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The International Waste Trade and its Policy Implications for Pakistan

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The International Waste Trade and its Policy Implications for Pakistan

Bina Nazar

Abstract

This paper surveys recent trends in the international waste trade, and looks at the national and international policy options southern countries like Pakistan have to employ in order to protect themselves from the harmful effects of toxic waste. The writer suggests that Pakistan should formulate its own system of monitoring and enforcement which should involve both governmental and non-governmental institutions. International environmental treaties and public pressure can also be used effectively against countries that allow the export of hazardous waste.

Introduction

The aim of this paper is twofold. First, it seeks to examine recent trends in international waste trade. Second, it explores the policy options for Pakistan, both domestically and at the international level, to protect the country from the adverse effects of toxic waste.

Production and trade in hazardous waste is occurring on a very large scale. According to the UNEP, "Worldwide some 338 million tonnes of hazardous wastes are produced every year - 275 million in the USA and 25 million in Western Europe" (UNEP 1992:28). Another estimate shows that roughly two million tons of waste are exported yearly from Europe and North America alone (US News & World Report 1994:66). At the world level, Greenpeace International reports that waste brokers have proposed shipping over 160 million tonnes of waste (Greenpeace 1991). The classes of waste being traded typically include sewage sludge, medical waste, liquid wastes, expired pesticides, contaminated soils, radioactive waste and industrial incinerator ash.

The tightening of environmental standards in the industrialised world, and the consequent escalation of disposal costs, makes dumping of waste in southern countries (which have laxer controls) an economically attractive proposition. The cost of burying a tonne of hazardous waste in the US increased from $ 15 in 1980 to $ 250 in 1989. Burying a tonne in African countries, however, currently costs a mere $ 40 (CRS Issue Brief: 1991).

A common justification given for the dumping of waste is that it benefits poor nations by transferring income to them, creating jobs, and raising their standards of living. This is a fallacious argument. Most southern countries provide easy grounds for exploitation by unscrupulous waste traders, since they have neither the technical capability nor the regulatory infrastructure to ensure the safe handling and disposal of toxic waste. Waste dumping is a response not only to a difference in disposal costs, but also and more importantly, to differences in the ability of governments to protect the health and safety of their citizens.

Bleak as this scenario is, poor countries are not without options in the desire to protect themselves. International environmental treaties, especially the Basel Convention, provide legal options through international courts against violations. The Basel Convention on the Control of Transboundary

Movements of Hazardous Wastes was signed in Basel, Switzerland, on March 22, 1989, and includes Pakistan amongst its signatory parties. In the current international climate of sensitivity to environmental concerns, public pressure can be an effective tool against countries that allow the export of hazardous waste.

At the international level, assistance can be obtained from advocacy groups and international NGOs (especially Greenpeace), both to mobilise public opinion and to economise on monitoring costs. Policy advice can be obtained from national and international NGOs and think-tanks, including especially, the International Union for the Conservation of Nature (IUCN), the World Wildlife Fund (WWF), and in Pakistan from the Sustainable Development Policy Institute (SDPI).

The critical need, however, is for countries like Pakistan to build up their own systems of monitoring and enforcement. These include the Pakistan Environment Protection Council (PEPC), a statutory body created in 1983, with its executive arm, the Pakistan Environment Protection Agency (PEPA), and ancillary organisations in all four provinces, the provincial environmental protection agencies. The most prominent environmental NGOs are SDPI, Citizens for a Better Environment (SHEHRI), the Society for Conservation and Protection of Environment (SCOPE) and a few others (NCS 1989: 102).

A related need is to increase environmental awareness in the country. Practical steps include the development of environmental curricula for schools and colleges (e.g., by the Teacher's Resource Centre (TRC)), research seminars, workshops and conferences, more air time on television and radio, and provision of information and assistance to the print media, especially vernacular newspapers, which have not shown much interest in the environment. The Urdu press has a circulation of 2.4 million compared to approximately one million for the English press (Pakistan's report to UNCED 1992:69).

Finally, there is a need for more research on the prevention and abatement of pollution. Environmentally relevant research is being carried out at such institutes as SDPI, the Pakistan Council for Scientific and Industrial Research (PCSIR), and at other government-funded research institutes. However, public funding for research is very limited and needs to be enhanced, especially in the non-government sector.

Trends in International waste Trade

In the late 1980s, a series of dilapidated ships travelled across the world in search of ports where their poisonous cargoes could be dumped. The most infamous of these are the *Khian Sea,* the *Lynx* (and its successors the *Makiri* and the *Zanoobia*), and the *Paive.*

The voyage of the Liberian registered *Khian Sea* came into public view in August 1986 when it unsuccessfully attempted to empty its cargo of 13,476 tonnes of toxic municipal incinerator ash from Philadelphia on a Bahamian island. Prevented from doing so by Bahamian authorities, it began wandering through the Caribbean Sea in search of a dumping spot, and managed on October 26, 1987, to obtain an import permit (ostensibly for fertiliser) from the Haitian government.

