

A Dirty Dilemma: The Hazardous Waste Trade

Author(s): ZADA LIPMAN

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A Dirty Dilemma

The Hazardous Waste Trade

Since the 1980s, exporters of hazardous waste have targeted developing countries. Some of this waste is destined for dumping or disposal, while other waste is directed to resource recovery, recycling, or reuse. To protect developing countries from the dangers associated with hazardous waste, the international community adopted the *Basel Convention on the Transboundary Movements of Hazardous Wastes and their Disposal*, which first

Z A D A L I P M A N

regulated and then banned the trade of hazardous waste. Although lauded as a landmark for global democracy and environmental justice, the ban has created a dilemma for developing countries with large recycling industries that rely on hazardous waste imports for their continued operation.

Environmental problems arising from the disposal of hazardous waste in developing countries did not gain international attention until the late 1980s, when several incidents of dumping were reported in African nations. One of the most serious cases occurred in 1987. Several thousand tons of highly toxic and radioactive waste, labeled "substances relating to the building trade," were exported from Italy to Koko, Nigeria, and stored in drums in a backyard. Many of these drums were damaged and leaking; workers packing the drums into containers for retransport to Italy suffered severe chemical burns and partial paralysis, and land within a 500-meter radius of the dump site was de-

clared unsafe. The Italian government eventually accepted the return of the waste, and the Nigerian government has since imposed the death penalty on the waste importers. In 1988, Guinea-Bissau was offered a US\$600 million contract—four times its gross national product—to dispose of 15 million tons of toxic waste over five years. The contract was never concluded because of public concern within Guinea-Bissau, but many similar arrangements were reported in the 1980s in countries such as Namibia, Guinea, Sierra Leone, and Haiti. In some cases, dumping took place with the consent of the government in question, while in other cases it was part of an illegal operation. Since then, numerous incidents of dumping in developing countries have been reported throughout the world.

Logic of the Market

Although precise estimates of the worldwide generation of hazardous waste are difficult to obtain, the

United Nations Environment Programme (UNEP) estimated in 1992 that approximately 400 million metric tons of hazardous waste were generated annually, with 80 percent of this waste coming from countries in the Organisation for Economic Cooperation and Development (OECD). This figure is likely to be significantly higher today.

The disposal of hazardous waste has become a major issue for countries that are large waste-generators. Before the dangers associated with disposal were understood, most of this waste was deposited in landfills, causing serious problems for surrounding areas. A well-documented example is the "Valley of the Drums" in Kentucky, a seven-acre site with 17,000 drums of hazardous waste that has contaminated nearby soil and water. As a result of incidents like this, most developed countries introduced stringent environmental and safety measures for the disposal of hazardous waste. This trend led to increasingly

ZADA LIPMAN is Associate Director of the Centre for Environmental Law, Macquarie University, Australia and a Barrister of the Supreme Court of New South Wales.

limited and costly disposal options in developed countries.

Developing countries became targets for waste generators—mostly developed countries—since they provided disposal options for a mere fraction of the equivalent cost in the state of origin. According to a study by Katharina Kummer in *International Management of Hazardous Wastes*, disposal costs for hazardous waste in developing countries in 1988 ranged from US\$2.50 to US\$50 per ton, compared with costs of US\$100 to US\$2,000 per ton in OECD countries. The cost of incineration was even higher, at US\$10,000 for one ton of hazardous waste in the United Kingdom. The lower disposal costs in developing countries generally stem from low or nonexistent environmental standards, less stringent laws, and an absence of public opposition due to a lack of information concerning the dangers involved. Given these considerations, the economic logic for exporting hazardous waste to developing

countries is indisputable.

The Basel Convention

International concerns about the export of hazardous waste to developing countries led to the negotiation of the 1989 Basel Convention, which became binding in 1992. As of August 2001, 148 countries had ratified the Convention. Unfortunately, the United States, which generates approximately 60 percent of the world's hazardous waste, has yet to ratify.

