly complete, the OECD suspended work on its waste trade treaty because there was significant overlap between the two agreements.⁴⁰

The working group meetings leading up to the Basel Convention were very politically charged because there were basic differences of opinion on how to reconcile the exchange of hazardous wastes with the principle of free trade.⁴¹ Two opposing viewpoints quickly emerged. On one hand, there were those who wanted the waste trade across borders to continue to be legal. Waste dealers and waste-producing firms that were reaping large profits on such deals obviously wanted to have few restrictions on their activities. Some of these firms were represented at the Basel negotiations by business advocacy groups such as the International Chamber of Commerce and the International Precious Metals Institute. Similarly, the states in which most wastes are generated, mainly the rich industrialized countries, advocated regulation of the waste trade rather than a ban. They claimed that they wanted to keep their waste management options open, even if this included the export of hazardous wastes. Such a position was clearly intended to protect the interests of powerful waste-producing firms located within their borders. UNEP agreed that the trade should be regulated rather than banned outright. It argued that not all states are able to dispose of their wastes safely and that they need to export them to countries that could do a better job at disposal. But UNEP also expressed its view that waste should not be exported to developing countries that did not want to import it. It saw the main purpose of the convention as protecting the rights of developing countries to refuse waste imports.⁴²

The less industrialized countries were strongly in favor of an outright global ban on waste exports from rich to poor countries. These states saw regulation as merely legalizing of a conspicuously unjust practice. Some developing country governments were initially involved in waste trade deals, but when the widespread nature of the problem became evident,

³⁹ Mostafa Tolba and Iwona Rummel-Bulska, *Global Environmental Diplomacy* (Cambridge, Mass.: MIT Press, 1998), 112. For background on the negotiations, see Katharina Kummer, "The International Regulation of Transboundary Traffic in Hazardous Wastes: The 1989 Basel Convention," *International and Comparative Law Quarterly* 41, no. 3 (1992): 534.

⁴⁰ Kummer 1995, 161.

⁴¹ Wynne 1989, 123.

⁴² Tolba 1990, 207-8.

there was outcry among developing country governments that the export of toxic wastes was yet another mechanism to exploit them. These governments saw the negotiations as an ideal forum to demonstrate solidarity.⁴³ The key interest of these states was to preserve not just the environment but also justice and economic development prospects over the long term. President Gnassingbe Eyadema of Togo, referring to the Basel Convention, explained, "Our efforts for the economic development of our states and for the progress of our people will be in vain if we do not ... preserve the lives of our people and the environment."⁴⁴ Also advocating a ban on the waste trade between rich and poor countries were environmental NGOs, the most active being Greenpeace International. This group argued that as long as rich countries could legally continue to pay poor countries to take their toxic by-products, there would be no incentive to adopt clean production methods. The main tactics that this group pursued were global lobbying at Basel meetings, raising public awareness through demonstrations, and publishing extensive research reports on specific cases, naming firms and countries involved, to reveal the extent of the trade.

Once the African waste import schemes came to light, several African governments met in May 1988 at a regional workshop on toxic waste held in Monrovia, Liberia. Participating were West African governments, United Nations experts, and representatives of various environmental NGOs. This workshop recommended banning the movement of toxic waste to Africa and the elaboration of a regional convention on the waste trade. Also discussed was the establishment of national committees on environmental protection, the harmonization of environmental legislation, and the establishment of a Third World Environment Bureau to house a data bank on toxic waste issues.⁴⁵ Shortly after this workshop, the Organization of African Unity (OAU) held its forty-eighth ordinary session in Addis Ababa. At this meeting African governments adopted Resolution 1153, which strongly condemned those involved in the import of waste, and declared the practice a crime against Africa and the African people.⁴⁶ The forcefully worded resolution, adopted just as many African waste deals were being exposed, also called upon African countries that had accepted hazardous wastes, or were in the process of doing so, to cease such

⁴³ Kummer 1992, 535-36.

⁴⁴ Cited in *Waste Trade Update* 1, no. 2 (1988): 1.

⁴⁵ Kebe 1990, 251-52.

