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THE TRANSBOUNDARY MOVEMENT OF HAZARDOUS AND NUCLEARWASTES IN THE WIDER CARIBBEAN REGION

A CALL FOR A LEGAL INSTRUMENT WITHIN THE CARTAGENA CONVENTION

UNEP

CARIBBEAN ENVIRONMENT PROGRAMME

Caribbean Environment Programme

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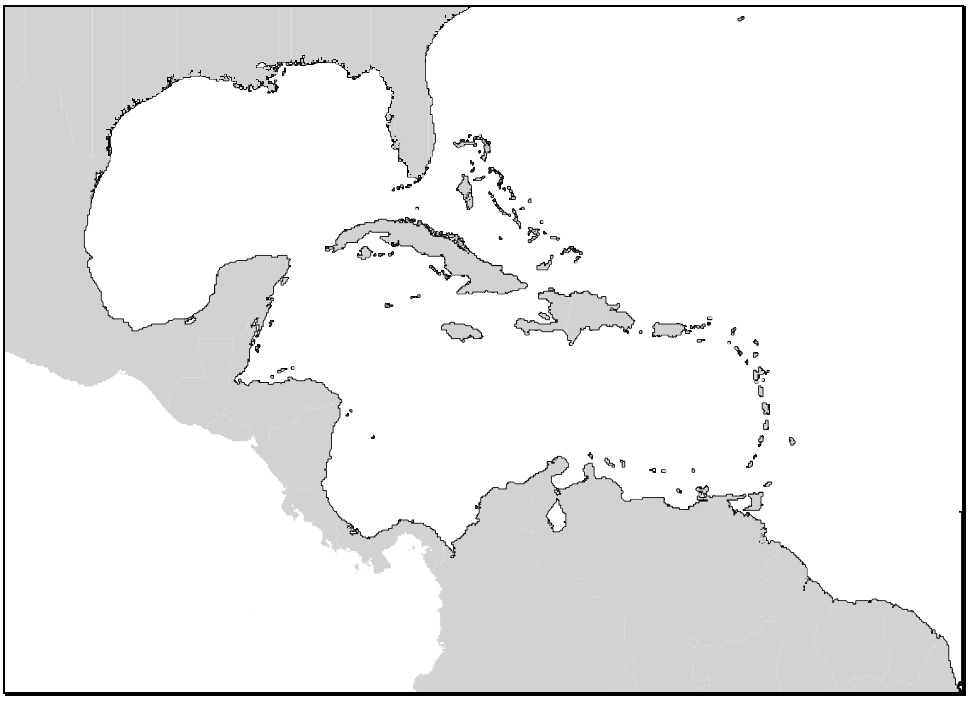
The Transboundary Movement Of Hazardous And Nuclear Wastes in the Wider Caribbean Region - A Call for a Legal Instrument within the Cartagena Convention



Prepared by Greenpeace International

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SOURCE AND SCOPE OF THE WASTE TRADE PROBLEM

1. Toxic waste follows the path of least resistance. The hazardous by-products of industrialization tend to move toward those areas with the least political and economic power to refuse them. The economic "gradient" defined by the contrast in disposal costs in different locations causes wastes to move. This "gradient" is determined by many factors including labour costs, land value, etc. But of crucial significance are the costs relative to the differential in comparative environmental protection legislation, and liability obligations.

2. In industrialized countries, poorer neighbourhoods or rural areas have most often been chosen as sites for toxic waste landfills or incinerators. Residents have been induced to accept hazardous wastes with the promise of revenue, jobs or electricity.

3. In recent years the public in Western industrialized countries, have begun to rebel against having their land, air and water poisoned by toxic wastes. This rising public furore has forced industrialized countries to adopt increasingly strict and costly regulations for waste disposal. The legislation has taken the form of absolute bans or phase-outs of certain types of disposal. Examples include; ocean incineration in the North Sea or landfilling of certain USA wastes, more requirements for environmental protection resulting in higher costs, or strict liability upon generators of wastes for future damages from disposal.

4. In addition, new, more encompassing definitions of hazardous waste are increasingly being implemented into legislation which require more wastes to be managed. By the United States Environmental Protection Agency's (EPA) own admission, there is a lack of hazardous waste treatment capacity in that goliath waste producing country. Despite this, the EPA has banned the landfilling of an increasing list of wastes (83 waste streams as of March 1989). This is also the case in the European Community. Recent decisions by the Oslo Commission, Barcelona Convention and the North Sea Ministers Conference have all but banned the use of ocean incineration. In addition, according to the Community Strategy for Waste Management, Brussels, 18 September 1989, the landfilling of many waste streams will be phased out within the Community.

5. This lack of "treatment capacity" combined with legal pressure to "properly dispose" of wastes has created immense pressures to export. And the pattern of waste dumping within industrialized countries is repeating itself on a global scale, as waste generators seek to export wastes to those areas most remote and poor.

6. The past several years has seen the spectacle of numerous waste brokers sending ships around the globe in quest of new dumping grounds for their hazardous cargoes. Over 78 less industrialized nations have been asked to accept massive quantities of industrial waste from the U.S. and Europe. The potential recipients of this waste are essentially asked to choose between short term economic gains and the long term health of generations of their population. Between 1986 and 1988, over three million tons of wastes were exported from the OECD (Organization for Economic Co-operation and Development) countries to non-OECD countries.

WASTE TRADE IN THE WIDER CARIBBEAN REGION

7. Bordered to the north by the world's largest hazardous waste producing nation, the United States, the Wider Caribbean Region lies on the front lines of the international trade in toxic wastes. Almost every country in the Caribbean region has been targeted as a waste dumpsite by waste brokers operating from the United States, and these nations are under increasing pressure to accept the wastes. In fact, during 1990 alone, information became available on at least 21 deals to import a wide range of waste into the Wider Caribbean countries. Unfortunately, it appears that the numbers of offers will continue to increase.

RECENT TRENDS

8. Wastes are often presented by dealers as useful raw materials for landfills, recycling, fuel substitution, or housing and road construction. In addition to their presentation as "development projects" that will generate everything from jobs to electricity, these deals are often accompanied by offers of monetary commissions, technical assistance and infrastructural support. Waste dealers always try to assure potential buyers that the waste is totally harmless, or that it can be safely handled. Regarding the deals offered in the region in 1990, it is possible to detect three major trends.

Municipal garbage & incinerator ash

9. The first trend is a significant increase in the number of deals being offered to Caribbean countries to accept garbage or ash generated by municipal garbage incinerators from major U.S. cities. While governments are assured by waste brokers that municipal incinerator ash is not hazardous, there are ample laboratory studies of the ash available to document dangerous levels of heavy metals, including lead, chromium, mercury, cadmium, copper and zinc contained in these ashes. In addition, the ashes contain consistent amounts of dioxins, a complex group of extremely toxic and bioaccumulating chemicals, shown to cause cancers, birth defects and other reproductive problems, and damage the immune system at levels as low as one part per quadrillion (1 part per 1,000,000,000,000,000).

10. Given that U.S. cities are facing rapidly increasing quantities of garbage, ever-rising local disposal costs and liability risks for environment damage, they may be increasingly tempted to offer their waste or incinerator ash "free-of-charge," presenting it as useful raw material. In northern eastern U.S. cities, average disposal fees for incinerator ash are $70 to $90 per ton, plus transportation and other transfer costs; for particularly hazardous ash the fee can reach $140 per ton.

European chemical wastes

11. The second trend is that a number of European chemical industries are trying to export hazardous wastes to developing countries. Again, this is to escape the high cost of local disposal which in the United States now can cost up to $2,400 per ton for hazardous waste incineration, as well as the serious environmental and health risks inherent in the handling and disposal of these substances. This trend is expected to increase after 1992 when new

definitions for waste will at least double the amount of waste requiring special management.

12. These chemical wastes can be especially hazardous, in particular the halogenated solvents, since they generate high levels of dioxins and furans, when burnt in disposal operations, or invariably escape into the groundwater when disposed of in landfills.

13. As persistent, bioaccumulating and extremely toxic substances, dioxins and furans represent some of the most hazardous contaminants known; they can have long-term negative impacts on virtually every ecosystem, make it unsafe to consume fish and seafood from aquatic systems near dioxin-furan emitting installations and provoke significant, long-term human health problems.

Lead Contaminated Waste

14. The third trend is that, as the United States regulations have tightened and made it increasingly difficult to dispose of lead slag and other lead-contaminated wastes in this country, there has been a greater activity recently among waste traders to offer lead wastes. These wastes are generally presented as useful raw material for recycling, construction or road-building purposes. In fact, they are highly toxic. Small doses of lead can adversely affect many human organs and cause behavioural and learning problems in children; prolonged excessive exposure can cause damage to the peripheral and central nervous systems.

GREENPEACE INVENTORY OF WASTE TRADE IN THE CARIBBEAN

15. The following is an inventory of some of the proposals that have threatened to turn the Caribbean region into a dumping ground for hazardous wastes from Europe and North America. All proposals will be listed by Date, Type of Waste, Source Countries, Exporting party, Pretext for export (see Dumping By Another Name: The Myth of Recycling, below), and Current Status.

16. Greenpeace is committed to uncovering, exposing and ending the international waste trade. This inventory, which is a continuing work, is an attempt to fulfil this commitment. Greenpeace International Waste Trade Campaigners act as reporters, not only of facts proven in a court of law, but of accounts and stories that have appeared in journalistic reportage, government memos and correspondence and conversations with waste traders and officials. In each case, we cite the primary source of the information. Because Greenpeace is not always the primary source of the information, we cannot be liable for any inaccuracies committed by the primary source.

Antigua and Barbuda

Date:	June 1988
Type of Waste:	Garbage
Source:	U.S.A.
Exporter:	Unnamed
Pretext/Fate:	Incineration
Status:	Rejected

The government of Antigua and Barbuda rejected a proposal by an unnamed firm to build an incinerator for U.S. garbage. The proposed incinerator would have burned over one million tons of U.S. garbage per year.

Bahamas

Date:	1980
Type of Waste:	Paint, pesticides, metal plating wastes
Source:	U.S.A.
Exporter:	Ashvins
Pretext/Fate:	Dumping
Status:	Probably rejected

In 1980, a U.S. firm called Ashvins S.A. tried to ship wastes from U.S. paint manufacturers, pesticide companies and metal- plating firms to the Bahamas.

Date:	August 1986
Type of Waste:	Municipal incinerator ash
Source:	U.S.A.
Exporter:	City of Philadelphia
Pretext/Fate:	Fertilizer
Status:	Rejected in Bahamas, dumped in Haiti and at sea.

The Bahamas was the first country to turn back the KHIAN SEA, which visited several islands in the Caribbean in 1986 and 1987, loaded with incinerator ash from Philadelphia. (See Haiti)

Date:	May 1987
Type of Waste:	Garbage
Source:	U.S.A.
Exporter:	City of Islip, New York
Pretext/Fate:	Methane recovery
Status:	Rejected, returned to New York

In early 1987, the so called New York "garbage barge" tried to unload 3,186 tons of solid waste from Islip, New York, on Little San Salvador. (See Belize)

Date:	1989
Type of Waste:	Liquid hazardous waste
Source:	U.S.A.
Exporter:	Finn Moller
Pretext/Fate:	Cement kiln fuel
Status:	Rejected

In 1989, the Bahamian government gave its preliminary approval for burning 88,000 tons per year of U.S. hazardous wastes in Freeport. This approval was quickly retracted following strong public opposition and a reminder to the Bahamian government that they were parties to the then negotiated (now signed) waste trade ban enacted in the Lomé IV Convention.