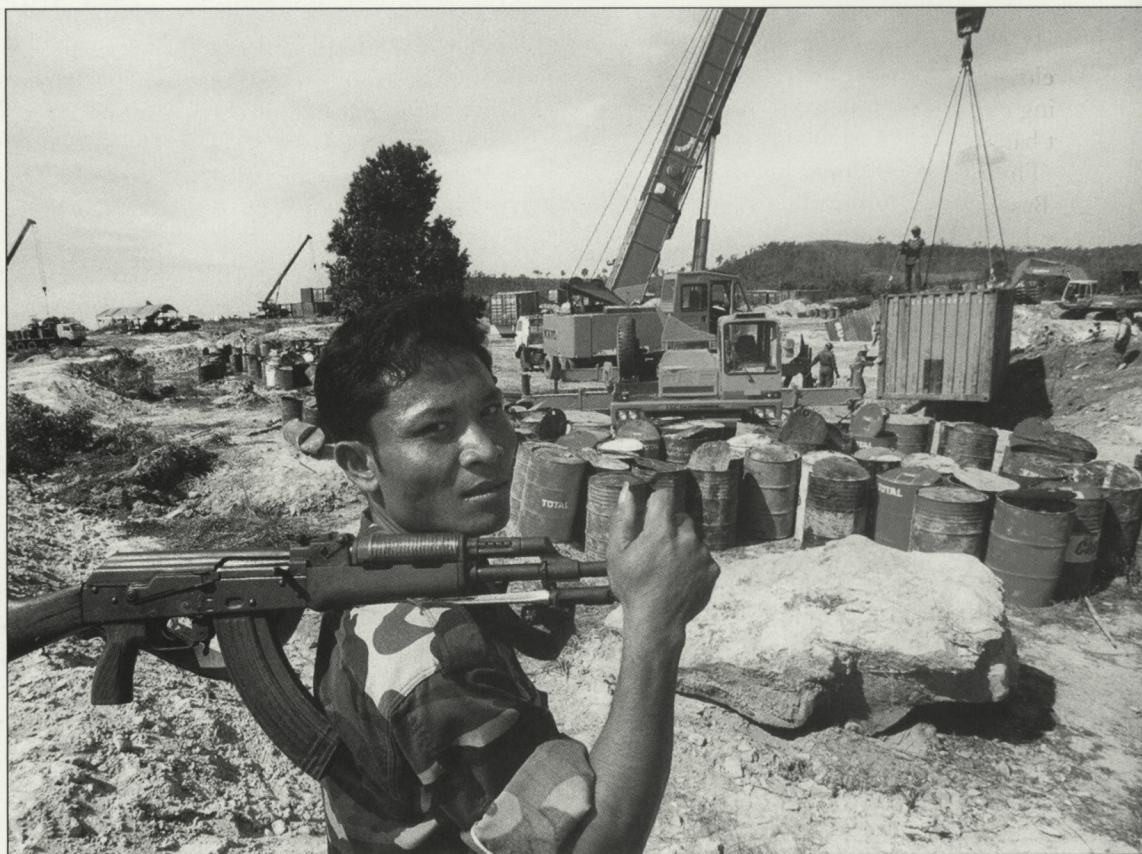
The Basel Convention itself does not ban the transboundary movements of hazardous waste, except to Antarctica. Rather, it seeks to control and limit the movement of waste based on a process of prior informed consent. Hazardous waste exports cannot proceed unless the pertinent authorities in the recipient and transit countries are notified in advance and provide written consent. Any movement of hazardous waste without a movement document or prior notification is illegal under the Basel Convention. This

Convention requirement applies to both hazardous waste exported for final disposal and waste exported for recycling. The Convention also requires parties to prohibit the import of hazardous wastes when it is likely that the waste will not be managed in an environmentally sound manner.

The Basel Convention initially focused on protecting developing countries from hazardous waste dumping by developed countries. But by 1992, at the First Meeting of the Conference of the Parties (COP-1), concerns had already shifted to hazardous waste traded for recycling or recovery. Jim Puckett of the Basel Action Network estimates that from 1980 to 1988, only 36 percent of hazardous waste exports to developing countries were destined for recycling. In 1992 these exports had risen to 88 percent, and in 2001 they are likely to constitute over 95 percent of all waste exports.