⁴⁶ Organization of African Unity, *Resolution on Dumping of Nuclear and Industrial Waste in Africa*, CM/Res. 1153 (Addis Ababa: OAU, 1988).

contracts.⁴⁷ The following month the issue was discussed at the eleventh summit of the Economic Community of West African States (ECOWAS) in Lomé, Togo. At this summit, ECOWAS leaders adopted a resolution in which they denounced the waste trade and pledged to adopt national legislation that outlawed the acceptance of foreign wastes.⁴⁸

This heightened interest of African countries in the Basel negotiations aroused concerns that these countries might take action to block agreement on the final text of the Basel Convention. This fear prompted UNEP to agree to hold an African Ministerial Conference in Dakar in January 1989. The purpose of this conference was to encourage the African countries to agree on a common position with the developed countries before the March 1989 Basel meeting at which the convention was scheduled to be adopted. But little was agreed upon at this conference. Some representatives from industrialized countries tried to force African governments to accept prior notification as the foundation of the Basel Convention. This pressure put off many African countries, who by then were demanding a ban on exports to Africa in return for their support for the convention. The African Ministerial Conference was in the end only able to pass a broadly worded appeal for the participation of African states in the Basel negotiations. Moreover, it was clear that the African states would go ahead with their own regional convention.⁴⁹

Between mid-1987 and mid-1988 similar moves in favor of regional agreements banning waste imports were made by the states of the Zone of Peace and Cooperation in the South Atlantic, the Non-Aligned Movement (NAM), and the Caribbean Community (CARICOM).⁵⁰ These regional coalitions soon joined forces to call for a ban on the waste trade with developing countries. These groups felt strongly that waste should not be treated as a regular commodity subject to the principle of free trade, or even regulated trade.

Environmental NGOs were important in influencing these positions taken by developing countries. Because they were both on the same side of the issue, a strong alliance was formed between environmental NGOs and Third World, particularly African, negotiators to press for inclusion of a

⁴⁷ Countries in the process of completing waste deals at the time included Guinea-Bissau, Benin, Congo, and Somalia.

⁴⁸ ECOWAS, *Resolution of the Authority of Heads of State and Government Relating to the Dumping of Nuclear and Industrial Waste*, A/Res.1/6/88 (1988). Although this group was formed, its activities were limited because of a lack of funding.

⁴⁹ UNEP, *Final Joint Declaration of the Dakar Ministerial Conference on Hazardous Wastes* (Geneva: UNEP, 1989), 26-27. See also Kummer 1992, 536; Kebe 1990, 252; Tolba and Rummel-Bulska 1998, 109-10.

⁵⁰ See Vallette and Spalding 1990, 18, 64, 121.

ban on the waste trade in the convention. Throughout the Basel Convention negotiating process, the NGOs that formed part of this Third World-NGO alliance were major players. Greenpeace was the main coordinator of the environmental NGOs on the issue, and its representatives began to attend the Basel working group meetings in mid-1988. At the same time it began to publish a quarterly newsletter to inform the public and interested governments of waste trade deals around the world.⁵¹ The extensive on-the-ground research by Greenpeace on this issue gave it an expertise unmatched by most states, other NGOs, and possibly even UNEP. Other international environment and development NGOs concerned about the Basel negotiations also linked up with Greenpeace to form a temporary lobbying group, International Toxic Waste Action Network (ITWAN), to strengthen the campaign for a global ban.⁵²

The Group of 77 developing countries (G-77) looked to these NGOs, Greenpeace in particular, for vital information and help in writing up proposals to be included in the convention. They also sought advice on negotiation strategy. Although the environmental NGOs were observers rather than full voting participants, they managed to wield significant influence at the negotiations through their close relationship with representatives of the developing countries. Some have argued that the concerns of the G-77 countries, such as the call to minimize waste generation and for more stringent disposal standards, were clearly shaped by the agenda of the environmental NGOs.⁵³ For this reason, some industrialized states began to regret that they had allowed environmental NGOs into the negotiating process. They began to close certain meetings in order to keep them out of discussions on highly sensitive issues. But developed country representatives soon realized that they could not keep the environmental NGOs from finding out what happened in those meetings because the developing countries would immediately brief them. The industrialized states and industry groups, though not organized into as tight a coalition as the G-77 and environmental NGOs, still wielded substantial power over the outcome of the negotiations. The industrialized states in effect threatened not to become parties to the convention if it went

⁵¹ This newsletter was called *Waste Trade Update*. It was renamed *Toxic Trade Update* in 1992 and renamed *International Toxics Investigator* in 1995. Its publication ceased in 1997.