However, it had only dumped a part of its cargo, when the Haitian government found out the real intent, cancelled the permit, and ordered the removal of the ash already dumped on the beach. The ship left that night, leaving some 2,000 to 4,500 tonnes of ash (Greenpeace 1991).

The *Khian Sea's* journey ended in late 1988, when it succeeded in unloading its cargo somewhere in the Indian Ocean. During its journey, several countries including the Bahamas, Bermuda, Chile, Costa Rica, Dominican Republic, Haiti, Honduras, Senegal, Sri Lanka and Yugoslavia refused to accept its cargo.

In February 1987, the Maltese-registered vessel, *Lynx*, left the Italian port of Marina di Carrara loaded with 2,200 tonnes of waste collected from various European producers by the north Italian firm, Jelly Wax. When the ship reached its destination, Djibouti, it was discovered that there was no contractual agreement with the local authorities for disposal, and it was forbidden to unload. It then showed up in Puerto Cabella, Venezuela in April 1987, where it dumped 10,876 barrels above ground without protection. After six months, when leaks of waste and toxic gases had harmed the health of residents, the Venezuelan government ordered Jelly Wax to remove the waste.

In October 1987, the barrels were reloaded in the Cypriot-registered *Makiri,* but instead of returning to Italy, the toxic cargo was transported to Tartous, Syria, and dumped there in December 1987. Two months later, however, in February 1988, it was loaded yet again on the *Zanoobia*, and returned to Marina di Carrara, the original starting point. By this time, the waste barrels were seriously corroded, and the crew suffered from skin inflammation and shortness of breath. It took another month before the Italian government agreed to allow the waste to be off-loaded. It was eventually destroyed by incineration. To get an idea of the economic factors involved, it may be noted that Jelly Wax paid the Greek agency, Alsa Shipping, US$ 102,000, and Mohammed Samin's Syrian company US$ 200,000.

There are many other instances. Between August 1987 and May 1988, some 3,884 tonnes of chemical waste generated by Italy, the Netherlands, Norway, the USA and UK, were deposited near the port of Koko, Nigeria. The importer of the waste paid a local Nigerian US$ 500 a month to store the waste on his land. Nigerian authorities were quick to protest, and seized an Italian ship, the *MV Paive.* They then ordered the captain to remove the waste, which was suspected to be radioactive. Italy authorised the state-owned firm, ENI, to take charge, and two ships - the *Karin B* and the *Deep Sea Carrier* - brought the waste back to its original starting point.

West Africa was not the only region to be affected by toxic dumping. In fact, Greenpeace International reports that Asia is the newest destination for toxic waste dumping (Greenpeace 1994). Between 1990 and 1993, more than 5.4 million tonnes of waste, including contaminated metal waste and contaminated plastic and computer waste, were transported to Asia from Australia, Britain, Canada, Germany and the US, often under the guise of "recycling". In 1994, the phased-out, branched and hard type of sulphonic acid which is used to make detergents, was being dumped at low prices in developing countries, by manufacturers in the US, UK, Germany and Australia (*Nation*, 4/8/95). Swedish export statistics report that toxic secondary materials, which are known to be detrimental to human health and the environment, are being shipped from Sweden to Pakistan. In 1993 and 1994, Pakistan imported 1,328 tonnes of scrap and waste metals, and 16 tonnes of plastic waste (*Nation* 1/18/95). Today, Hong Kong is the largest single importer of plastic waste, while South Korea is also a significant waste importer, mostly buying metal scrap. After the tightening of regulations in Taiwan, China has become a new dumping ground for Western waste.

In 1991, the Bangladesh Development Corporation imported 6,300 tonnes of fertiliser from a US chemical company, with a loan from the Asian Development Bank. Upon investigation, it was found to be contaminated with baghouse dust, and contained dangerous levels of cadmium and lead; when applied to the soil, it made it highly toxic, destroying crops and leaving the fields barren.

In November 1993, the South Carolina senior district court fined those responsible for the shipment one million dollars. The US government agreed to take the toxic fertiliser back and dispose of it in its country of origin. But a deadlock arose in the negotiations when it came to the question of the payment of US $800,000 for the shipment of the fertiliser back to the country of origin. Since both the Asian Development Bank and the US government refused to pay, the Bangladesh government agreed to pay the total cost.