The lack of a distinction between “waste” and “products” in the Convention and its vague criteria for “hazard-

Toxic gold: French biological and chemical weapons experts in Paraguay inspect toxic waste allegedly exported from Germany.



ous" allowed the continued export of hazardous waste to developing countries for recycling on the basis that the toxic substances exported were commodities rather than wastes. Some exports of waste are for "sham" recycling, but even when recycling takes place, this waste presents environmental and health risks to developing countries that lack the

developing countries are highly unlikely to be managed in an environmentally sound manner consistent with the Convention. Clearly, protection of developing countries was the rationale for this amendment. However, the ban has not yet received the requisite number of ratifications to come into force. As of August 2001, there were 26 ratifications—out of the minimum of

per compounds, lithium, and spent catalysts.

The ban will likely have a considerable impact on recycling industries in developing countries. In particular, a future decision to classify lead-acid batteries as hazardous will affect countries such as India and the Philippines, which rely on imported lead-acid batteries for a significant proportion of

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technology to handle the waste safely. For instance, Greenpeace and the Basel Action Network have not encountered a single hazardous waste recycling facility in a non-OECD country that does not cause serious pollution. In addition, Greenpeace estimates that more than 2.5 million tons of hazardous waste were exported to developing countries between 1989 and 1994. Dissatisfaction with the Basel Convention resulted in over 100 developing countries unilaterally imposing regional or national waste-import bans.

The control regime imposed by the Basel Convention was a compromise between developing countries, which favored a total ban on the transboundary movements of hazardous waste, and developed countries, which wanted a more flexible control regime. In 1994, developing countries finally gained sufficient international support to achieve a total ban on hazardous waste exports, when the parties to the Basel Convention decided to ban all exports of hazardous wastes from OECD to non-OECD (largely developing) countries. To ensure that the ban was legally binding, it was adopted as an amendment to the Convention in 1995. At the same time, a newly added paragraph recognized that exports of hazardous waste to de-

veloping countries, which had been the chief initiators and presumed benefactors of the ban. However, the European Union has ratified the amendment and introduced regulations to ban exports to developing countries, a decision that binds its 15 member states.

Destiny's Landfill?

Developing countries with large recycling and reclamation industries are concerned that they will be deprived of resources if the ban comes into force. This concern is exacerbated by the uncertainty as to which types of waste are subject to the ban. A major weakness of the Basel Convention is its failure to provide clear definitions of hazardous waste. Waste characterized as hazardous and subject to the ban, as well as waste not covered by the Convention (including a large percentage of internationally traded metals and secondary raw materials), were classified into two lists and adopted as Annexes to the Convention in 1998, which made them legally binding. Waste is primarily classified according to its degree of hazard, with its value as a secondary raw material also taken into account. Wastes that have yet to be classified include items of economic importance such as zinc, lead and cop-

per compounds, lithium, and spent catalysts. The demand for lead in developing countries in Southeast Asia is also increasing due to rising demand for batteries in motor vehicles, telecommunications, and computer equipment. As Jonathan Kreuger points out in his book, *International Trade and the Basel Convention*, if the ban proceeds, lead ingots will have to be bought to supplement the output of the domestic recycling industry, which will itself become reliant on domestic supplies or on imports from other non-OECD countries. A 1999 United Nations Conference on Trade and Development (UNCTAD) study into lead-acid batteries found that a Philippine secondary lead smelter that provides 80 percent of the country's refined lead output may need to close if feedstock requirements were to become unavailable.

Of course, any financial benefits that the recycling of hazardous waste may provide should be offset against the costs to human health and to the environment. Most developing countries lack the capacity to handle hazardous waste safely. The UNCTAD study identified thousands of small battery-reconditioning shops in major cities throughout the Philippines that were located in busy streets, often adjacent to fast-food vendors. Workers did not wear protective clothing and

often dismantled batteries with their bare hands. Reconditioners routinely dumped diluted sulfuric acid down street drains or behind their premises. Lead plates were then sold to licensed smelters, and the residues from the smelters, which can have a lead content of over 90 percent, were dumped in a river, in the countryside, or behind the smelters. Greenpeace research in the Philippines into imports of lead-acid batteries has revealed that even legitimate hazardous-waste recycling operations promoted by the Philippine government are in many cases creating residual waste more toxic than the original product.