⁵² These NGOs included African NGOs' Environment Network, Environment Liaison Centre, Greenpeace, International Organization of Consumers' Union, and the Natural Resources Defense Council. See *Waste Trade Update* 2, no. 1 (1989): 3. This network was dissolved after the adoption of the Basel Convention, and Greenpeace took over as the main NGO active in attempts to strengthen the Basel Convention.

⁵³ Willy Kempel, "Transboundary Movements of Hazardous Wastes," in *International Environmental Negotiation*, ed. Gunnar Sjostedt (London: Sage, 1993), 52.

so far as to ban the trade. This was a serious threat. If the major waste producing and exporting states were unwilling to ratify the treaty, there was little point to the convention.

The Basel Outcome

UNEP had set an ambitious schedule of just over a year to complete the Basel negotiations. Representatives of 116 governments and several NGOs were present at the meeting in March 1989 when the convention was to be adopted. Throughout the meeting there was a high degree of uncertainty as to whether any agreement would be reached. The end result of UNEP's initial efforts was the Basel Convention on the Transboundary Movement of Hazardous Wastes, narrowly agreed upon in the last remaining hours of the meeting.⁵⁴ The principal objectives of the Basel Convention are stated as being the reduction in the generation and transport of hazardous wastes and the promotion of the environmentally sound management of hazardous wastes, including disposal as near as possible to the source.⁵⁵ To facilitate the achievement of these objectives, the provisions of the original 1989 convention provided a regulatory framework for the movement of wastes. This regulatory framework did not constitute a comprehensive ban on their movement between rich and poor countries. The convention was later amended, in 1995, as will be discussed in Chapter 3. The analysis here focuses on the original 1989 convention.

The convention first outlines what wastes are and are not governed by the convention. Wastes exhibiting certain "hazardous" characteristics are listed in specific annexes to the convention. Annex I lists hazardous waste stream categories, and Annex III lists hazard characteristics. Trade in Annex I wastes is governed by the convention, unless they do not exhibit any of the qualities listed in Annex III. Wastes not defined as hazardous by the method above, but which are considered hazardous by either the state of export, import, or transit, are also covered by the convention.⁵⁶ Radioactive wastes are outside of the scope of the convention.⁵⁷

⁵⁴ Kummer 1992, 537.

⁵⁵ See Kummer 1995, 47-48; Tolba and Rummel-Bulska 1998, 114-15.

⁵⁶ *The Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal*, Article 1.

⁵⁷ Radioactive wastes were excluded at the insistence of the International Atomic Energy Agency (IAEA), the UN organization responsible for dealing with radioactive products and technology transfer. At this time the IAEA did not have a set of regulations for the transfer of radioactive wastes, but it did begin to draft a set of regulations similar to the Basel Convention which were completed in 1991. See Patricia Birnie and Allen Boyle, *International Law and the Environment* (Oxford: Clarendon Press, 1992), 335.

A key foundation of the convention is that it affirms that countries have the sovereign right to ban imports of hazardous waste if they so choose. Parties to the convention are prohibited from exporting wastes to states that have banned its import. The convention includes restrictions on waste trade in other instances as well. One of these is the outright prohibition of exports of hazardous wastes to Antarctica.⁵⁸ It also stipulates that parties are to refrain from trade in hazardous wastes with nonparties unless there is a bilateral or regional agreement under which wastes are to be disposed of in no less environmentally sound a manner than that outlined in the convention (Article 11).⁵⁹ The purpose of this latter trade restriction is to encourage states to become parties to the convention, though the allowance of bilateral or multilateral agreements does ease this pressure somewhat.⁶⁰