In 1994, Pakistani NGOs were successful in preventing the import of a second-hand, mercury-based chlor-alkali plant from Denmark to Pakistan. To save the huge cost of disposing the obsolete equipment in Europe, DS Industries of Denmark sold it to a Pakistani company at a throwaway price. Alerted to the transaction by Greenpeace, Pakistani NGOs, led by SDPI, launched a concerted media campaign to stop the import. The agreement by the importer to install and operate the plant in Pakistan (even for a day) enabled the Danish company to have the equipment declassified from hazardous waste to industrial machinery, and thus to escape the provisions of the Basel Convention.

The matter was taken up by the Pakistani Senate, but initially it declined to interfere after receiving assurances, duly validated by the Provincial Environment Protection Agency, which showed that there would be no liquid effluent from the plant. SDPI requested Greenpeace and the Earth Resource Center (ERC), Exeter, UK, to evaluate the EIA, and they argued that they knew of no process whereby a mercury cell plant could be operated without contaminating the environment. The Senate re-opened the case after receiving this information, but in the meanwhile, public outcry and international pressure forced the importer to agree to replace mercury cell technology with a less harmful, membrane cell technology at additional cost, and to not import any mercury or mercury contaminated equipment. At a policy level, the NGOs involved in the protest called for a complete ban on the transfer of obsolete and hazardous technologies, in order to enable countries to develop environmentally sustainable production processes.

Causes of Waste Trade

Developing countries are an emerging market for waste disposal primarily because of economic reasons. As environmental standards tighten in the industrialised world, it becomes cheaper for producers to get rid of their waste in the loosely monitored southern countries. African countries, in particular, have been known to accept toxic waste at very low prices. Out of many illegal dumping schemes, one is that of a group of European firms who offered the government of Guinea-Bassau US$120 million a year, equivalent to its GNP, to dispose of their industrial waste in landfills (Environment: 5). This is a documented example, there may be several more which are not documented. Burdened by massive foreign debt, many poor countries succumb to economic pressure, and are forced to choose between poverty and poison. The exploitation of African countries, in particular, along with all other loosely monitored southern countries, has also been facilitated by corrupt local government officials and the intentional mislabelling of toxic waste.

Another reason which makes dumping in the southern countries cheaper than in the North is that labour costs are cheaper there. ILO statistics show that labour costs in industrialised countries are between five and 50 times higher than those in developing countries.

For environmental critics, the moral and ethical questions raised in the conversion of poor countries into trash receptacles must receive precedence over narrowly defined economic benefits. Indeed, vulgar economic reasoning has often produced devastating consequences for the environment, both human and

natural. Former World Bank chief economist Lawrence Summers outraged the international community with his blunt comment in a 1992 internal memo which read: "I think the economic logic behind dumping a load of toxic waste in the lowest-wage country is impeccable, and we should face upto that" (The Nation: 257). Summers was in favour of rich nations dumping waste in poor ones, and the migration of dirty industries to the less developed countries, because among other reasons, the poor ones had greater capacity to absorb pollution, shorter human life spans and lower aesthetic concerns! Others who favour waste trade want it to be promoted because they feel that it will benefit the poor nations by providing them with industrial development. Recycling waste, an environmentally sound practice, earns the US five billion dollars annually, while simultaneously assisting the economies of poor nations and raising their standard of living (US News & World Report: 66).

But, given the loose monitoring in the poor nations, that is debatable. For instance, environmental issues are not as politically charged in Africa as in the European Union (EU). Definitions of what wastes are hazardous differ in each poor country. Dangerous substances are passed off as being benign industrial feed stocks. False labelling, legal loopholes, and lack of expertise make developing countries easy targets for aggressive waste traders. Also, there is no proper waste disposal system because poor nations cannot afford the sophisticated technology used in the West to process waste safely. Lastly, developing countries are ill-equipped to manage the ecological and health problems posed by wastes. Therefore, waste dumping in the third world arises not just because of a difference in costs, but because of a difference in enforcement and monitoring abilities.

However, there are signs of hope. In 1987, only three developing countries prohibited waste imports. By 1994, about a hundred nations refused to allow waste to cross their borders and 119 nations pledged to ban toxic exports (US News & World Report: 68). Recognising that waste imports will only reproduce the environmental problems of industrialised countries, the Organisation for African Unity began efforts to defeat toxic terrorism and ban waste imports, declaring "the dumping of nuclear wastes in Africa a crime against Africa and African people" (Black Enterprise: 31).

Waste Mismanagement in Pakistan

Countries around the world face severe problems in getting rid of their waste in an environmentally friendly manner, and Pakistan is no exception. Pakistan, like other waste importing southern countries, does not have access to the expensive technologies used by the industrialised countries to dispose of their waste. The resultant mismanagement of hazardous waste leads inevitably to contamination of air, water and land, and ultimately to a wide range of human health problems including cancer, nervous system disorders and birth defects. Critical areas in domestic incapacity to manage and dispose hazardous waste include the use of pesticides, hospital waste, as well as industrial effluents.