Finn Moller was instrumental in attempting a similar scheme in Belize and Guyana in 1987 and 1988. (See Guyana)

Belize

Date:	March, April 1987
Type of Waste:	Garbage
Source:	U.S.A.
Exporter:	City of Islip, New York
Pretext/Fate:	Methane recovery
Status:	Rejected, returned to New York

In April 1987, the government of Belize ordered its security forces to prevent the so called "garbage barge" from unloading its cargo of 3 186 tons of solid waste from Islip, New York. The vessel had previously attempted to unload its wastes in the states of North Carolina, Alabama, Florida, Louisiana, Mississippi and Texas, and in the nations of Mexico and the Bahamas. The operators of the vessel tried to arrange a deal with Belizean investors to purchase the cargo for use as material for a "methane recovery facility". This led a government spokesperson for Belize to say, "the idea of buying that garbage is laughable."

Date:	1987
Exporter:	Finn Moller
Type of Waste:	Industrial waste
Source:	U.S.A.
Pretext/Fate:	Incinerator
Status:	Rejected

The Belizean government rejected a proposal by made by Pott Industries and Teixeira Farms to construct an incinerator for the burning of imported U.S. wastes. (see Guyana)

Date: 1987
Type of waste: Sewage sludge
Source: U.S.A.
Exporter: Applied Recovery Technology
Pretext/Fate: Dumping
Status: Rejected

Belize rejected a scheme to import sewage sludge from several U.S. cities in 1987. (see Turks and Caicos)

Colombia

Date: January 1990
Type of Waste: Municipal incinerator ash
Source: U.S.A.
Exporter: International Energy Resources
Pretext/Fate: Roadbuilding material
Status: Unknown

San Andres Island of Colombia was targeted as one of the dumpsites for incinerator ash by International Energy Resources. (See Guatemala)

Costa Rica

Date: 1985
Type of Waste: Toxic waste gases
Source: U.S.A.
Exporter: TRW Corp.
Pretext/Fate: Transfer to subsidiary
Status: Rejected

In 1985, a vessel arrived off the Costa Rican coast carrying 197 cylinders filled with toxic waste gases, generated by TRW Corporation of California. Costa Rican authorities refused to allow the ship to unload the toxic gases at the port of Caldera, and demanded that the ship return to California.

Date: July 1987
Type of Waste: "Paper waste"
Source: U.S.A.
Exporter: Hancock Industries
Pretext/Fate: Recycling, land recovery
Status: Unclear

In 1987, a U.S. firm named Hancock Industries tried to convince the government of Costa Rica to construct a paper recycling plant utilizing "paper waste and related products brought from

cities on the east coast of the U.S. The waste which is not recyclable would be used as sanitary landfill in the recovery of areas subject to flooding on the outskirts of the port of Limon.

Date: 1987
Type of Waste: Municipal incinerator ash
Source: U.S.A.
Exporter: City of Philadelphia
Pretext/Fate: Land recovery
Status: Rejected

The operators of the KHIAN SEA, loaded with incinerator ash, approached Costa Rica with a proposal to use the toxic ash as "landfill to rehabilitate and recover lands around the port of Limon." (See Haiti)

Date: October 1990
Type of Waste: Industrial waste
Source: Europe
Exporter: World Wide Energy Inc.
Pretext/Fate: Electricity generation
Status: Unknown

World Wide Energy Inc. proposed to install a rotary kiln and energy generating facilities, using mostly European industrial waste as fuel substitute.

Dominican Republic

Date: 1980
Type of Waste: PCB waste
Source: U.S.A.
Exporter: Arbuckle Machinery
Pretext/Fate: Dumping
Status: Actual

According to one report, a U.S. firm named Arbuckle Machinery shipped PCB wastes to the Dominican Republic between January and June 1980.

Date: 1983
Type of Waste: Chemical wastes
Source: U.S.A.
Exporter: Atlantic Forest Products
Pretext/Fate: Topsoil
Status: Rejected

In 1983, the government of the Dominican Republic approved a scheme by a company called Atlantic Forest Products which would have dumped chemical wastes from U.S. cities in the barren Oviedo region. Public opposition forced the government to withdraw its approval. The

government subsequently implemented one of the world's first national waste import bans in 1983. Yet, this law has not deterred waste traders from continuing their attempts.

Date:	1987
Type of Waste:	Municipal incinerator ash
Source:	U.S.A.
Exporter:	City of Philadelphia
Pretext/Fate:	Fertilizer
Status:	Rejected, later dumped in Haiti, and probably at sea

The Dominican Republic rejected KHIAN SEA dump attempts. (See Haiti)

Date:	1988
Type of Waste:	Liquid toxic wastes
Source:	Northern Europe
Exporter:	World Technology
Pretext/Fate:	Water purification (dilution)
Status:	Unclear

Northern European liquid toxic waste was to be shipped by the Italian firm, World Technology Co. to the Dominican Republic where it would have been dissolved into a 90% water solution. This material would then have been dumped down the drain. The Dominican Company receiving the waste was formed with the pretext of building a "water purification" plant for use by hospitals and clinics.

Date:	February 1988
Type of Waste:	Garbage
Source:	U.S.A.
Exporter:	Franklin Energy Resources
Pretext/Fate:	Electricity generation
Status:	Probably rejected

In February 1988 promoters of a "recycling...plant generating energy based on cardboard refuse," travelled to the Dominican Republic on a promotion tour. However this plant was believed to be designed to take household waste from the U.S. A public outcry followed the announcement.

Date:	1989
Type of Waste:	Antibiotic production waste
Source:	Puerto Rico
Exporter:	Unspecified pharmaceutical company
Pretext/Fate:	Food for cattle
Status:	Actual

An unspecified pharmaceutical company in Puerto Rico has been shipping wastes from the manufacture of antibiotics to the Dominican Republic. The company mixes the wastes with corn

and fishmeal and ships it to a firm in the Dominican Republic where it is "given" to ranchers as "food for cattle."

Date:	1988
Type of Waste:	Garbage
Source:	U.S.A.
Exporter:	W.T. Associated
Pretext/Fate:	Electricity generation
Status:	Rejected

W. T. Associated proposed to "process" garbage imported from the U.S.A. and dump it in Santiago de los Caballeros. They stated that it would then be converted, via methane burning,to electrical power. The city council originally accepted the offer to import 3,650,000 tons of U.S. garbage each year in exchange for $1.33 per ton. A huge national outcry put a stop to the plan as the President of the Dominican Republic affirmed that no more such offers would be approved.

Date:	1988
Type of Waste:	Industrial waste
Source:	U.S.A.
Exporter:	Global Dynamics Ltd.
Pretext/Fate:	Electricity generation
Status:	Rejected

The government of the Dominican Republic rejected a proposal from the New York City firm, Global Dynamics Ltd., to ship industrial wastes for the production of electricity.

Date:	January 1990
Type of Waste:	Municipal incinerator ash
Source:	U.S.A.
Exporter:	International Energy Resources
Pretext/Fate:	Roadbuilding material
Status:	Unknown

The Dominican Republic was also targeted by IER as part of their regional roadbuilding scheme. (See Guatemala)

Date:	1990
Type of waste:	Treated wood products
Source:	U.S.A.
Exporter:	Environmental Services Group
Pretext/Fate:	Incineration
Status:	Unknown

Environmental Services Group, a New York City-based firm, is negotiating with the government of the Dominican Republic for permission to build an incinerator for treated wood and other wastes to be imported from the U.S.A.

Guatemala

Date:	1987
Type of Waste:	Sewage sludge
Source:	U.S.A.
Exporter:	Applied Recovery Technologies
Pretext/Fate:	Fertilizer
Status:	Rejected

In 1987, the Guatemalan government initially approved, and then rejected, the import of 125,000 tons of sewage sludge each year from Los Angeles, California. Los Angeles' sewage sludge contains toxic chemicals from industries which discharge their wastes into the city's sewer system. The scheme, led by the U.S. firm, Applied Recovery Technologies, would have used the sludge as a soil fertilizer in Guatemala. In exchange, ART offered the Guatemalan government US$14 million. ART has tried to ship sewage sludge to several other Central American or Caribbean countries, including Honduras and the Turks and Caicos Islands.

Date:	1988
Type of Waste:	Asbestos waste
Source:	U.S.A.
Exporter:	NCTB of New Jersey
Pretext/Fate:	Re-use in brake linings
Status:	Unknown

In late 1988, another U.S. firm, NCTB, tried to set up a transfer station in New York which would have shipped up to 365,000 cubic yards of asbestos wastes to Guatemala each year.

Date:	January 1990
Type of Waste:	Municipal incinerator ash
Source:	U.S.A.
Exporter:	International Energy Resources
Pretext/Fate:	Roadbuilding material
Status:	Rejected

International Energy Resources offered Guatemala incinerator ash from U.S. municipal incinerators to be mixed with cement for road building purposes. The five-year plan proposed would have involved the import of some 5.5 million tons of ash to Guatemala. In early January it seemed the Guatemalan government had already signed a protocol agreement for building the first 100 km. of roads. According to IER's presentation, the Guatemalan government was to provide the road building equipment and its operating personnel, while the company would underwrite all other costs for the project. The Guatemalan government finally turned down the deal and presented the case to the Contracting Parties to the Cartagena Convention in Kingston, Jamaica that same month. IER claims that it is negotiating similar deals with the Dominican Republic, Jamaica and San Andrés Island (Colombia).

Date:	January 1990
Type of Waste:	Liquid chemical waste
Source:	Europe
Exporter:	Terra International Services,Inc./Energy Resources
Pretext/Fate:	Electricity generation
Status:	Rejected

In January of 1990, Guatemala and El Salvador were offered by Terra International Services, Inc., operating as the agent for Energy Resources, N.V. (incorporated in Aruba), 1.2 million tons per year of liquid industrial chemical waste. The plan called for mixing the waste with locally generated municipal garbage and then burning it in a rotary kiln incinerator to generate electricity. Energy Resources would provide the chemical wastes as "enhancing material," provide and install all the necessary equipment for the incinerator-generator plant, supervise the operation, and provide training to local personnel.

The waste would be provided by European companies such as Bayer or from the European plants of U.S. firms such as Dow Chemical and others. The proposal claimed that one of the principal benefits of the project would be the production of cheap electricity for the industries in the Santo Tomas de Castilla free trade zone. Nonetheless, the chemical waste that would have been imported included halogenated and benzene-based solvents, all of which, to varying degrees, are carcinogenic and the causal agents for a wide range of other serious health problems.

In February 1990 the project was rejected for the first time. It was presented to the government again in May, as the agents for the deal hoped to take advantage of a loophole in the Guatemalan legislation that bans waste imports, except for "commercial use." The deal was rejected again in October 1990.

The local agents for the scheme claim that similar projects have already been approved in El Salvador (May), Honduras (August) and Nicaragua (August); there is no independent confirmation of these claims.

Date:	May 1990
Type of Waste:	Lead slag
Source:	U.S.A.
Exporter:	Bell Medical Corporation
Pretext/Fate:	Rail and road beds
Status:	Rejected

In May 1990, the Guatemalan Ministries of Economy and Mining had already given approval for a local company to import some 245,000 metic tonnes of lead slag from a U.S. company whose name is given as "Bell Medical Corporation" in one document and as "Southern Medical and Surgical, Inc." in another. The slag was to be crushed and used as gravel for rail and road beds or to be mixed with asphalt for road construction.

The project was detained for a time due to the exporter's difficulties in obtaining export permits from the U.S. EPA. Later the Guatemalan government rejected the project.