For exports of wastes to states that have not prohibited their import, the principle of prior notification is to be adhered to (Article 6). This system was intended to allow countries to accept or turn away such imports on a case by case basis at their own discretion. Parties planning to export hazardous wastes must notify the importing country in writing in advance of a hazardous waste shipment. If the latter agrees in writing to accept the waste and is assured that the waste will be disposed of in an environmentally sound manner, the transaction can take place.⁶¹ Though these rules do not constitute a ban on the trade in wastes between rich and poor countries, the convention does call for parties to undertake a reevaluation of a ban. This measure calls on parties to undertake, three years after entry into force and at least every six years beyond that time, "an evaluation of its 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."⁶² This measure was included in response to a proposal made by Greenpeace.⁶³

Beyond these specific trade provisions regarding the movement of hazardous waste, the convention outlines other steps that should be taken to meet its stated objectives. Perhaps most important, it requests parties to take steps to reduce the generation of hazardous wastes and to ensure the

⁵⁸ *The Basel Convention*, Article 4.

⁵⁹ *Ibid.*, Articles 4, 11.

⁶⁰ For a full analysis of the trade measures in the Basel Convention, see Krueger 1999.

⁶¹ *The Basel Convention*, Articles 4, 6.

⁶² *Ibid.*, Article 15.7.

⁶³ *Ibid.*, Article 15; Kummer 1992, 539.

availability of environmentally sound disposal facilities. The transboundary movement of hazardous wastes, though allowed, is to be kept to a minimum. The convention also requests parties to export wastes only if they themselves lack the means to dispose of those wastes in an environmentally sound manner or if the wastes are considered a "raw material" by the importing country.⁶⁴ Movements carried out in contravention of provisions of the treaty are considered to be illegal traffic in waste, and the waste must be reimported by state of export.⁶⁵ The convention established a secretariat to arrange periodic conferences of the parties (COPs) at which all contracting parties would meet. The secretariat is to act as a liaison center for information on waste management, technical assistance, and the identification of illegal trade in wastes.

The final text of the Basel Convention incorporated some of the demands of the environmental NGOs and G-77 states. These include the need to reconsider the issue of a ban in light of new evidence and the incorporation of provisions calling for environmentally sound disposal of exported wastes. But the convention was an overall disappointment to the environmental NGOs and developing countries because it was based on regulating the trade in hazardous wastes, not banning their export. It was also a disappointment to some of the key industrialized countries and industry groups, who thought that the convention's provisions went too far in regulating the trade in wastes. The battle that emerged during the negotiation of the convention threatened to stall its acceptance on a global scale.

Although some proposals made by African countries during the negotiations were incorporated into the final document,⁶⁶ the African country delegates were not happy with the outcome. Although thirty-eight of forty-three African countries at the final conference adopted the convention in principle, all suspended signature of the document.⁶⁷ As Mostafa Tolba has noted about this meeting, "The problem of the African delegates' intransigence hung heavy in the air."⁶⁸ The African government representatives said that they could not sign or ratify the Basel Convention until they consulted with one another at the upcoming OAU meeting to be held in June 1989, at which they would discuss drafting their own con-

vention. Tolba directly attributes the African delegates' refusal to sign the treaty at Basel to Greenpeace. In pushing for a global ban on the waste trade and highlighting the ways in which the Basel Convention worked against this goal, Tolba remarked that "the organization convinced some African representatives, who later blocked the rest of the African states from signing the convention when it was finally adopted."⁶⁹ Other developing countries also withheld signature of the document for similar reasons. Environmental NGOs immediately denounced the agreement as the legalization of "toxic terrorism."

Nonetheless, the final text of the Basel Convention was signed by thirty-five countries in March 1989 and was ratified by the necessary twenty countries to come into force by May 1992. This was accomplished largely without the participation of developing countries⁷⁰ or of the EC (except France), the United States, and Japan. This latter group of countries together produce over 90 percent of hazardous waste.⁷¹ The Basel Convention thus got off to a fragile start. The key players involved in the waste trade negotiations at the time, the industrialized countries and waste traders on the one hand, and the developing countries and environmental NGOs on the other, were, for opposite reasons, disappointed with the treaty.