The waters of the Indian sub-continent notoriously receive huge quantities of sewage and domestic and industrial waste. Chemical factories, tanneries, paper and pulp mills, rubber factories, petrochemical and fertiliser complexes and several others, use the rivers as a favourite dumping spot (World of Waste: 132). A recent statistic states that approximately ten million tonnes of toxic waste is dumped in different rivers thereby causing irreparable damage to Pakistan's marine life (*The News* 4/24/94).
The open dumping of pesticides not only damages crops, it also contaminates ground water and poses a threat to the respiratory and nervous systems of those coming into contact with the chemicals. Pesticide dumping is very common, not only by commercial operators, but also by government agencies. For example in January 1994, the agriculture department of the government of Punjab dumped thousands of

litres of rotten and toxic pesticides near Chanan Pir in Bahawalpur district, as a result of which the residents of Chanan Pir suffered skin rashes, headaches and burning of eyes (*The News* 1/15/94).

Although pesticide imports started to arrive in Pakistan through USAID as early as 1956, trade picked up during the 1970s, when the then federal government decided to import large quantities as part of its agricultural development strategy. But the authorities were lax about disposal, and the various dumps which were set up for this purpose became substandard and ineffective (*The News* 1/15/94).

Another waste disposal problem is that of hospital waste. Since Karachi does not have a designated piece of land for dumping hospital waste, it lands up in ordinary garbage dumps, sometimes in the centre of the city. For example, Karachi's Civil Hospital generates around 1,500 kg of highly toxic waste on a daily basis - for which there is no safe disposal system (*The News* 2/17/94). The hospital waste comprises of infected blood, sputum and pus which provides growth culture to germs of tuberculosis, hepatitis, AIDS and could cause various types of metabolic and skin diseases. Rarely are disinfectants used to minimise the effects of the toxic nature of the waste produced by the blood bank, operation theatres and laboratories.

Domestic Institutional Arrangements

Environmental legislation and regulations, monitoring institutions, and technical capabilities form the backbone of a country's waste management system. An important initiative for environmental conservation is Pakistan's National Conservation Strategy (NCS) which was prepared by the Government of Pakistan's Environment and Urban Affairs Division (EUAD) in collaboration with IUCN over a period of three years (1988-91). The three main objectives of the NCS include the conservation of natural resources, sustainable development and improved efficiency in the use and management of resources. In its implementation, the NCS focused on institutional and organisational strengthening and development. SDPI came about because of the NCS. Another direct consequence of the NCS was the creation of the NCS unit in the EUAD and of the Environment Section in the Ministry of Planning and Development. The NCS also subsequently led to the setting up of environment departments in the governments of Balochistan, NWFP and Punjab.

In Pakistan, the Pakistan Environmental Protection Ordinance of 1983 is the principal environmental law for pollution control. It laid the foundation for the establishment of the Pakistan Environment Protection Council, some of whose key functions are to formulate a comprehensive national environmental policy and to ensure the enforcement of the National Environmental Quality Standards (NEQS). It also set up the Pakistan Environment Protection Agency, part of whose responsibilities include the implementation and periodic revision of the NEQS, provision of information to the public, and administration of the rules and regulations of the Ordinance. However, the PEPC met for the first time in April 1993, after a lapse of ten years. In general, the implementation effort is weak and ineffective. A draft law to replace the EPO 1983, and to make it more effective is now on the anvil.

Apart from the federal EPA, provincial EPAs have been appointed in all the four provinces of Pakistan by the provincial governments. These EPAs have also been delegated powers under the Pakistan EPO, 1983. This dual system of administrative control and the flow of powers from two different tiers of the government could create operational difficulties when implementation begins in earnest.

Under the Local Government Ordinance of 1979, the provincial governments can create local governments one of whose primary responsibilities would be the management of water supply, sanitation and waste disposal. To achieve effective pollution control and to be able to develop a proper and safe waste disposal system, the institutional capacity of these bodies needs to be strengthened and built upon. The provincial governments have also established urban development authorities in Pakistan's major cities whose work needs to be coordinated more effectively with that of local and municipal authorities.

Some broad environmental provisions are also contained in the country's omnibus law, the Pakistan Penal Code (PPC), 1860. However, its provisions are extremely general and outdated. For example, crimes relating to public nuisance, fouling spring water and making the atmosphere noxious to health are punishable with a fine of up to 500 rupees, or a three-month term of imprisonment, or both (EUAD: 11). The Factories Act of 1934 regulates the labour force and deals with occupational safety and health matters on factory premises. The issue of toxic or hazardous wastes is also covered under the Pakistan Nuclear Safety and Radiation Protection Ordinance, 1984 (Pakistan's Report to UNCED: 72). There is no specific provision for the control of non-radioactive toxic wastes.