Guyana

Date: 1988
Type of Waste: Hazardous wastes
Source: U.S.A.
Exporter: Pott and Texeira
Pretext/Fate: Incineration
Status: Rejected

In early 1988, the Guyanese government tentatively entered into a joint venture with two California firms (Pott Industries and Teixeira Farms) to burn over 60,000 tons of U.S. hazardous wastes in Guyana each year. The wastes would have been burnt in an incinerator along the Demerara River, at the edge of the rainforest. The plan met heavy opposition from Guyanese opposition parties, which held numerous protests in Guyana and in the U.S.A. Finally, in September 1988, Guyanese President Desmond Hoyte declared the project "a non-starter."

Haiti

Date: 1982
Type of Waste: Unknown
Source: Unknown
Exporter: Steward Environmental Systems
Pretext/Fate: Dump
Status: Rejected

Steward Environmental Systems offered to buy from the Haitian government 44,460 acres of land to serve as a landfill for 40,000 metric tons/year of unspecified waste.

Date: 1987
Type of Waste: Sewage sludge
Source: U.S.A.
Exporter: Applied Recovery Technology
Pretext/Fate: Dumping
Status: Unknown

(See Turks and Caicos)

Date: January 1988
Type of Waste: Municipal incinerator ash
Source: U.S.A.
Exporter: City of Philadelphia
Pretext/Fate: Fertilizer
Status: Dumped

In January 1988, a ship called the KHIAN SEA illegally dumped 4,000 tons of toxic incinerator residues from the U.S.A. on a beach in Gonaives, Haiti. After dumping 4,000 tons

(misrepresented as fertilizer) on a Haitian beach, the ship then embarked on a voyage of 27 months. During the course of the journey, an official of the city of Philadelphia stated, "I'd slit my wrists if I didn't think there is enough greed in the world to find somebody to take Philadelphia's trash." The statement was likely an accurate one, for somehow, somewhere, the hazardous cargo was discharged in, or around the Indian Ocean. The KHIAN SEA journey includes attempts to dump the toxic ash in the Bahamas, Bermuda, Cape Verde Islands, Chile, Costa Rica, Dominican Republic, Guinea, Guinea-Bissau, Haiti, Honduras, Indonesia, Philippines, Senegal, Sri Lanka and Yugoslavia.

Despite demands by government officials and Haitian environmentalists to return the ash to the U.S.A., the wastes remain piled on the beach. A Grand Jury investigation proceeds in the U.S.A.

Honduras

Date:	November 1990
Type of Waste:	Toxic waste
Source:	U.S.A.
Exporter:	Energy Resources N.V., Thermal processing Corp, Viking Inc. of Dover, NJ.
Pretext/Fate:	Disposal
Status:	Imminent

According to independent sources, the Honduran government has granted operating permits to two toxic waste disposal plants that would burn industrial wastes generated in the U.S.A. The three companies would be Energy Resources, N.V., Thermal Processing Corp. and Viking Inc. of Dover, NJ. The Honduran counterparts are Cementos de Honduras and Inversiones la Mosquitia S.A. The companies involved want to export 35,000 barrels of waste each month and will pay US $100 per barrel.

Date:	March, April, 1990
Type of Waste:	Radioactive paper
Source:	Unknown
Exporter:	Morgan Price
Pretext/Fate:	Recycled, roofing, sanitary products etc.
Status:	Dumped

In March and April 1990 more than 1,000 bales (300 tons) of waste cardboard were unloaded in Puerto Cortes, Honduras on the Atlantic coast. The cardboard, supposedly intended for recycling and used for roof laminate, sanitary and other products, is alleged to have radioactive contamination. The waste was shipped by Morgan Price of Hialeah, Florida and received by a Honduran firm, Maritima y Transporte de Honduras, Intermodal, S.A. Claims appear in several press clippings to the effect that millions of dollars changed hands in the deal.

Honduran sources reported that the situation had not changed since April. The cardboard was still being stored at the port, and it had not been possible to determine if the waste is really contaminated since the equipment needed to test the materials is not available in Honduras.

Date: 1988
Type of Waste: Toxic wastes
Source: U.S.A.
Exporter: International Asphalt and Petroleum
Pretext/Fate: Incineration
Status: Rejected

In 1988, International Asphalt and Petroleum, proposed burning up to 1,800,000 pounds per year of U.S. toxic wastes in the rainforest around Gracias a Dios.

Date: 1988
Type of Waste: Municipal incinerator ash
Source: U.S.A.
Exporter: City of Philadelphia
Pretext/Fate: Fertilizer
Status: Rejected

(See KHIAN SEA, Haiti)

Date: 1987
Type of Waste: Sewage sludge
Source: U.S.A.
Exporter: Applied Recovery Technology
Pretext/Fate: Dumping
Status: Rejected

In 1987, Applied Recovery Technology offered to pay Honduras between $30 and $60 million to dump sewage sludge in coastal swampland in the department of Valle, one of the poorest areas of Honduras.

Date: 1970s
Type of Waste: Nuclear Wastes
Source: U.S.A.
Exporter: Unknown
Pretext/Fate: Storage
Status: Rejected

Honduras rejected plans to store U.S. nuclear wastes in Puerto Cortes in the 1970's.

Jamaica

Date: January 1990
Type of Waste: Municipal incinerator ash
Source: U.S.A.
Exporter: International Energy Resources
Pretext/Fate: Roadbuilding material
Status: Unknown

Jamaica was also targeted by IER as part of their regional roadbuilding scheme. (See Guatemala)

Date: 1988
Type of Waste: Solvent wastes
Source: U.S.A.
Exporter: A.G. & H Chemicals
Pretext/Fate: Dumping
Status: Rejected

In 1988, A.G. & H Chemicals of Delray Beach, Florida, notified the U.S. EPA that it intended to export 75,000 gallons of flammable liquid and hazardous solvent wastes to Jamaica. The company hoped to ship these wastes to Solvar Chemicals of Kingston. The Jamaican government, however, rejected the proposal.

Date: April 1987
Type of Waste: Radioactive skim milk
Source: EEC Countries
Exporter: EEC
Pretext/Fate: Human consumption
Status: Removed, whereabouts unknown

In April of 1987 the European Community shipped 20,000 bags of radioactive milk powder to Jamaica as part of a food aid package. According to the EEC standards this milk was suitable for human consumption, but the Jamaican authorities discovered the contamination and refused to accept the donation as it exceeded the allowable levels under Jamaican law. The EEC subsequently removed all but 4,313 bags to an undisclosed site in Europe.

Date: 1990
Type of waste: waste
Source: U.S.A. and local
Exporter: International Business Development Corporation
Pretext\Fate: Incineration
Status: Unknown

IBDC is hoping to build an incinerator in Jamaica to burn local and U.S. wastes. Reportedly, the Montenay Power Corporation would build the facility.

Mexico

In spite of a Presidential Decree which bans imports of waste to Mexico, with the exception of wastes bound for recycling and bilateral waste agreements between the U.S.A. and Mexico, much illegal trade is known to occur along the 3,000 kilometer U.S.A./Mexican border. Waste traders take advantage of chronically weak enforcement of waste trade laws, and illegally ship toxic wastes to Mexico for disposal.

The legal trade in recyclable waste from the U.S.A. to Mexico is significant but does not enter into, or transit within, the Wider Caribbean Region. This traffic will thus be omitted from this inventory. The extent of illegal shipments of wastes to Mexico moving into or within the Wider Caribbean Region is unquantifiable.

Date:	1989-1990
Type of Waste:	Industrial, garbage
Source:	Europe
Exporter:	Arnold Kuenzler
Pretext/Fate:	Incineration
Status:	Unknown

Notorious ex-soldier of fortune and weapons trader Arnold Andreas Kuenzler has admittedly been busy convincing various local governments in Mexico and Venezuela of the need to build numerous incinerators for European industrial and household wastes. In January 1990 he contacted the Swiss Ambassador in Mexico for his participation in a waste importation contract. The Ambassador refused to participate.

At the end of 1990 the Mexican press noted that local authorities of the State of Veracruz had been approached for the construction of various garbage incinerators.

Netherlands Antilles

Date:	1988
Type of Waste:	Garbage
Source:	U.S.A.
Exporter:	Waste Central Inc.
Pretext/Fate:	Reef construction
Status:	Rejected

In 1988, this Netherlands dependency rejected a scheme by a firm called Waste Central Inc. to build a 70 mile long reef made of U.S. garbage off the coast of Saba. In exchange, Waste Central offered $1.00 per ton of garbage dumped, plus "one ounce of fine gold, one 'yard fowl,' and a basket of fruit and vegetables."

Date:	1987
Type of Waste:	Garbage
Source:	Europe
Exporter:	Power, Water and Waste Ltd.
Pretext/Fate:	Methane gas farm
Status:	Rejected

The Netherlands Antilles also rejected a proposal by a British firm to bury U.S. wastes in Curaçao in 1987.

Nicaragua

Date:	October 1990
Type:	Liquid chemical waste
Source:	Unspecified
Exporter:	INFRA International Ltd.
Pretext/Fate:	Electricity generation
Status:	Rejected

INFRA International Ltd. offered to build a rotary kiln incinerator to burn high BTU waste. This project will import industrial wastes from unspecified sources, as a fuel substitute to generate electricity. The wastes are given as "principally acetone, benzene, methanol, alcohol, oils, fats and other processed materials". This seems to be either the same or a very similar project as the one proposed to Guatemala by Terra International/Energy Resources, NV.

Date:	September, 1990
Type:	Chemical and radioactive wastes
Source:	Industrialized countries
Exporter:	Benjamin Thomas Corp.
Pretext/Fate:	Electricity generation
Status:	Rejected

The U.S.-based Benjamin Thomas Corporation, working through its Central American subsidiary, Casa Phillips S.A., offered to build an electrical generating plant free of charge for the Nicaraguan government. The company also offered to donate the fuel for the plant, which was to consist of 500,000 tons annually of chemical and radioactive waste from unspecified industrialized countries.

If that quantity of material were actually burned each year, the incinerator facility would produce at least 2500 metric tons of ash with radioactive and or toxic contaminants.

The Nicaraguan press reported that the local agent for this project was Farid Ayales, former Costa Rican ambassador to Nicaragua during the Oscar Arias government. Ayales later denied the report.

Date: August, 1990
Type of Waste: Lead slag
Source: U.S.A.
Exporter: Bell Medical Corporation
Pretext/Fate: Roadbuilding material and landfill
Status: Unknown

The agents for this project in Guatemala claimed to have already received permission from the Nicaraguan government to move ahead with a similar project in the latter country; the slag would be used as construction material to repair roads damaged in the war and as land fill. There is no independent confirmation of this.

Date: April 1990
Type of Waste: Municipal incinerator ash
Source: U.S.A.
Exporter: ALQUI Distributors
Pretext/Fate: Roadbuilding material
Status: Rejected

In April 1990, Roberto Morales, agent for ALQUI Distributors, offered the Nicaraguan government some 200,000 tons of ash per month from U.S. municipal incinerators (claiming the ash is from Philadelphia), for the next five years. Each shipment accepted would be accompanied by payment of some 1.2 million dollars, although the vast majority of the money would be paid as fees and commissions to agents, shippers, lawyers, etc, and a very small percentage to the Nicaraguan government. The ash would be delivered to the port of Bluefields and supposedly be used in roadbuilding projects, first to connect Bluefields and Pto. Cabezas and in a second stage, Bluefields and Managua.

The Nicaraguan government rejected the scheme. Dr. Jaime Inser, director of the Nicaraguan Institute of Natural Resources (IRENA, the government agency responsible for environmental matters) affirmed in press declarations that Nicaragua would not accept this kind of projects.