National Legislation and Regional Waste Trade Agreements

Following the negotiation of the Basel Convention in 1989, several countries and regional organizations in the developing world began to take other precautionary measures to control the waste trade. Encouraged by Greenpeace and local environmental NGOs, many countries began to implement national legislation banning the import of hazardous waste. The number of countries banning the trade rose from 3 in 1986 to 103 by early 1994.⁷² These countries include most developing countries, as well as several industrialized countries, including Italy and Norway. The latter two

⁶⁴ *The Basel Convention*, Article 4.9.

⁶⁵ *Ibid.*, Article 9.

⁶⁶ UNEP, *Proposals and Position of the African States during the Negotiations on the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal and the Status of Their Incorporation into the Basel Convention* (Geneva: UNEP, 1989).

⁶⁷ Kebe 1990, 252.

⁶⁸ Tolba and Rummel-Bulka 1998, 112-13.

⁶⁹ *Ibid.*, 103.

⁷⁰ Nigeria, however, was one of the first twenty countries to ratify the Basel Convention. It went against OAU instructions not to ratify the treaty until the Bamako Convention had been ratified. It is unclear why Nigeria has taken this position, although it has been rumored that its decision was linked to pressure from certain aid donors.

⁷¹ The United States produces 85 percent of the world's hazardous wastes, while the EC produces 5-7 percent of the world total. *Environmental Policy and Law* 23, no. 1 (1993): 14.

⁷² Puckett 1994, 55.

had each enacted a ban in the late 1980s following incidents of dumping that originated from those countries.

In 1989, directly following the Basel negotiations, the African, Caribbean, and Pacific (ACP) states insisted that the EC (now the European Union, EU) impose a ban on exports of hazardous wastes as well as radioactive wastes to the ACP states within the framework of the Lomé IV Convention. The Lomé Convention is an aid and trade agreement between the European Union and the ACP states which is renegotiated on a regular basis. In response, the EU proposed to allow the export of hazardous wastes to ACP countries if accompanied by technologies to improve waste disposal safety and management.⁷³ The ACP states refused to accept this proposal and demanded an outright ban on their export to ACP states. A compromise was reached whereby the ACP states agreed not to accept toxic waste exports from any country in return for a ban on exports from the EU states. This agreement was outlined in Article 39 of the Lomé IV Convention.⁷⁴ The Lomé IV agreement came into force in 1991 and was valid until the year 2000. Because of new global trade dispute rules under the WTO which came into effect in 1995, it is unlikely that a new Lomé agreement will be negotiated. This will not affect the EU's ban on the export of wastes to ACP states because the EU has subsequently banned the export of hazardous wastes to all non-OECD countries.

Seeking to protect themselves from waste exports from non-EU states, the African countries agreed at the June 1989 OAU meeting to draft an African waste trade convention. Three working group meetings were held to prepare and draft the convention. Present at these meetings were African ministers of the environment and foreign affairs, as well as legal and technical experts. The latter included a technical expert from UNEP and a legal expert from Greenpeace. UNEP officials initially felt that a separate African convention might undermine the Basel Convention. At these negotiations the UNEP representative tried to convince the Africans not to abandon the Basel Convention and suggested that they issue a declaration of their concerns instead.⁷⁵ But the Africans were determined to have their own convention and continued to work toward that goal. The Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes

⁷³ Hilz 1992, 153.

⁷⁴ EEC-ACP, *Fourth ACP-EEC Convention*, signed in Lomé on December 15, 1989 (Article 39), 18.

⁷⁵ Interview with Kevin Stairs, Greenpeace International, November 1993; UNEP, *Hazardous Waste: Why Africa Must Act Now* (Geneva: UNEP, 1989).

within Africa was completed and signed by twelve African countries at the OAU Pan African Coordinating Conference on Environment and Sustainable Development held in Bamako, Mali, in early 1991.⁷⁶