The federal government also supports a network of research institutes that can assist in the conservation effort. However, the quality of these institutes is generally quite poor, mainly because of inadequate funding, lack of autonomy and weak incentives. The Pakistan Council of Scientific and Industrial Research (controlled by the Ministry of Science and Technology) has surveyed hazardous chemical use in industry (NCS: 97). The Pakistan Agricultural Research Council (under the Ministry of Food, Agriculture and Cooperatives) is the leading agency for agriculture, livestock and fisheries development. Again, SDPI is a new, non-government institute that undertakes policy research. It has initiated a major Swiss-funded research effort aimed at the clean-up of dirty industries.

Lastly, worldwide the implementation of conservation is directly related to the viability of environmental non-governmental organisations. NGOs perform an essential role in informing the government about the sense of popular concern for the environment and about the deteriorating state of the earth. They have always done innovative thinking about the management of resources and environmental protection and serve as a source of alternate development approaches which should be facilitated and encouraged.

There are few environmental NGOs in Pakistan, and most of these do not have a strong advocacy capacity (NCS: 102). However, several grassroot NGOs engaged in community or rural development have taken up environmental causes. A comprehensive listing is not relevant here, but a sample of grassroot NGOs and national groups that became known to the NCS team during its implementation are given below. Selected NGOs doing environmental work at the national and regional levels include:

- Citizens for a Better Environment (SHEHRI), Karachi
- Energy and Environment Society of Pakistan, Lahore
- Environment Conservation Forum, Lahore
- Environment Protection Foundation of Pakistan, Peshawar
- Environmental Protection Society of Pakistan, Lahore
- Friends of Earth and Trees, Lahore
- Margallah Hills Society, Islamabad
- Pakistan Forum of Environmental Journalists, Lahore
- Save Environment, Multan
- Society for Conservation and Protection of Environment, Karachi
- World Institute of Ecology and Cancer, Lahore

Some grassroots groups are as follows:

- Anjuman-i-Ittehad Naujawanan-e-Bandat, Ziarat
- Anjuman-i-Ittehad-e-Nawa Killi, Quetta, Baanhn Beli, Karachi
- The Basic Urban Services for Katchi Abadis, Karachi
- Community Health Development Programme, Gujrat
- The Gunyar Youth Welfare Organization, Malakand
- Karachi Administrative Women's Welfare Society, Karachi
- Rural Youth Welfare Organisation, Sialkot
- Shewa Educated Students Welfare Association, Shewa, Swabi
- Sindh Rural Workers' Co-operative, Karachi
- Urban Community Development Project, Mardan
- Youth Work Unit Head Marala, Sialkot
  (NCS: 102)

Global Framework

As the movement of pollutants across borders increases so does the need for the active co-operation and participation of the international community. Principle 14 of the Rio Declaration states that "states should effectively co-operate to prevent the relocation or transfer to other states of any activities and substances that cause severe environmental degradation or are found to be harmful to human health".

Chapter 20 of Agenda 21 aims at preventing illegal international traffic in hazardous wastes. Banning international toxic trade schemes (as under the Basel Convention) will provide an impetus for all countries to develop environmentally sustainable production processes. Effective prevention can only come about through effective monitoring and the imposition and enforcement of appropriate penalties. Some of the guidelines laid out in Agenda 21 include that:

1. government should adopt, where necessary, and implement legislation to prevent illegal trade in hazardous wastes;
2. they should develop national enforcement programmes to monitor compliance with such legislation and to deter violations through appropriate penalties;
3. governments should develop an information network and alert system to detect illegal traffic in hazardous wastes;
4. they should co-operate in the exchange of information on illegal transboundary movements of hazardous waste;
5. and that countries and international organisations, as appropriate, should co-operate to strengthen the institutional and regulatory capacities, particularly of developing countries, to prevent such trade. (Agenda 21: 460).

In 1989, sixty-eight countries from Africa, the Caribbean and the Pacific (collectively known as the ACP countries), joined with EEC officials in prohibiting international waste trade. This convention, known as the Lome IV Convention, bans all radioactive and hazardous waste shipments from the EEC to the ACP countries. ACP countries also decided to ban waste imports from any non-EEC country (Greenpeace: 1991).

On January 29, 1991, ministers from African States met in Bamako, Mali, and adopted the "Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa". All African countries, except for South Africa, can sign it. This treaty was convened under the auspices of the Organisation for African Unity. When in force, it will close the continent to all forms of hazardous waste (Greenpeace 1991).