Morales claims that President Cristiani and the head of the Salvadoran army have both already signed agreements for a similar deal in El Salvador. It also seems that Morales has been offering his ash in other Central American countries, in each case asserting that the previous country visited has already accepted.

Date: December 1990
Type of waste: Tire pieces and other waste
Source: U.S.A.
Exporter: Camus, Granata and Associates, Inc.
Pretext-Fate: Energy generation
Status: Under consideration

The Miami-based, Camus, Granata and Associates, Inc. has presented a proposal to the Nicaraguan government to build an incinerator and a modular electrical generating plant.

Imported tire scraps and pellets would be a principal fuel source for the plant. The initial proposal also mentioned the possibility of using U.S. solid municipal wastes, but that part of the project was rejected by the Nicaraguan government. The rest of the project remains under consideration.

Panama

Date:	August 1990
Type of Waste:	Municipal incinerator ash
Source:	U.S.A.
Exporter:	Almany Enterprises Inc.
Pretext/Fate:	Landfill
Status:	Under consideration

The Miami-based firm Almany Enterprises offered the Panamanian government some 30 million metric tons of ash from U.S. municipal incinerators, to be imported over the next four years. The company would pay the government approximately 6.50 USD for every ton received. In addition the company offered to construct a block factory, a hospital and an incinerator for local wastes. The ash would be used as land fill material in France Field, an area with both fresh water and marine wetlands, close to the Colon duty free port.

Date:	1988
Type of Waste:	Garbage
Source:	U.S.A.
Exporter:	International Energy Resources
Pretext/Fate:	Landfill or incinerator
Status:	Rejected

Panama has been a major target of numerous waste traders. In 1988, the government rejected a deal proposed by the New York firm, International Energy Resources Inc., to dispose one-third of New York City's garbage in either a landfill or an incinerator near Colón.

Date:	1988
Type of Waste:	Radioactive ash
Source:	Austria
Exporter:	Gebrueder Convalexius
Pretext/Fate:	Dumped
Status:	Prohibited by Austria

In 1988, an Austrian company, Gebrueder Convalexius, proposed to ship 4,500 barrels of nuclear wastes (reportedly radioactive ash) to Panama. However, the Austrian government prohibited all nuclear waste shipments to Panama.

Date: 1987
Type of Waste: Municipal incinerator ash
Source: U.S.A.
Exporter: Bulkhandling
Pretext/Fate: Roadbed material
Status: Rejected

In 1987, the Panamanian government retracted its earlier approval for a scheme which would have dumped 250,000 tons of incinerator ash from Philadelphia in coastal wetlands in the province of Bocas del Toro.

Suriname

Date: 1987
Type of Waste: PCB waste
Source: Europe
Exporter: Mine Tech International
Pretext/Fate: Dump
Status: Rejected

This former Netherlands colony in South America rejected plans by the Netherlands firm, Mine Tech International, to dump two million tons of PCB-contaminated wastes from Europe in Suriname in exchange for an undisclosed sum of money, in 1988. The rejection followed a heated debate in Surinam over the proposal.

Turks and Caicos

Date: 1986
Type of Waste: Sewage sludge
Source: U.S.A.
Exporter: Applied Recovery Technology
Pretext/Fate: Dumping
Status: Unknown

The broker firm, Applied Recovery Technology of Alexandria, Virginia U.S.A. has been attempting to ship US sewage sludges to numerous Western Hemisphere countries since 1986. ART has offered British officials approximately $33 million per year for use of 400 hectares of land for a dumping ground on West Caicos Island.

The Governments of Belize, Guatemala, Haiti, and Honduras have all rejected similar ART proposals.

Venezuela

Date: 1987
Type of Waste: Highly toxic wastes
Source: Europe
Exporter: Jelly Wax
Pretext/Fate: Dumping
Status: Actual

The Venezuelan coastal city of Puerto Cabello was the unwilling home to 2,000 tons of highly toxic wastes from Europe in 1987. The waste trading vessel, LYNX, dumped and abandoned the wastes in Puerto Cabello, where they remained for six months. According to the Venezuelan government, "while stored in Venezuela, the drums of waste leaked, were in constant danger of explosion and presented serious health hazards to the local population." The government ordered the wastes removed and returned to Italy. The wastes finally returned to Italy in the summer of 1988, but only after they were dumped first in Syria.

Date: 1987
Type of Waste: Toxic wastes
Source: Europe
Exporter: Jelly Wax
Pretext/Fate: Dumping
Status: Rejected

Another European waste trading ship, the RADHOST, was prevented from dumping toxic wastes in Venezuela in 1987; the RADHOST eventually dumped these same wastes in Lebanon.

DUMPING BY ANOTHER NAME -- THE MYTH OF RECYCLING

17. A major trend in the waste trade is to package waste trade deals as recycling or reuse proposals. Of the 55 regional waste trade schemes reported in the inventory above, a full 64% masquerade as, or claim to involve, some form of recycling or "development" pretext. Many waste traders try to tailor their schemes to the particular needs of the area where they would like to dump their wastes.

18. For example, many countries in the Caribbean region suffer from acute shortages of electricity and roads. Consequently, a host of waste traders have tried to persuade them to build toxic waste incinerators which would presumably produce electricity (along with toxic air emissions and ash), or use existing incinerator ash, (along with its heavy metals and dioxin), to make roads.

19. Even if the proposed "recycling" schemes involve some form of legitimate recycling, this type of trade, if condoned, represents a grave loophole through which huge volumes of poisons can be allowed to move across boundaries and endanger the health and environment of the receiving country. Unless there are provisions for repatriation of the

residual waste following reprocessing, which there very seldom are, the transboundary movement of hazardous wastes for recycling or recovery must always be recognized as including transboundary movement for final disposal. This is due to the fact that nothing can ever be recycled to 100% and thus the residual material will be dumped on the receiving territory.

20. The problems inherent to the transboundary movement of hazardous waste for recycling are outlined below:

Toxic Residue

21. Nothing can be recycled to 100%. Very often the residual material constitutes the greater and more hazardous part of the original material following the reprocessing. Most recovered products in the recycling industry are not the toxic elements of the waste stream. For example steel wastes which are recycled to recover non-ferrous metals often contain dangerous quantities of toxic heavy metals and dioxins which remain on the receiving territory.

Dirty Industry

22. Waste moves primarily for economic reasons. The movement from North to South is often caused by cheaper labour, capital costs, liability, insurance costs, etc. These price differentials are often indicative of much less stringent labour or environmental protection laws. In other words, wastes are often recycled in poorer countries because industry is allowed to be dirtier there. Thus dirty industries are allowed to exploit workers and the environment because of an obvious shortage and need for foreign exchange.

Opens Loophole

23. By permitting any opportunity to ship wastes that are designated for recycling or deemed a secondary raw material, an enormous loophole is allowed, through which waste traders can ship a wide variety of dangerous substances misrepresented as "fertilizer, road oil, building materials", etc. This presents an important problem for enforcement and places the burden of proof of toxicity on the enforcing government.

Absolves Waste Generators

24. The transboundary movement of wastes for the purposes of recycling can be used as an excuse by generators to absolve themselves of responsibility for the later effects of the hazardous materials. When legally viewed as "secondary raw materials" or "for recycling or recovery industries", toxic wastes are too often exempted (as in the Basel Convention) from the requirements for ensuring the availability of "adequate technical capacity or suitability." Even if strict liability is imposed on the generator, from a practical perspective there is little to ensure that a judgement can be enforced against a foreign generator.

Allows Risky Transportation

25. The transportation of such materials involves hazards to dock and ship workers, processing plant workers, and the environments of the transit areas and ultimate disposal site of the residues. In a recent case in Brazil involving metal waste, 20 ship workers were hospitalized after shifting a cargo of hazardous waste on its ship.

A Disincentive for Waste Minimization

26. The Basel Convention recognized, and it is widely accepted, that we must "ensure that the transboundary movement of hazardous wastes and other wastes is reduced to a minimum consistent with the environmentally sound and efficient management of such wastes." In addition,

27. Basel obliged its parties to "ensure that the generation of hazardous wastes and other wastes within it is reduced to a minimum..."

28. Shipping wastes for recycling is often another way to avoid the responsibility to minimize the waste at the source of generation. By avoiding this responsibility in order to enhance profits, such movement creates a disincentive to introduce non-polluting, or less wasteful technologies.

OCEAN DUMPING AND OCEAN INCINERATION

29. It is crucial to note that the international trade in hazardous, including nuclear wastes, not only subjects land territories to the risks of dumping, but the territorial waters and the global commons of the high seas are threatened as well. The allure of ocean dumping by waste traders is obvious. It is extremely easy and virtually liability free to throw wastes in barrels or bulk into the sea even though the environmental implications can be severe.

30. Today, as the marine environment has become increasingly degraded, there has been a shift in thinking away from the principle of assuming a harmless "assimilative capacity", toward the view that all contamination of the marine environment, especially by synthetic and persistent substances, should be significantly reduced or eliminated even where there is inadequate or inconclusive evidence to prove a causal link between emission and effects. This "precautionary principle" has been adopted by many fora.

31. The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters (London Dumping Convention, LDC) seeks to control pollution of the sea by dumping, and to encourage regional agreements supplementary to the Convention. During the Thirteenth Consultative Meeting of this Convention (London, October-November 1990), the Contracting Parties agreed that the dumping of industrial wastes shall cease by 31 December 1995, and encouraged the adoption of individual or regional commitments to cease dumping of industrial wastes before 31 December 1995. The LDC however will still allow the dumping of many types of hazardous wastes, and not all the Contracting Parties

to the Cartagena Convention are Contracting Parties to this Convention. Furthermore, there is no mechanism to this day to monitor, let alone enforce law against any illegal form of ocean dumping.

32. It is crucial that within the sensitive marine environment of the Wider Caribbean region, ocean dumping is banned and a method is provided by which illegal ocean dumping can be discovered and made punishable.

OCEAN INCINERATION

A Failed Technology

33. Ocean incineration is the burning of toxic, persistent, industrial wastes in shipboard incinerators and dispersing the residual matter into the atmosphere. The system is designed to burn liquid, organic chemicals with a high caloric content, most notably organochlorides and other halogenated hydrocarbons. Wastes from the pesticide, plastic, pharmaceutical and wood preservatives industries, and used chlorinated solvents are among those wastes that have been incinerated at sea.

34. This method of ocean dumping has served as one escape route for extremely hazardous byproducts of inefficient production processes for nearly twenty years. Ocean incineration's only real "advantage" over other dangerous disposal methods such as landfilling or land-based incineration is that it is an activity out of public view and control. Furthermore, it is attractive to generators of wastes as it is virtually impossible to substantiate a liability case for airborne toxins.

35. The major problems of ocean incineration are:

    i. No incineration process can operate with an efficiency of 100%. Therefore, some portions of the original chemicals fed into the system are always released into the marine environment.

    ii. Many new compounds known as "products of incomplete combustion" are produced in the incineration process and are themselves extremely hazardous. Chemicals routinely identified as "products of incomplete combustion" include dioxins and furans, two of the most toxic manmade compounds known.

    iii. The types of waste burned at sea are known to adversely affect living organisms, especially the organohalogens.

    iv. Ocean incineration frequently requires the long distance transport of hazardous waste, on land and at sea, creating the potential for chemicals spills.

36. Today's science cannot easily measure to what extent ocean incineration emissions have affected the marine environment. It is known that the type of chemicals burned at sea are some of the most toxic, persistent, bioaccumulative substances on earth. One chemical, a

fungicide called hexachlorobenzene, has been recently detected in elevated concentrations in the sediment of the North Sea burn zone. Scientists suspect that ocean incineration is a significant contributor to the build-up.