The text of the Bamako Convention closely mirrors that of the Basel Convention in some respects, but for the African countries it is an important improvement on the latter. It imposes an outright ban on the import of hazardous wastes, including radioactive wastes, into African countries.⁷⁷ The Bamako Convention also bans all forms of ocean dumping of wastes; outlaws the import of hazardous substances that have been banned in the country of manufacture; and includes provisions on clean production methods within Africa. It further requires hazardous waste audits and imposes strict, unlimited, joint, and several liability on waste generators.⁷⁸ The inclusion of more stringent provisions than the Basel Convention has been attributed to the influence of Greenpeace.⁷⁹ The African states recognized that the Bamako Convention would lack the funding to monitor effectively the movement of toxic wastes and called on NGOs to assist in ensuring compliance. They also acknowledged the important role NGOs played in the drafting of the convention. The executive director of the Kenya Energy and Environment Organization, Achoka Awori, said of the convention: "It sends a message even though it doesn't do much. It gives environmental agencies something to point to in a legal sense.... It is now up to the NGO community and the international agencies to patch up the loopholes."⁸⁰ The Bamako Convention gained the necessary ten ratifications and came into force in March 1996.

The Agreement on the Transboundary Movement of Hazardous Wastes in the Central American Region was signed by six Central American presidents in Panama in late 1992. This convention was adopted following a year of strong campaigning by environmentalists in the region. A number of NGOs had formed the Central American Committee against Toxic Waste Trafficking and Other Polluting Products to monitor the waste trade in the region and to lobby Central American governments. This group was able to convince these governments to adopt a regional

⁷⁶ OAU, "Africans Ban Hazardous and Nuclear Waste Dumping," press release, January 29, 1991.

⁷⁷ *Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa* (Addis-Ababa: OAU, 1991).

⁷⁸ Ibid.; see also "Africa Adopts Sweeping Measures to Protect Continent from Toxic Terrorism," *Waste Trade Update* 4, no. 1 (1991): 1.

⁷⁹ Interview with Kevin Stairs, Greenpeace International, November 1993.

⁸⁰ "United Nations Officials See Basel Treaty as 'Limping' into Effect with Limited Support," *International Environment Reporter* 15 (May 6, 1992): 275-276.

waste trade ban in addition to the existing national bans.⁸¹ The resulting convention is similar to the Bamako Convention in that it calls for a ban not only on waste imports to the region but also on transportation, ocean dumping, and ocean incineration of hazardous wastes in Central America. The agreement is valid for ten years, after which time it must be renewed. Governments seeking to opt out can do so on six months' notice.⁸² This agreement is currently in force in the six Central American countries that signed it.

Nineteen countries in the Mediterranean region agreed in late 1993 to negotiate a protocol banning the waste trade within the framework of the existing Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution (1975). This agreement came following a decision in late 1991 of the parties to the Barcelona Convention to establish a working group of experts to draft this protocol.⁸³ The result was the Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and Their Disposal, known as the Izmir Protocol, which was adopted October 1, 1996, in Izmir, Turkey. The protocol calls for protecting of the Mediterranean Sea from hazardous waste by banning the trade and transit of hazardous wastes and their disposal (including wastes destined for recycling) between industrialized and developing countries in the region.⁸⁴ According to Katharina Kummer, "This draft had been prepared by Greenpeace International and reviewed by the competent UNEP institutions."⁸⁵ This protocol is not yet in force.⁸⁶

Also in late 1993 the South Pacific Forum began negotiations on a regional convention known as the Waigani Convention. The official title of the agreement is The Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region. It was adopted September 16, 1995, in Waigani, Papua New Guinea. This convention bans the import of hazardous and radioactive wastes from outside the convention area to developing countries in the convention area, while prohibiting New Zealand and Australia from

⁸¹ "Latin America Blocks Hazardous Import Schemes," *Waste Trade Update* 5, no. 1 (1992): 4.

⁸² "Toxic Trade Ban Agreed by Central American Presidents," *Toxic Trade Update* 6, no. 1 (1993): 5.

⁸³ *Siren*, no. 45 (March 1992): 22-24.

⁸⁴ "Three Regions Move to Ban the Waste Trade," *Toxic Trade Update* 6, no. 4 (1993): 4.

⁸⁵ Kummer 1995, 120.

⁸⁶ As of March 31, 1999, only one country, Tunisia, had ratified this protocol.

exporting hazardous or radioactive wastes to the developing countries in the convention area.⁸⁷ This convention is not yet in force.