There is nothing in Pakistan's legal system as yet preventing the import of hazardous substances. The dumping of wastes and pollution into the ocean by ships particularly needs to be controlled. In November 1994, the Senate Committee on Environment and Urban Affairs was working on a proposal for the enactment of a law by the parliament which would ban the import of toxic or hazardous elements (*Dawn* 11/23/94). Furthermore, the draft of the Pakistan Environmental Protection Act, 1995, states that, "Subject to the provisions of this Act, no person shall generate, consign, transport, treat, dispose of, store, handle or import any hazardous substance except under a license issued by the Federal Agency and in such manner as may be prescribed" (Draft: 12).

So far 52 countries, including Pakistan, have ratified the Basel Convention. Other developing countries who are parties to the convention include Tanzania, Nigeria, Bangladesh, India, the Philippines, Indonesia and Sri Lanka. The convention entered into force on May 5, 1992, after being ratified by the requisite 20 states. The Basel Convention has provided the world community the opportunity to implement a global legal instrument dealing with the control of transboundary movements of hazardous wastes and their disposal. When the industrialised countries have no place to dump their deadly wastes, they will be forced to replace waste production with clean production.

Pakistan, as a signatory, has to abide by the rules laid out in the convention. Some of the important features are:

1. it requires the generation of hazardous wastes to be reduced to a minimum;
2. it demands the establishment of adequate disposal facilities for environmentally sound management of hazardous wastes;
3. it asks for steps to be taken to prevent pollution due to hazardous wastes;
4. requires appropriate legal, administrative and other measures to implement and enforce the provisions of the convention;
5. and it prohibits the parties of the convention to export or import hazardous or other wastes to and from non-parties.

Source: EUAD

Article 11 of the Convention, however, allows the parties to enter into bilateral, multi-lateral and regional agreements with parties and non-parties in which the prohibitions of transboundary movements can be lifted, provided that such arrangements do not derogate from the environmentally sound management of hazardous and other wastes as required by this convention.

In pursuance of Article 5 of the Convention, the government has to designate one focal point and one or more competent authorities. As part of Pakistan's waste management strategy, the government of Pakistan has appointed the Environment and Urban Affairs Division as the focal point and the competent authorities are as follows:

1. The Ministry of Commerce to regulate imports and exports.
2. The Central Board of Revenue to regulate entry and shipment into Pakistan.
3. The Ministry of Industries to monitor industries using hazardous wastes and its eventual safe disposal.

4. The Ministry of Communications to prevent marine pollution and hazardous waste dumping in the Exclusive Economic Zone (EEZ) of Pakistan.
5. The four provincial EPAs (Punjab, Sindh, NWFP, Balochistan) to ensure that hazardous wastes are used in the bona fide industry, and that they are disposed of in an environmentally friendly manner.

Source: EUAD

There are, however, certain loopholes and weaknesses in the Basel Convention which need to be mentioned at this point. First, the Basel Convention does not consider the technical and financial capabilities and capacities of developing countries. For instance, there is a lack of co-ordination in the government agencies mentioned above. The monitoring system is inefficient and there is a lack of technical capabilities since they do not have the requisite knowledge and expertise. Second, the Convention does not consider the loopholes in the legal systems of developing countries and the existence of corruption. For instance, the revenue department is mainly concerned with revenue generation, more than whether the substance being imported is environmentally hazardous or not. Third, the Convention has no specific provision to stop developed countries from exporting obsolete and dirty technologies to the developing countries. The Convention should have stringent provisions for the exporting countries so that they do not export in the first place. The provisions in the Convention should make sure that the importing countries can handle waste properly.

Policy Implications

Exporting hazardous waste not only enables governments to avoid disposal costs, but to avoid the only solution to toxic pollution: the implementation of non-polluting industry and ecologically compatible products. Efforts should be directed not towards searching for new places to dump waste, but rather towards ensuring that waste is never produced. Waste minimisation and the development of clean production techniques must make their way to the top of the environmental agenda.

The transition to clean production in Pakistan takes two forms. First, the choice of efficient and less polluting technologies, and second, the modernisation and replacement of machinery in existing plants (Country Report: 22). The former can be achieved by instructing all banks and development financial institutions to require each sponsor of an industrial project to prepare an Environmental Impact Statement, and to ensure that the project will meet the requirements of the National Environmental Quality Standards. But along with that, the technical capabilities of institutions dealing with the EIS should be enhanced to make them competent for effective monitoring. For the latter, the industry should be allowed to sue existing credit lines from banks and financial institutions as part of the industrial investment policy of the government of Pakistan.