Moves to Ban Ocean Incineration

37. As of January 1991 with a final voyage of the Vulcanus II, ocean incineration has ceased. It remains to be seen if others will seek to reinvent this practise in other parts of the world. While practiced in Europe, ocean incineration never gained acceptance as an environmentally sound method of toxic waste disposal. The Contracting Parties to the Convention on the Protection of the Environment of the Baltic Sea Area banned all ocean incineration in the Baltic Sea. The Eleventh Consultative Meeting of the London Dumping Convention, 6 October 1988, agreed to terminate ocean incineration by 31 December 1994. On 3-6 October 1989, the Parties to the Convention for the Protection of the Mediterranean Sea Against Pollution (Barcelona Convention) banned ocean incineration in the Mediterranean. Since then the North Sea Ministers Conference in March 1990 agreed on a phase out of all ocean incineration operations by 31 December 1991. The Contracting Parties to the Oslo Convention (International Agreement on the Prevention of Marine Pollution by Dumping from Ships and Aircrafts) decided at their sixteenth meeting to terminate incineration at sea by 31 December 1991.

38. In 1984 and 1986, the U.S. EPA formally refused to grant permits for any ocean incineration using U.S. ports or waters, citing scientific, technical and legal problems as well as public opposition. In 1986, over 15,000 signatures were gathered and over 6,000 people attended hearings in Texas alone in protest of plans to conduct test burns in the Gulf of Mexico. Finally in 1988 the EPA cancelled its entire ocean incineration programme, based upon recommendation of Congress.

An Ocean Incineration Ban in the Cartagena Convention

39. The recent decision by the Mediterranean countries to ban ocean incineration within the United Nations Environment Programmme's Regional Sea Convention, the Barcelona Convention, was taken due to the real fear that the ocean incineration industry, once banned in the North Sea, would seek to establish this obsolete technology elsewhere. Today the regions especially vulnerable to this industry include the South Pacific, South-East Asia and the Wider Caribbean.

40. At the First Meeting of Contracting Parties to the Cartagena Convention October 1987, participants expressed concern about the possibility of waste being imported into the region from countries outside the Convention area. Venezuela and other countries introduced a resolution prohibiting ocean incineration. However, in the spirit of compromise during this initial official gathering, Contracting Parties agreed to weaker language. The resolution that was finally adopted, simply urged States to "refrain from authorizing the disposal [of wastes] at sea" except "in accordance with global rules and standards established by the London Dumping Convention."

41. If ocean incineration is not acceptable for European seas, then it is certainly not acceptable for other seas where the ocean environments may consist of yet more fragile ecosystems, and where the people are perhaps even more dependent upon them for a source of protein and livelihood. It would be very prudent of the Cartagena Contracting Parties to the Convention to take action now as was done within the Barcelona Convention to prohibit the transfer of ocean incineration to its own Convention Area.

RADIOACTIVE WASTE IN THE WIDER CARIBBEAN REGION

OVERVIEW

42. For almost fifty years, a number of countries have been developing nuclear technology, both in the civil and weapons' industries. Large-scale national nuclear construction programmess did not truly flourish until the early 1960s, and for the most part came to an end by the 1980s. Despite the short tenure of this "nuclear golden age" the industry has left a long term lethal legacy -- massive quantities of radioactive waste representing a threat for the environment and health of present and future generations.

43. The European Commission has estimated that seven nuclear nations in the European Community will have produced the following amounts of radioactive waste by the year 2,000:

-

Low and medium radioactive wastes:

Arisings prior to 1986, now stored: 59,000 cubic meters

Projected quantity, 1986-2000: 1,150,000 cubic meters

-

Alpha and high level radioactive wastes:

Arisings prior to 1986, now stored: 62,000 cubic meters

Projected quantity: 62,000 cubic meters

44. In the U:.S.A., and only considering civil nuclear sources, the total accumulated amount of low level radioactive wastes is 21,300 metric tonnes, and of irradiated spent fuel, 700,100 cubic meters.

45. These figures fail to include the waste expected from the decommissioning of nuclear reactors. In fact, and despite a cessation in the expansion of the nuclear industry, the demand for radioactive waste disposal options has increased due to the waste from the

decommissioning of a growing number of reactors. In the early planning stages of nuclear programmes, very little attention was given to the problem of decommissioning, and there is a serious lack of technology and resources to deal with the vast quantities of wastes that will be produced.

46. The option of dumping radioactive wastes in shallow land- fills has now been rejected for national sites by many States on environmental and health grounds, and at present, there exists no operating facility anywhere in the world for the disposal of high level radioactive wastes. Wherever attempts have been made to conduct development work for such facilities, those countries have discovered that their own citizens have rejected them. In countries as diverse as the United Kingdom, Federal Republic of Germany, Sweden, France and the U.S.S.R., local communities have vigorously resisted the siting of high-level radioactive waste disposal facilities in their region.

47. The dumping of radioactive wastes at sea was carried out for many years by the U.S.A. and some European countries. In 1983 the contracting parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters (London Dumping Convention or LDC) agreed, after long debate and controversy, on a moratorium on the dumping of radioactive wastes at sea. Since then, no ocean dumping operation of nuclear waste is known to have occurred.

48. The LDC's moratorium was adopted out of grave concern for the state of the ocean environment, and for the health and economic well-being of the communities whose livelihoods depend upon marine produce. A cheap and effective means to off-load domestic problems onto the global community was thereby denied to those countries producing large quantities of radioactive wastes.

49. The report of the LDC 's Inter-governmental Panel on Radio Active Disposal (IGPRAD) is likely to be released in 1992. In light of this report, the LDC Contracting Parties will have to decide whether to allow sea dumping of radioactive wastes to resume, to continue moratorium, or to ban permanently the practice by amending the Annexes to the Convention. Because of existing scientific uncertainties, and differing management philosophies, no consensus is expected, despite of over ten years of active debate. Very strong pressure is to be expected from some countries and from the nuclear industry itself, to re-open the sea dumping option. In the 1990s and beyond, the nuclear industry will be faced with ever increasing amounts of radioactive wastes, both in volume and in terms of the radioactivity involved, as a result of the massive decommissioning programmes of the old and now contaminated nuclear plants, and with waste management problems of unprecedented magnitude, for which there is no true solution to date.

50. The central theme of all radioactive waste issues is that, no matter how sophisticated the technology employed, the risk presented to health and environment cannot be reduced to zero. And in fact the risks are considerable. The countries who have "benefited" from nuclear energy must not attempt to pass the huge environmental, social and political cost of these wastes to the global commons or to other States. It is perfectly legitimate for all

people in all countries to reject exposure to the long-term risk presented by radioactive wastes.

EXPORTING THE RADIOACTIVE WASTE PROBLEM

51. The two favoured options for dealing with radioactive wastes, dumping on national territory, or dumping in the "global commons" of the oceans, present technical, political and legal problems. Faced with an imminent increase in the quantities of radioactive waste that must be managed, the "nuclear countries" and industry are now seeking another option for the disposal of this extremely hazardous waste: export for disposal in other countries.

52. Despite strenuous efforts, attempts to codify concerns over the transboundary movements of radioactive wastes within global fora have met with little success. The recently concluded Global Convention on the Control of Transboundary Movements of Hazardous Wastes (Basel 1989) actually sought to exclude radioactive wastes.

53. From the preparatory documentation of the Basel Convention, it is clear that the decision to exclude radioactive wastes was taken on the mistaken assumption that "control systems" had already been established for the regulation of trade in radioactive wastes, and that these "control systems" fall under the auspices of the International Atomic Energy Agency (IAEA). However, and contrary to information provided by the IAEA to UNEP during the Basel negotiations, legally binding "control systems" for the regulation of transboundary movements of radioactive waste did not exist at that time, nor to this day.

54. The frequently cited "Code of Practice on the International Transboundary Movement of Radioactive Waste", which was only recently adopted by the IAEA General Conference of September 1990, does not in any way prohibit the transboundary movement of radioactive wastes, nor is it binding in its "control" as the Basel Convention will be once it is in force. Rather, this non-binding code only provides the guidelines to States for the development of policies and law on the international transboundary movement of radioactive waste, based mainly in the "prior notification and consent of the sending, receiving and transit States".

55. The same code recognizes that "it is the sovereign right of every state to prohibit the movement of radioactive wastes into, from, or through its territory". Greenpeace believes that only a complete ban on radioactive waste import into the Caribbean region will prevent the dangers inherent to radioactive wastes.

56. The recent signatories to the Lomé IV Convention recognized the futility of attempting to "control" or manage such transport and called for a complete ban on the import of radioactive wastes into the 68 ACP (African, Caribbean, and Pacific) group of States as part of its waste trade ban (Article 39). (See Section on Lomé IV Convention below).

SUB-SEABED DISPOSAL IN THE CARIBBEAN REGION

57. One of the options that has been considered to deal with radioactive wastes is sub-seabed disposal--the implantation of wastes into the ocean floor. Member-nations of the Nuclear

Energy Agency (NEA) of the OECD have devoted resources estimated to several hundreds of millions of dollars to research and development of the sub-seabed disposal option for high-level radioactive wastes. This research effort has been coordinated by the NEA's so-called Seabed Working Group (SWG) formed in 1975 by the U.S.A., U.K., EEC, France, Netherlands, Japan, Canada, Switzerland, Federal Republic of Germany, and observers from Belgium and Italy.

58. Separately, the US has also carried out its own research programme, through the U.S. Sub-seabed Disposal Programme, a facet of the U.S. National Waste Terminal Storage Programme, started in 1973. U.S. funding was pared in 1984/85, but was later resurrected with the formation in 1987 of a "US Sub-seabed Consortium" formed by the Woods Hole Oceanographic Institution and six other academic institutions, with a budget of 250 millions of US dollars. The present status of the Consortium and US sub-seabed research is unclear at present, but sub-seabed disposal is still considered an option for HLW by the Department of Energy in the USA.

59. The NEA Seabed Working Group (SWG) published its report in December 1988. Although it points out many scientific and technical uncertainties, the report concludes that sub-seabed disposal is a feasible option for the disposal of high-level waste, and advocates a continuation of the research program. It is important to stress that one of the areas of reference considered to implement this disposal method is located within the Wider Caribbean region: the Southern Nares Abyssal Plain at 22.0-24.0 degrees N & 62.0-67.0 degrees W. See Figure 1.

60. Because of the objections to sub-seabed disposal raised within the London Dumping Convention, and the moratorium on radioactive waste dumping, the NEA has officially reduced its sub-seabed research effort, and is dedicating more effort to deep geological disposal on land. However recent developments demonstrate that sub-seabed disposal for radioactive wastes remains an option seriously considered:

    i. In 1989 at least two countries, France and Japan, undertook research cruises in the Atlantic;

    ii. There is still a strong academic and industrial lobby in the U.S.A. and Europe to intensify sub-seabed disposal research. In Europe some industrial concerns are lobbying so that sub-seabed research enters its next phase, with emplacement tests utilizing torpedo-shaped canisters containing heat-generating (non-radioactive) simulators;

61. As land-based radioactive waste disposal is fraught with difficulties and political turmoil, it is feared that after having been refused from all or most of the possible land-based disposal sites, the nuclear industry will renew its effort to re-open the sea dumping and sub-seabed emplacement options.

62. The impact of sub-seabed disposal of radioactive wastes for the Caribbean region is obvious. There is no evidence whatsoever that this technology would isolate the radioactive

wastes from the biosphere. It would damage the tourist and fishing industries among others, as the contamination of the environment, as well as the dangers inherent in the sea transport of radioactive wastes would represent an unacceptable threat against the livelihood and well-being of the region's inhabitants.