Other regional efforts were made in the early 1990s, for example within the Association of Southeast Asian Nations (ASEAN) and in the Economic Community of Latin American Countries (ECLAC), but these agreements have not yet been completed.⁸⁸

Conclusion

The initial rise of the waste trade is best explained as a combination of both local economic incentives and the nature of the global economy. Increased regulations raised costs for hazardous waste disposal in rich countries, making waste exports to developing countries with less stringent regulations and lower costs appealing. The lure of foreign exchange made waste imports attractive in poor countries. While these factors are crucial in explaining the emergence of the trade, without a fluid global trading system, reinforced by lower costs for transportation and communications, it would not have been lucrative or easy. The global factor in the equation, one which is often overlooked or underplayed, is extremely important. This set of circumstances led to a rapid growth in attempts to export toxic waste to developing countries in the late 1980s. Though not all of the attempts resulted in actual waste dumping once they were exposed by NGOs and the media, the sheer number of proposals indicates that the problem could have easily exploded into a major crisis had it not been put in the international spotlight.

The political response to the rise of the waste trade was the negotiation of the Basel Convention as well as other regional waste trade agreements. In the formulation of these rules, states played an important role as the official participants in the negotiations and as official parties to the treaties. The relative power position of states in the negotiations was indeed important in determining the final outcome of the Basel Convention and other agreements. But they were far from being the only significant players in international waste trade politics. Alongside state actors, nonstate actors played key roles in the formulation of the Basel waste trade convention.

⁸⁷ "South Pacific Forum Countries Sign Regional Hazardous Waste Convention," *International Environment Reporter* 18, no. 19 (September 20, 1995): 709-10. See also "South Pacific Forum to Negotiate a Regional Waste Trade Ban," *Toxic Trade Update* 6, no. 3 (1993): 4.

⁸⁸ "Southeast Asian Activists Call for a Regional Waste Trade Ban," *Toxic Trade Update* 6, no. 3 (1993): 5.

Both environmental NGOs and business lobby groups were active in the process by lobbying relevant government representatives. Greenpeace International in particular participated actively as an independent negotiator. Greenpeace representatives were also indirectly influential as advisers to developing country governments at the Basel negotiations, providing them with technical information on waste dumping and helping them to formulate strategy. The alliance that formed between Third World governments and Greenpeace was mutually beneficial, as both had a significant amount to gain from cooperation. While the developing country governments gained access to vital information and strategy advice for negotiations, Greenpeace gained influence in shaping the direction of those negotiations by operating through developing country government representatives when meetings were closed to NGOs. Greenpeace also played a strong role, perhaps stronger than at the Basel meetings, in the drafting of many of the regional waste trade agreements. Industry interests were also present during the negotiation of the Basel Convention, strongly lobbying in opposition to strict regulation on the movement of wastes. These players were aligned in their views with the industrialized countries, though they did not form as tight an alliance as did the environmental groups and developing countries. As one observer notes, environmental NGOs were more directly vocal and influential over the final wording of the Basel Convention than were industry lobby groups.⁸⁹

The factors that initially led to the transboundary movement of wastes are not unrelated to the importance of nonstate actors in the political response to it. The global economic factors that contributed to the rise of the waste trade also allowed for the rise in nonstate actors as key players in the global waste trade negotiations. Moreover, the fact that the waste trade was conducted by private, rather than state actors, helps to explain why environmental NGOs were among the first to identify the practice and to publicize it. Their work subsequently focused on states in an attempt to get them to hammer out an acceptable international agreement to govern the trade. But their early involvement in identifying and publicizing the issue with the broader public secured them a place at the negotiating table.

⁸⁹ Kempel 1993, 51.

3

The Role of Environmental NGOs in the Evolution of the Basel Ban

The Basel Convention and other regional and national regulatory measures were specifically aimed at reducing the export of hazardous wastes to developing countries. In this goal they were partly successful. The number of proposals for the export of toxic waste to developing countries for final disposal indeed declined dramatically after the adoption of these agreements. But by the mid-1990s, it was clear that they had weaknesses that enabled waste traders to circumvent the various treaties' rules. Waste exporters responded to the agreements by shifting from the export of hazardous wastes destined for final disposal to that destined for recycling operations, which made the waste trade more difficult to track. Though recycling implies environmental stewardship of hazardous wastes, in most cases, especially in developing countries, it has been as harmful to