Furthermore, the government should promote cleaner production through the establishment of centres providing research, information and training on environmentally sound technologies. The government should enhance knowledge and information on the economics of prevention and the management of hazardous wastes, as well as impact in relation to employment and environmental benefits. This means support for an effective national research programme on industrial waste minimisation.

There are also constraints of financial resources, trained staff and technical know-how. To overcome these constraints, the government should try to strengthen the capacities of research and training institutions, and interdisciplinary groups working on risk assessment, risk management and risk reduction with respect to hazardous wastes. Research and analysis on the health effects of hazardous wastes and

research aimed at the needs of small and medium-sized industries needs to be encouraged. The government should strengthen relevant academic/research institutions to enable them to carry out training activities in the environmentally sound management of hazardous wastes. Institutes such as PCSIR, for example, should investigate indigenous alternatives, so that the need to import does not even arise.

In Pakistan, institutional strengthening involves both the government sector and NGOs. There is a need to set up environmental cells in different government chambers to be staffed by qualified people. Where these already exist, their capacity should be enhanced by training and education and human resource development. As part of its information dissemination strategy, the government, with the help of environmental NGOs, should collaborate in providing educational material on hazardous wastes and their effects for use in schools, by women's groups and by the general public.

The government of Pakistan should place a complete ban on the import of any hazardous substances which are known to contaminate the environment. The quality of fisheries in coastal areas is particularly endangered, because that is most likely where such wastes are likely to be dumped in Pakistan (NCS: 15). It should develop national enforcement programmes to monitor compliance with this law banning such imports. It should develop an information network to assist in detecting illegal traffic. Local communities and others could help out in the operation of such a network, as well as the general public who, if they are made more environment conscious, could use public pressure as a tool to improve the monitoring system.

The Basel Convention specifies rules which deal with illegal traffic and which could serve as useful guidelines for Pakistan.

1. If illegal traffic occurs as a result of the conduct of the exporter or generator of hazardous waste, then the state of export should ensure that the waste is taken back by the exporter or otherwise disposed of in accordance with the provisions of the Convention within 30 days from the time when the state of export was informed of this illegal traffic.
2. If it occurs as a result of the conduct of the importer or disposer, the state of import should ensure that the wastes are disposed of in an environmentally friendly manner within 30 days from when the state of import was notified about the illegal traffic.

The illegal import and export of hazardous wastes is deemed as criminal activity by the parties to the Basel Convention. If wastes are too dangerous to dump in the highly industrialised countries, so too are they to dump in the less developed countries which do not have the environmental monitoring, enforcement, emergency response and health care systems of the North. Pakistan must beware of these environmental double standards and must implement protective action without any further delay. The government should give special attention to those who are known to have conducted illegal traffic and to those hazardous wastes that are particularly susceptible to such traffic. The government's trade policy should specify those hazardous wastes whose import should be completely banned. Along with the Basel Convention, it should adopt the rules laid out in other international conventions relating in general to hazardous wastes. Specific laws should be framed under the provisions of the Pakistan Environment Protection Act about trade in hazardous wastes and their safe disposal.

A system of penalties linked with incentives should be set up by the government. Most of Pakistan's industries are polluting industries and do not have the capacity to treat waste. A strong regime of penalties is necessary to show that the government is committed to minimising adverse environmental impacts of the industries. Incentives can be in the form of tax reductions provided to the industrial units that achieve compliance. The government can give a tax holiday to environmentally friendly

technologies for a specific period of time. The import of non-polluting equipment to treat industrial effluent should be given tax concessions.

Conclusion

The industrialised countries of the North produce more waste than they are able to dispose of . Strict environmental legislation, limited landfill space and higher costs of labour in the North, are some of the factors responsible for their dumping hazardous wastes in the less developed world. Problems then arise because the poor nations have no way of safely disposing these toxic wastes, and as a result human health and the aerial and aquatic environment are highly endangered.

African and Asian countries (and increasingly the South Asian subcontinent) are favourite targets. Poor nations are easily exploited because environmental monitoring is lax, health regulations are not strict enough, corruption and bribery practices occur on a large scale, false labelling and legal loopholes exist and there is a lack of expertise.

In the wake of huge toxic disasters (such as those in Koko, Nigeria, and the dumping of Philadelphia's incinerator ash on a Haitian beach), steps have been taken by international organisations such as the United Nations, the EEC and the OAU, to protect countries from the perils arising from such indiscriminate dumping. Some of the key international agreements on waste trade include the Basel Convention, the Bamako Convention and the Lome IV Convention.

All developing countries which import waste should be encouraged to ban such imports in the wider interests of the global community. If all countries refuse to accept these wastes, the producers will have no place to dump them and they will be forced to replace waste production with clean production. Waste minimisation and clean production are being more focused on today, because if countries do not generate excess waste, the problem of disposing it would not arise at all.