63. Attention must be given to the fact that in 1989, the five member States of the Permanent Commission of the South Pacific (CPPS) adopted a Protocol against Radioactive Pollution which bans the dumping and sub-seabed burial of radioactive wastes in their respective Exclusive Economic Zones. Other regional agreements in other parts of the world, such as the Rarotonga Treaty (1985) in the South Pacific, also ban the dumping at sea of radioactive wastes. It is nowadays more and more recognized that - whenever possible and appropriate - regional treaties should go beyond any existing global mechanism, in order to reflect adequately the necessarily higher number of common denominators amongst the Parties to a regional agreement, and - at the same time - encourage the improvement of global treaties. Within this context, and in light of the specific relevance of the issue for the Wider Caribbean region - it is desirable that the Parties to the Cartagena Convention take the appropriate steps to prevent and ban the dumping and sub-seabed disposal of radioactive wastes in the region. By doing so, not only would they eliminate an environmental and social threat to the region, they also would send to the world a strong message in favour of more stringent ocean protection regimes.

THE TRANSIT OF RADIOACTIVE WASTE THROUGH THE CARIBBEAN

64. Spent fuel from commercial Japanese nuclear power reactors is transported through the Panama canal, in order to reach the Sellafield (U.K.) and La Hague (France) reprocessing plants. Once through the Panama canal the ships are likely to take the Mona Passage which lies between the Dominican Republic and Puerto Rico. The alternative course through the Caribbean would be the Windward Passage which lies between Cuba and Haiti. See Figure 2.

65. There are currently five especially designed ships involved in the transport of irradiated fuel. The registered owner of those ships is Pacific Nuclear Transport Limited (PNTL) of the United Kingdom. Each of the ships is capable of transporting some 90,000 kg. of nuclear spent fuel distributed in 20-24 casks. In 1989, PNTL ships carried ten loads of spent fuel through the Panama canal.

66. There are considerable risks involved in the sea transport of this radioactive material. Shipping fires, grounding, foundering and subsequent sinking are a fact of life in maritime transport and nuclear shipments will inevitably fall victim to these same odds. The nuclear industry suggests that the chances of a major disaster are decreased by building strong casks, and by using special ships for the carriage of nuclear spent fuel. But ultimately these measures are recognized as limiting rather than prohibiting accidents. The question is not whether accidents may happen but what would be the consequences of such accidents.

67. Primarily the nuclear industry says that its casks will protect radioactive cargoes in case of accidents. The International Atomic Energy Agency has promulgated a series of guidelines

for the development and production of casks. Unfortunately, these guidelines are neither stringent enough nor do they take into account the real dynamics of shipping accidents.

68. For instance, studies indicate that these containers can lose their integrity after a fire of only 1 hour. This figure is based on a fire generating a temperature of 800 degrees Celsius, or 1,475 degrees Fahrenheit. On the other hand, shipboard fires, on average, burn for over 20 hours, and can generate temperatures of 2,400 degrees Fahrenheit.

69. The industry is of course aware of such shortcomings and has even secretly built their ships in such a way that radioactivity can be vented from the ship and its containers to the local environment in case of an accident. In fact, the shipping company that carries nuclear spent fuel through the Caribbean has suggested that despite all precautions, venting of radioactivity will take place at least once every 15 years per ship. This means that one of Pacific Nuclear Transport's five ships could dump radioactivity into the marine environment every 3 years! This catastrophe is not even considered an accident but is regarded as a fact, a given result of ongoing operations.

70. A number of additional nuclear transports through the Caribbean and Panama Canal are scheduled to take place starting in the next few years. While nuclear spent fuel from Japan has transitted the Caribbean on its way to the UK and France since 1968, both high level nuclear waste and plutonium will be returned back through the Caribbean on its return from Europe to Japan as part of these same nuclear reprocessing contracts.

71. Plutonium, extracted from Japanese spent fuel, is scheduled for transport from Europe to Japan via the Caribbean beginning as early as 1992/93. Plutonium is an extremely toxic element: a single microgram quantity of plutonium (smaller than a grain of sand) if inhaled into the human lung is sufficient to induce lung cancer. The dispersion of this material in an accident would be a disaster. At the same time, plutonium is the most highly prized fuel for nuclear weapons. As such, these shipments could be of particular interest to countries or organizations wishing to seize plutonium or sabotage the shipments for political or personal reasons.

72. During a thirty year period, Japan is destined to receive between 150,000 and 400,000 kilograms of plutonium. Each shipment through the Caribbean will contain between 50-1,000 kilograms of plutonium. It is worth noting that a simple nuclear bomb can be made with 7 kg of plutonium or less. If shipments were made containing the largest amounts of plutonium per shipment, some 4 to 5 shipments would be required per year for a ten year period.

73. By 1995, high-level nuclear waste is scheduled to be sent from Europe to Japan on board ships which will transit the Caribbean and the Panama Canal. As part of its reprocessing contracts with the U.K. and France, Japan has agreed to receive high level nuclear waste which arises out of this process. This waste, which will be transported in a glasseous form, is twice as radioactive as nuclear spent fuel. A single shipment of this waste could contain material emitting 15 times as much radiation as was vented during the Chernobyl disaster. From 1995 through 2005, some 60 casks containing a total of 1,200 glass rods are

scheduled to be transported by sea via the Caribbean and Panama Canal on the return journey to Japan.

74. At the same time, the U.S.A. has signed an agreement with the West German government to ship this same kind of high level nuclear waste to the Federal Republic of Germany. In all, the U.S.A. plans on sending 32 canisters of glassified waste, with a total gross weight of 31,500 lbs, from a nuclear weapons production facility in Washington state. According to U.S. officials, the shipments could leave the U.S.A. as early as 1991. These shipments are most likely to be shipped from a port or ports on the West Coast of the U.S.A. If this were the case, these nuclear waste shipments would go through the Panama Canal.

75. Return shipments of HEU spent fuel have been returned to the U.S.A. since the late 1960s--sometimes through the Caribbean and Panama Canal. As of 1 January 1989, the U.S.A. has had a self-imposed moratorium on these return shipments due to public concern and protest over the potential danger of the transports. The U.S. government is conducting an environmental assessment of these shipments after which it hopes to resume its receipt of the HEU spent fuel. Accordingly, shipments of this dangerous material could resume during 1991. As of 1984, the U.S.A. had exported about 16,700 kg of HEU to other countries and had received only some 1,500 kg of HEU spent fuel in return.

76. Concern about the catastrophic cost of nuclear transport accidents has spurred protests around the world and has in fact lead to the closure of a number of major ports to such cargoes. Greenpeace urges the Contracting Parties to the Cartagena Convention to seriously consider closing the Wider Caribbean Region to shipments of high-level nuclear material.

POLITICAL INITIATIVES

"CONTROLS" vs. BANS

77. The debate over how best to prevent the environmental, political, social and moral ills presented by the international waste trade has manifested itself in two types of actions: control mechanisms and bans. The former are characterized by the fact that they are generally supported by major industrialized powers and consist of a notification and consent regimen known commonly as "prior informed consent" or PIC. The bans however, are more generally supported by less-industrialized countries--the potential victims of waste trade.

78. The relevant U.S. and European Community legislation as well as the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes, all rely on various forms of the PIC as the basis for its "control system". Greenpeace firmly believes that instruments which rely on PIC cannot possibly combat waste trade or mitigate the political, ecological, moral or social ills created by it.

79. PIC cannot pretend to be a just system when we live in a world of such disproportional economic and political levels; in a world where the wastes of the rich can be offered as short term remedies for the poverty of the poor. PIC cannot pretend to redress the disincentive for both waste minimization and the implementation of clean production methodology that is served when industrial interests, with a minimum of paperwork can cheaply export their waste problems rather than take responsibility for them at home.

80. Thus, rather than accepting "control systems" based on some form of "prior informed consent", Greenpeace and much of the less-industrialized world insist on complete import or export bans as the only means to adequately remedy the problems associated with the international trade in hazardous wastes.

81. The following paragraphs elaborate the primary "control" legislation impacting the Wider Caribbean region -- The Basel Convention and U.S. law; and will point out their respective shortcomings. Then the existing policies and legal mechanisms which are helping to bring about real solutions will be reviewed --waste trade prohibitions or bans.

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal

82. In March 1989, the United Nations Environment Programme's attempt to deal with the waste trade problem culminated in the signing of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. The Convention negotiations were marked from the start by a division between a minority of powerful industrialized nations that wished to retain the possibility to sweep their waste problems out the "back door", and a majority of developing countries that came to Basel with hopes of closing that door. Due to the consensus decision making process used in the creation of international law, the lowest common denominator (U.S.A., U.K., U.S.S.R., Japan etc.) prevailed.

83. The Basel Convention's primary achievement is a requirement that waste exporters receive the written consent (PIC) of importing nations before any shipment takes place. However, this notification regimen is largely a duplication of existing laws in the U.S.A. and the European Community, and will do little to curtail existing or expected transboundary waste movements.

84. As of February 1991, the Basel Convention had only been ratified by 6 countries. Entry into force will occur on the ninetieth day after the deposit of the twentieth ratification instrument and the first meeting of the Contracting Parties will be convened not later than one year after entry into force. Thus it will be some time before even this weak instrument will come into force.

85. By 11 February 1991, seven countries in the Wider Caribbean region had signed or acceded to the Basel Convention: USA, Colombia, Guatemala, Haiti, Mexico, Panama, U.S.A. and Venezuela. None of these countries has yet ratified the Convention nor implemented its provisions into national law.

86. The primary flaws of the Basel Convention are summarized as follows:

    i. There exist no general provisions to ban any sort of waste trade (except to Antarctica) including trade to developing countries (Article 4).

    ii. By providing a legal framework within which to trade waste (PIC), the Convention legitimizes a practice which should be considered a criminal activity (Article 6).

    iii. PIC is not an equitable contract in a world with the actual disproportional economic and technological levels.

    iv. The PIC system does not assure that the national competent authority will have all the necessary information on the planned waste shipment.

    v. With PIC there is no guarantee that the state of import, once the national competent authority gives the written authorization to receive the wastes, has the adequate facilities or the real possibility to manage the wastes in a environmentally sound manner (Articles 4 and 6).

    vi. The Convention allows that the notification of a planned shipment could be delegated from the export government to the generator or exporter (Article 6). This represents a clear conflict of interest.

    vii. Radioactive waste can be interpreted as being excluded from the scope of the Convention (Article 1).

    viii. There are no liability provisions developed to this day (Article 12).

87. However, the Basel Convention recognizes that any State has the sovereign right to ban the entry or disposal of foreign hazardous wastes and other wastes in its territory (preamble and Article 4), and allows that Parties and Non-Parties enter into bilateral, multilateral or regional agreements regarding the transboundary movements of hazardous wastes. These agreements "shall stipulate provisions which are not less environmentally sound that those provided for by this Convention" (Article 11).

United States Legislation

88. An overwhelming majority of the waste transported legally or illegally to the Wider Caribbean region comes from the U.S.A. It is therefore important to consider the legislative effort that this country is making to control its own borders in respect to hazardous waste.

89. The Resource Conservation and Recovery Act (RCRA) as amended by the Hazardous and Solid Waste Amendments (1984), effective since November 1986, requires that exporters of hazardous waste notify the US Environmental Protection Agency (EPA) which in turn will notify the importing country. The importing country must then send the EPA its

consent to import. If consent is not granted or the notification is ignored, the EPA cannot grant a permit to export the waste.