Mercury waste is also subject to the ban. The danger associated with the reprocessing of mercury wastes is well illustrated by a notorious incident in South Africa. Thor Chemicals, a British company, established one of the world's largest mercury-reprocessing plants in South Africa and began importing mercury wastes in 1986. Over the next eight years, the plant imported thousands of tons of waste from the United States and Europe. In 1988, mercury contamination 1,000 times higher than the World Health Organization's standards was discovered in a river about 50 kilometers from the Thor plant. Subsequent samples of soil at the reprocessing site revealed high levels of mercury contamination. Mercury, which can be absorbed into the body through food, air, or skin contact, is linked to many neurological problems causing symptoms such as trembling, loss of muscle control, headaches, mental confusion, nausea, and hair loss. Long-term exposure can lead to a coma and eventually to death. Workers at the Thor plant claim that they were not warned about the dangers of working with mercury. They continued to work at the plant because unemployment was high and Thor "paid the highest wages." This comment encapsulates the painful dilemma for workers in developing countries—poverty or pol-

lution.

By 1992, two Thor workers had died of mercury poisoning, while many others were permanently disabled. Tests conducted on workers in 1992 revealed that almost 30 percent were at risk of severe mercury poisoning. The families of the deceased workers sued Thor in a British court and were awarded almost US\$2 million. In comparison, compensation for injured workers has been paltry. In 1997, 20 former Thor workers were paid approximately US\$1.3 million in an out-of-court settlement by Thor's head office in Britain. A second class-action lawsuit in 1999 involving 20 workers resulted in an award of approximately US\$400,000 split amongst the plaintiffs—an amount barely sufficient to cover all the medi-

cal expenses. In the interim, the plant site remains an ecological time bomb. Although the plant was shut down in 1994, 1,000 tons of stockpiled waste remains on the site in leaking barrels. A South African Commission of Inquiry has recommended the incineration of the stockpiled wastes at standards far below those in developed countries. Environmental groups have opposed the recommendations of the Commission and have called on companies that originally exported the waste to South Africa to reclaim it.

Out of the Waste Land

A ban on hazardous-waste exports to developing countries is the simplest control measure to implement, as well as being morally justifiable. Countries that benefit from industrialization

Calm before the storm: A protester looks up at the tower of a nuclear power plant before demonstrations against a radioactive-waste transport.