The first protective measure countries like Pakistan need to implement, is to increase the level of environmental awareness about pollution and its health effects in the country. Research groups, NGOs and international organisations can assist the government in achieving this end. In Pakistan, some of the key international players working for environmental protection are IUCN-Pakistan, WWF and Greenpeace International.

The second important objective which needs to be implemented is institutional strengthening. In Pakistan, important institutions include the four provincial environmental protection agencies, local governments and environmental NGOs. Research and training programmes and human resource development in this field need to be promoted by the government. Technical guidelines on the environmentally sound management of hazardous wastes need to be adopted.

Third, the government should set up a monitoring system for the transboundary movement of hazardous wastes and violators should be legally prosecuted. Apart from the Pakistan Penal Code, and to some extent the Factories Act, there is no law dealing specifically with the issue of hazardous wastes and the government must introduce further legislation without delay.

Fourth, since this is a global problem and not just a regionally specific one, international co-operation is a must. Countries can help each other through information dissemination and by establishing

internationally agreed upon criteria. They should all try and ratify conventions such as the Basel Convention. Illegal traffic in hazardous wastes should be closely monitored and any violators should be appropriately penalised; for instance, the matter could be taken to the International Court of Justice. Through effective policy and the implementation of the above recommendations, the world will surely succeed in protecting itself from the adverse effects of toxic and hazardous wastes.

References

Ashraf, Aamir. "Highly toxic clinical waste threatens with spread of infectious diseases," *The News* (Rawalpindi) 17 February, 1994.

Chohan, Soniya. "Dumping toxic waste," *The Nation* (Islamabad) 8 April, 1994.

Gain, Philip. "Toxic US fertiliser taints fields in Bangladesh," *Dawn* (Karachi) 27 February, 1995.

Henwood, Doug. "Toxic Banking," *The Nation*, 2 March, 1992.

Jaidi, Javed. "Ravi Alkali abandons toxic chlorine project," *The News* (Rawalpindi) 23 November, 1994.

Jamal, Nasir. "EPA okays import to toxic plant," *Dawn* (Karachi) 4 November, 1994.

Tohid, Owais. "Punjab Agriculture Department Dumping Toxic Waste Near Bahawalpur," *The News* (Rawalpindi) 1 April, 1994.

Satchell, Michael J. "Deadly trade in toxics," *U.S. News and World Report*, (March 1994)

Elahi, Mahboob. 1995 *Country Report on Industrial Audit for Waste Minimisation, Pakistan*

Gourlay, K. A., 1992. *World of Waste: Dilemmas of Industrial Development*

Pearce, Hannah, 1993. "Dump and run." *New Statesman & Society*, (February).

Ruffins, Paul, 1988. "Toxic Terrorism Invades Third World Nations." *Black Enterprise,*(November 1988).

The Economist, 16 July 1988, "Be my cesspit."

The Economist, 29 February 1992, "Paying for the Past."

"SDPI for ban on toxic waste to poor states." *The News* (Rawalpindi), 1 April 1994.

"Greenpeace to block shipment of toxic technology to Pakistan." *The News* (Rawalpindi), 2 November 1994.

"Law soon to ban import of toxic elements." *Dawn* (Karachi), 23 November 1994.

"Sweden exported toxic waste to Pakistan." *The Nation* (Islamabad), 18 January 1995.

"Tanneries spew toxic waste into sea." *Dawn* (Karachi), 3 February 1995.

"Toxic industrial waste." *Dawn* (Karachi), 13 February 1994.

"Toxic waste creates serious problems." *Dawn* (Karachi), 5 April 1994.

"Ten million tonnes of toxic wastes being dumped in rivers." *The News* (Rawalpindi), 24 April 1994.

Robinson, Nicholas A., 1993. "Environmentally Sound Management of Hazardous Wastes Including Prevention of Illegal International Traffic in Hazardous Wastes." *Agenda 21 & The UNCED Proceedings*.

Uva, M.D. and Bloom, J. 1989. "Exporting Pollution: The International Waste Trade," *Environment* .

EPA, 1995. "Draft, Pakistan Environment Protection Act."

U.S. Environmental Protection Agency, 1990. "Paying for Progress: Perspectives on Financing Environmental Protection."

Greenpeace 1994. "Inventory of Toxic Technologies."

Greenpeace 1991. "International Waste Trade."

Pakistan National Report to UNCED , 1992.

UNEP, 1994. "Progress within the UN system, and other intergovernmental organisations in implementing Chapter 20 of Agenda 21: Environmentally Sound Management of Hazardous Wastes Including the Prevention of Illegal Traffic in Hazardous Wastes."

UNEP, 1992. "Two Decades of Achievement and Challenge."

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