90. The U.S. Government has no authority to prohibit any attempt to export waste as long as notification procedures for such export are observed and consent is received from the importing country.

91. Four years of experience with the 1984 RCRA amendments, for which the EPA promulgated revised export regulations which became effective in November 1986, have revealed a set of weaknesses and loopholes. The major problems are as follows:

    i. Above all, EPA's authority is too limited. Currently, the EPA has no authority to stop (and thus cannot stop) an export if there has been proper notification, and if the importing government has given its consent. Even if the EPA believes that the particular export is dangerous and may cause harm, it is bound to allow the export.

    ii. The notification and consent procedures do not cover wastes that are not considered "hazardous" in the U.S.A., but which are legally defined as hazardous abroad. As a result, "the tendency to export solid waste classified as non-hazardous under RCRA is increasing and beginning to pose environmental, health and diplomatic problems..." as noted by Subcommittee Chairman Mike Synar (D-OK.) at a congressional hearing.

    iii. Hazardous waste exports have not been adequately controlled. The EPA Inspector General "found instances where hundreds of tons of hazardous wastes were exported without notifications". Furthermore, "enormous quantities of hazardous wastes were exported without exporters filing the required annual reports". By 1986, less than 20 annual reports were filed with the EPA, despite the receipt of "hundreds" of notifications each year. As a result, the EPA "did not know the amount of hazardous wastes actually exported to other countries.

    iv. The EPA did not have an enforcement strategy and failed to coordinate its efforts with those of Customs. Out of 274 manifests that the EPA National Enforcement Investigation Center (NEIC) received up to December of 1987, 143 manifests did not specify the port of exit. The EPA Audit report concludes that "consequently, hazardous waste exporters could disregard EPA regulations with little chance of detection". As a result, if exporters did not provide required notification, the EPA could not identify and prosecute violators. This practice had the consequence that importing countries were denied the right and opportunity to reject the wastes. In addition, "the receiving country's consent, which EPA forwards to the exporter for attachment to the manifest, did not always contain the data that Customs need to ensure the shipment is proper".

    v. EPA's hazardous waste export regulations are unclear or ambiguous and resulted in the misclassification of hazardous wastes as materials for "recycling" and "reclamation". This practice led to "sham recycling" and "illegal" exports. Another

problem stems from the fact that exporters claimed that their shipments did not contain hazardous wastes, but contained economic goods or "products".

vi. The system of Prior Informed Consent (PIC) did not always work. A waste export scheme to the Congo reveals that the country first consented the export, but withdrew its consent 10 days later. The Congolese government claimed that the information provided was insufficient to make an informed and sound decision, and if they had known all the information, they would have rejected it at first. The EPA's National Enforcement Investigation Office supports this claim by stating that hazardous waste manifests show "serious problems with proper completion of these documents and classification of wastes." At the congressional hearing Rep. Synar concluded that current application of prior informed consent "may not be as informed as it should be".

vii. It appears that there are no insurance requirements covering improper disposal and accidents abroad.

92. Besides these problems, there are a variety of other issues which effected the program's success. The entire EPA programme on hazardous waste exports is not adequately funded or staffed. For instance, a single person in the EPA is assigned to handle the programme. Moreover, the assignment of three agencies, the EPA, the Customs Service and the State Department, resulted in a bureaucratic burden with lack of coordination and final failure of effective control.

WASTE TRADE BANS IN THE WIDER CARIBBEAN REGION

National Bans

93. It is fortunate that many Caribbean countries have resolved to prevent hazardous waste shipments. However, others remain vulnerable. By the end of 1989, at least 19 States or Territories in the region had banned waste imports from industrialized countries, see Table I, while a number of others remain vulnerable, see Table II. Globally, at least 76 countries have banned all foreign waste imports, see Table III.

94. An excellent example of national legislation (Dominican Republic) banning waste imports can be found in Annex I.

95. The Caribbean region can be protected from the dangers inherent to waste trade through the implementation of waste import and export bans at the national, regional and international levels. Only through a complete ban can it be ensured that waste will not be transported under any pretext and end up endangering the lives and environments of these countries.

TABLE I

WIDER CARIBBEAN STATES WHICH ARE KNOWN TO BAN WASTE IMPORTS

	National Ban	Lomé IV Ban
Antigua & Barbuda		Full
Bahamas		Full
Barbados		Full
Belize		Full
Dominica		Full
Dominican Republic	Full	Full
Grenada		Full
Guatemala	Partial	
Guyana		Full
Haiti	Full	Full
Jamaica		Full
Mexico	Partial	
Panama	Full	
St. Kitts & Nevis		Full
St. Lucia		Full
St. Vincent & Grenadines		Full
Suriname		Full
Trinidad & Tobago		Full
Venezuela	Full	

Note: Mexico allows waste imports for "recycling" operations. Guatemala allows waste imports for "commercial" activities.

TABLE II

WIDER CARIBBEAN STATES AND TERRITORIES WHICH REMAIN VULNERABLE TO LEGAL WASTE TRADE. (NO FULL BAN IN PLACE).

Anguilla (U.K.)	Honduras
Aruba (Netherlands)	Martinique (France)
British Virgin Islands (U.K.)	Mexico
Cayman Islands (U.K.)	Montserrat (U.K.)
Colombia	Netherlands Antilles (Neth.)
Costa Rica	Nicaragua
Cuba	Puerto Rico (U.S.A.)
French Guiana (France)	Turks & Caicos (U.K.)
Guatemala	U.S. Virgin Islands (U.S.A.)
Guadeloupe (France)	U.S.A. (Gulf States)

TABLE III

DEVELOPING COUNTRIES WHICH HAVE BANNED WASTE IMPORTS

Underlined names indicate non-ACP states that have banned imports by their own policies or legislation. The ACP states make up the remainder of the list although many of these had instituted national bans prior to the signing of Lomé IV.

Algeria	Madagascar
Angola	Malawi
Antigua and Barbuda	Mali
Bahamas	Mauritania
Barbados	Mauritius
Belize	Mozambique
Benin	Niger
Botswana	Nigeria

Burkina Faso	Panama
Burundi	Papua New Guinea
Cameroon	Peru
Cape Verde	Philippines
Central African Republic	Rwanda
Chad	Sao Tome and Principe
Comoros	Senegal
Congo	Sierra Leone
Cote D'Ivoire	Solomon Islands
Djibouti	Somalia
Dominica	St. Kitts and Nevis
Dominican Republic	St. Lucia
Equatorial Guinea	St. Vincent and the Grenadines
Ethiopia	Sudan
Fiji	Suriname
Gabon	Swaziland
The Gambia	Tanzania
Ghana	Togo
Grenada	Tonga
Guinea	Trinidad and Tobago
Guinea Bissau	Turkey
Guyana	Tuvalu
Haiti	Uganda
Indonesia	Vanuatu
Jamaica	Venezuela
Kenya	Western Samoa
Kiribati	Yugoslavia
Lesotho	Zaire
Liberia	Zambia
Libya	Zimbabwe

The Lomé IV Convention

96. Many of the Caribbean countries in the Cartagena Convention area have succeeded in helping establish a waste trade ban within the Lomé IV Convention. Fifteen countries in the region are now protected from foreign dumping of hazardous and nuclear waste under a trade and aid agreement between the African, Caribbean and Pacific (ACP) group of States and the European Economic Community (EEC) signed on 15 December 1989.

97. Article 39, see Annex II to this report, of the Lomé IV treaty represents the world's most comprehensive hazardous waste trade ban. When this 10-year pact enters into force, the EC will not be allowed to ship any hazardous (including nuclear) wastes to the 69 ACP countries. Also, under this agreement, the ACP countries agreed to prohibit hazardous, including radioactive waste imports from any country.

98. Under the terms of the Single European Act, the Convention first had to be approved at the EEC level by at least 260 of the 518 Members of the European Parliament. This occurred on 16 May 1990. Now the 80 contracting parties have a maximum period of 12 months within which to notify the competent EEC and ACP authorities that the Convention has been ratified according to the constitutional procedures operating in each State. The Convention comes into force on the first day of the second month after all of the EEC member states and two-thirds or more of the ACP States have deposited their ratification instruments.

99. Caribbean nations protected under the Lomé IV treaty are Antigua & Barbuda, The Bahamas, Barbados, Belize, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Suriname and Trinidad & Tobago.

OTHER RELEVANT FORA, DECISIONS AND POLICIES

Action Plan for the Environment in Latin America and the Caribbean

100. At the Seventh Meeting of Latin American and Caribbean Environmental Ministers (Port-of-Spain 22-23 October 1990), the Ministers adopted the Action Plan for the Environment. In chapter V "The Strategic Component of the Plan" all the parties agreed to:

> "protect the region by prohibiting, under any circumstances, the entry from outside the region of all types of hazardous, toxic and radioactive wastes and implement monitoring and control mechanisms for the safe transport, treatment and disposal of wastes generated from within the region...."

101. In this meeting participated ministers and/or delegates from the following Wider Caribbean countries: Antigua and Barbuda, Bahamas, Barbados, Belize, Cuba, Dominica, Grenada, Guatemala, Guyana, Haiti, Jamaica, Mexico, Nicaragua, Panama, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago and Venezuela.

Caribbean Community (CARICOM)

102. At the Caribbean Community summit held in Grenada in late July 1989, leaders of 13 Caribbean States endorsed the Port-of-Spain Accord, an important regional document regarding conservation of the Caribbean environment. The accord condemns the dumping of hazardous and toxic wastes in the region from areas outside the region.

UN General Assembly

103. On 20 December 1988, the U.N. General Assembly adopted resolution 43/212, which among other things, urged all States, bearing in mind their respective responsibilities, to take the necessary legal and technical measures to halt and prevent the illegal international traffic in, and the dumping and resulting accumulation of, toxic and dangerous products and wastes; urged all States generating toxic and dangerous wastes to make every effort to treat and dispose of them in the country of origin to the maximum extent possible consistent with environmentally sound disposal."

U.N. Economic Commission for Latin America and the Caribbean-Caribbean Development and Co-operation Committee

104. The 11th session of the Caribbean Development and Cooperation Committee was held in the U.S. Virgin Islands on 18-22 November. The report of the meeting included a statement on international waste trade calling on the governments of developed countries to refrain from exporting wastes and to co-operate with affected countries to eliminate damages from foreign wastes.

Commonwealth Nations

105. In the October 1989 summit meeting in Langkawi, Malaysia, between heads of state of the then 48 and now 50 Commonwealth nations, a strong environmental declaration known as the Langkawi Declaration on the Environment was adopted. This declaration included a commitment to "strengthen international action to ensure the safe management and disposal of hazardous wastes and to reduce transboundary movements, particularly to prevent dumping in developing countries."

London Dumping Convention

106. At the Thirteenth Consultative Meeting of Contracting Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters, (London, 29 October -2 November 1990) contracting parties agreed on a resolution "to prohibit or not to permit the export of wastes for dumping at sea, particularly those containing substances referred to in Annexes I and II of the London Dumping Convention to States not Party to the Convention."

107. Regional parties to the London Dumping Convention include: Costa Rica, Cuba, Dominican Republic, Guatemala, Haiti, Honduras, Mexico, Panama, Saint Lucia, Suriname, and the U.S.A.

The Non-aligned Movement

108. The 9th Non-Aligned Movement summit meeting in September 1989 produced a statement on the environment which, inter alia, "called for the adoption of effective international measures, including conventions and other relevant legal instruments, to prohibit the dumping of toxic and other hazardous wastes in the territories of other countries. They also proposed that the developed countries should, in the meantime, adopt rigorous administrative measures and legislation to ban the export of toxic and other hazardous wastes to the territories of other, especially developing countries."