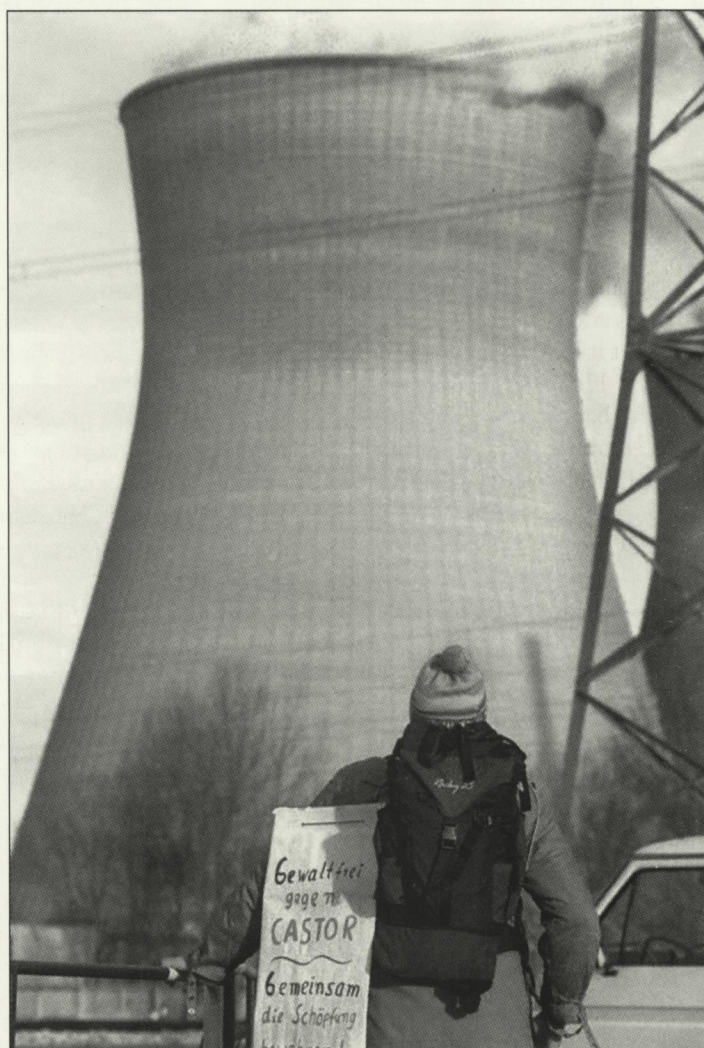


Photo Courtesy AFP/F. Leonhardt

should also bear the full weight of its burdens. This principle is exemplified by the "polluter pays" principle, by which countries that are the primary generators of hazardous waste have the responsibility to deal with the waste at its source rather than exporting it to developing countries. As the case studies illustrate, most developing countries do not have efficient hazardous-waste disposal facilities. They also lack the requisite skill to evaluate the risks posed by hazardous waste or,

denies developing countries the opportunity to import cheap materials. There is an undeniable tension between the justice of banning hazardous waste exports that cause harm to people in a developing country and the realization that doing so may endanger the very livelihood of these people.

Although it is impossible to ignore the ethical problems that arise in imposing a ban on exports of hazardous waste to developing countries, the alternative is an escalating waste col-

vention to provide training for developing countries in managing hazardous waste and to facilitate technology transfers. The underlying rationale is that if developing countries are trained to adopt clean production technology from the outset, they can avoid the mistakes made by developed countries.

Technology transfers, however, may not be a panacea for problems associated with the handling of hazardous waste. Greenpeace has observed

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where unsafe disposals have taken place, to institute monitoring systems and remedial strategies to mitigate widespread contamination and loss of workers' lives and health. Greenpeace believes that the ban has succeeded in preventing a global environmental disaster and claims that hazardous waste exports to developing countries have diminished dramatically since the ban was adopted, notwithstanding the fact that it has not yet entered into force.

However, many problems with the ban have yet to be resolved. For example, not all developing countries are in favor of a total ban. Attempts by developed countries to impose a ban on countries that oppose it not only suggest paternalism, but also infringe on the sovereign right of these countries to consent to the import of hazardous waste. Cash-starved economies and corruption at the government level also leave open the possibility of illegal imports of hazardous wastes. Regardless of the legality of such actions, developing countries may continue to import hazardous waste as long as it remains profitable. A ban on imports of hazardous waste may put thousands of workers in developing countries out of work; it also

nization process that would further degrade the health of impoverished people and stressed environments. This process is well-illustrated by developments in the global shipbreaking industry, which is not regulated by the Basel Convention and its ban amendment. This industry has relocated from the developed world to countries such as India, Bangladesh, and China. Thousands of workers toil under the most arduous conditions without any safety precautions. Apart from the dangers posed by exposure to toxic chemicals, it is estimated that one in four of these workers will contract cancer from the asbestos on board these waste vessels.

A Way Forward

International investment is necessary to assist developing countries in establishing their own industries and to relieve them from their dependency on hazardous waste imports. As developing countries continue to industrialize, they will require additional funding and technology to build environmentally safe recycling and disposal plants for any waste that they generate. Developed countries have a responsibility under the Basel Con-

vention that the challenges faced by developing nations are not just a matter of knowhow and technology; the successful export of the developed world's environmental knowledge would, instead, also require the export of an entire social structure. This claim may be an overstatement. It is more likely that as developing countries improve economically, social and environmental reforms will follow. The requirement that exporters adhere to global environmental standards for admission to international markets may provide the necessary incentive for developing countries to upgrade their environmental performance. Yet to impose these requirements without providing sufficient funding and technology will result in greater poverty and hardship for these countries.

At the same time, it is essential for all responsible developed countries to ratify the ban amendment to ensure its lasting success. It is also in the long-term interest of developing countries to ratify the ban. The developed world must provide more assistance in order to persuade developing countries to give up a hazardous livelihood chosen only out of the fear of having no livelihood at all. **[1]**