World Bank

109. World Bank President, Barber Conable on 16th February 1990 stated that "Industrial states have the capacity to dispose of these poisons. They must not be permitted simply to dump them on developing nations that lack even the means to handle their own pollution."

European Community

European Environment Council

110. As noted above the European Environment Council agreed on a policy on 7 June 1990 calling for member states "to take appropriate measures...to enable the Community as a whole to become self- sufficient in waste disposal and the Member States to move towards that aim individually..."

European Parliament

111. The European Parliament voted on May 26, 1989 for a total ban on hazardous waste exports to all developing countries.

Positions of EC Nations

112. During the Environment Council's Permanent Representatives Meeting of 31 May 1990 the delegations of Denmark, Federal Republic of Germany, France, Netherlands, and the U.K. are on record as feeling that in principle there must be national self-sufficiency in waste disposal as well as Community-wide self sufficiency.

FRANCE:

113. France has announced its intention to ban all waste trade nationally. The French Minister of Environment, Brice Lalonde, stated in September 1989 that he expected that an EC accord "will soon be reached requiring each nation to treat its own wastes."

FEDERAL REPUBLIC OF GERMANY:

114. In a German government press release of October 1989, Minister of Environment Topfer announced pending legislation "banning all (waste) exports to developing countries."

UNITED KINGDOM:

115. Chris Patten, the Secretary of the Environment urged all European partner governments to adopt a policy of insisting that richer nations dispose of all their own hazardous waste and to stop sending it abroad for treatment.

ITALY:

116. Europe's most prohibitive waste export law went into effect in Italy in June 1989. This export ban prohibits municipal, special, toxic, and hazardous wastes from being exported from Italy to any non-OECD country.

OTHER:

117. In addition, in a resolution attached to the Basel Convention, Belgium, Denmark, Federal Republic of Germany, France, Greece, Italy, the Netherlands, Portugal, United Kingdom as well as the Commission of the European Communities all committed themselves to "call upon the countries who will sign the Convention to join in making every effort to phase-out exports and imports of wastes for reasons other than for disposal in facilities established within a framework of regional cooperation."

THE AFRICAN EXAMPLE

118. Politically, Africa has been the first to respond to the threat of waste colonialism. In unprecedented numbers, African nations sent delegates to the pre-negotiations of the Basel Convention, only to have their concerns largely ignored by a small but powerful group of industrialized nations.

119. Following the outcome of the Basel Convention, which the African States regarded as a failure, the African States agreed to refrain from signing pending a joint position and response on that Convention and the continuing threat of waste trade. This responsibility was taken up under the auspices of the Organization of African Unity (OAU) which currently includes all African States with the exception of Morocco and South Africa. They are currently in the final stages of drafting an African Convention which among other things would ban all waste imports into the African continent.

The Organisation of African Unity (OAU)

120. The Resolution on the Dumping of Nuclear and Industrial Wastes in Africa declares, inter alia, that "the dumping of nuclear and industrial wastes in Africa is a crime against Africa and the African people."

121. The Resolution on the Global Convention for the Control of Transboundary Movement of Hazardous Wastes, expressed concern that the Basel Convention is "merely aimed at the regulation or control, rather than the prohibition of transboundary movement of hazardous wastes."

122. The Resolution on the Control of Transboundary Movements of Hazardous Wastes and their Disposal in Africa, "commended Member States which have promulgated laws prohibiting all forms of illegal transboundary movements of hazardous wastes into their countries and calls upon those who have not already done so to enact similar laws."

123. This resolution refers to the fact that following the Conference of Plenipotentiaries for Basel Convention, the African Group at the Conference in their disappointment over the outcome of the final Basel text, made a decision not to sign the Convention. The resolution "mandates the Secretary General of the OAU to undertake consultations with the view to adopting a common position on the Basel Convention" and "decides to set up a Working Group composed of legal and environmental experts to draw up a Draft African Convention on the Control of the Transboundary Movement of all forms of Hazardous Wastes in the Continent."

The Bamako Convention

124. This convention, entitled "The Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa" was adopted on 29 January 1991 in Bamako, Mali. Among other things, the Convention strictly bans the importation of all forms of hazardous and nuclear wastes into the African continent. This prohibition includes a ban on the import of products that have been banned for use in the country of manufacture.

CONCLUSION: A WASTE TRADE BAN WITHIN THE CARTAGENA CONVENTION

125. Notwithstanding the efforts of the EC, Basel Convention, Lomé IV, the United States of America, and other national legislations, the threat posed by the international trade in hazardous, including nuclear wastes in the Wider Caribbean region is very real. As is clearly demonstrated in the inventory of waste trade schemes in this report and despite widespread political support for a Wider Caribbean waste trade ban, the region still remains highly vulnerable to foreign waste traders. As can be seen from Table II above, many countries in the region do not have national legal instruments prohibiting waste imports. Strong, region-wide legal accords are thus necessary to protect the Wider Caribbean area from the deadly businesses of hazardous, including nuclear waste trade and the threat of ocean dumping and ocean incineration.

126. The increasing waste treatment capacity shortfall in the U.S.A. and Europe combined with a lax legal regimen to control the exports of waste from these regions, create a huge impetus to export.

127. The Cartagena Convention, as the only convention dealing exclusively with the issue of pollution problems affecting the Wider Caribbean region, is better positioned than any other international convention to protect the countries of the Caribbean region from becoming victims of waste importation and dumping.

128. Earlier meetings of the parties to the Cartagena Convention have demonstrated wide support for a waste trade ban within the Convention. At the First Meeting of the Contracting Parties to the Convention, Guadeloupe, October 1987, numerous delegations supported the concept of a regional waste import ban. In August 1988, at an informal meeting of governmental and non-governmental experts in Boquete, Panama, experts from nine countries resolved to urge all parties to the Cartagena Convention "to prohibit the importation and transit of hazardous waste in the Wider Caribbean region." Experts represented there included those from Colombia, Costa Rica, Cuba, the Dominican Republic, Guatemala, Honduras, Nicaragua, Panama and Venezuela.

129. At the Fifth Intergovernmental Meeting on the Action Plan for the Caribbean Environment Programme and Second Meeting of the Contracting Parties to the Convention for Protection and Development of the Marine Environment of the Wider Caribbean Region, held in Kingston on 17-18 January, 1990, a resolution was adopted, see Annex III to this report, which called for, *inter alia*, the preparation of:

    "an assessment of the nature of such movements (hazardous wastes) in the Wider Caribbean Region...and to suggest a mechanism to assist Contracting Parties...in monitoring the movement of all forms of hazardous wastes...and urges the Monitoring Committee and the Bureau at their next meeting to decide on the steps deemed appropriate in order to mitigate and avoid the negative environmental implications of the transboundary movement of hazardous wastes into the Wider Caribbean Region".

130. And finally the goal of a waste trade ban was adopted at the Ministerial level at the Seventh Meeting of Latin American and Caribbean Environmental Ministers (Port-of-Spain 22-23 October 1990), the Ministers adopted the Action Plan for the Environment of Latin America and the Caribbean. In chapter V, "The Strategic Component of the Plan," all the parties agreed to:

    "protect the region by prohibiting, under any circumstances, the entry from outside the region of all types of hazardous, toxic and radioactive wastes and implement monitoring and control mechanisms for the safe transport, treatment and disposal of wastes generated from within the region...."

131. Given the decisions made above, and especially bearing in mind the regional agreement adopted by the African States (The Bamako Convention) which is seen as a valuable model, Greenpeace urges the Monitoring Committee and the Bureau to draft a legal instrument to specifically ban hazardous, including nuclear waste trade and ocean incineration within the region as a logical development of the Cartagena Convention consistent with other national, regional and global initiatives.

132. The priorities for the Cartagena Convention in halting the international trade in hazardous, including nuclear wastes should consist of the following principles:

    i. To prevent wastes from moving for economic reasons, for example to avoid environmental costs at the expense of poorer economies or regulatory structures. Such economically motivated movement of hazardous wastes works in direct contravention to the goal of waste minimization at source, clearly stated in the Basel Convention. "Each party shall take the appropriate measures to ensure that the generation of hazardous and other wastes within it is reduced to a minimum..."

    ii. To prevent, abate and combat the pollution related to transboundary movement and disposal of hazardous and nuclear wastes, including from deliberate dumping or incineration at sea.

133. It is Greenpeace's contention that the above two goals will best be served by a prohibition rather than a regimen of notification and consent such as "prior informed consent" (PIC). Within such a system wastes can still move with facility for purely economic reasons while being disastrous to the marine environment.

134. Thus Greenpeace strongly recommends taking the steps taken already by the Lomé IV Convention and the Bamako Convention, in choosing the route of strict waste import and export prohibition.

135. Such a move would be entirely consistent and in keeping with the global Basel Convention. That Convention foresaw the need for certain regional bodies or other groups of States to take stronger measures than the Basel obligations, to ensure greater protection by allowing bilateral or multilateral agreements "which are not less environmentally sound than those provided for in this Convention in particular taking into account the interests of developing countries."

136. It is important to recognize however, that for the near future, a complete and absolute ban on waste trade, although an appropriate goal, is not feasible due to the lack of any sort of waste management infrastructure in many developing countries to deal with such things as monitoring, storage or minimization of domestically produced wastes. Many developing countries, in the desire to become more industrialized, have been unwittingly victimized by technology transfer without the transfer of such a management infrastructure or the necessary funding to maintain such an infrastructure. For this reason, wastes may need to be exported, for an interim period and for environmental reasons, from developing to developed countries, until such time as such infrastructure (clean production methodologies) are in place.

137. Greenpeace recommends that any legal instrument to combat waste trade in the region, consist of the following three obligations:

i. **An immediate suspension of the import from developed countries of all hazardous, including nuclear wastes into the territories of Contracting Parties which are developing countries.**

ii. An immediate suspension of the export of all hazardous, including nuclear wastes from Contracting Parties which are developed countries, to any developing countries.

iii. An immediate suspension of the ocean dumping of all contaminants which may cause harm to human health or the marine environment, including the dumping activities from ships, airplanes, platforms at sea, sub-sea bed disposal as well as ocean incineration.

Note: Developed countries should be defined as members of the organization for Economic Cooperation and Development. Likewise developing countries should be defined as non-OECD, for the purposes of this issue.

138. Not only would such a legal instrument serve to protect the political and environmental interests of the Caribbean States, but it would also serve as a vital precedent for other United Nations Environment Programme (UNEP) regional seas conventions. Already, the coastal states participating in several other equivalent conventions, including the Abidjan Convention, the Lima Convention, the Barcelona Convention and the South Pacific Regional Environment Programme have indicated to UNEP their interest in developing mechanisms to control the transboundary movement of hazardous wastes. The Cartagena Convention could lead the way in protecting coastal nations by developing an instrument which bans waste imports into the region.

139. **Greenpeace accordingly urges the Monitoring Committee and the Bureau of the Contracting Parties to Cartagena Convention to make a formal decision to begin negotiations towards a regional agreement to create a legally binding instrument within the Cartagena Convention, which would take account of the special situation in the Wider Caribbean region and prohibit all shipments of hazardous including nuclear wastes into the region**

ANNEX I -- DOMINICAN REPUBLIC, TOXICS IMPORT LAW

Law Number 218

The National Congress
In the Name of the Republic

Considering: That it is necessary to protect the country from the introduction to its territory of substances that threaten the life and health of its inhabitants, as well as of its flora and fauna;

Considering: That in the country pharmaceuticals and pesticides are being used freely that, due to their high level of danger, have been banned, not permitted, or have been taken out of the use for which they had been originally patented;

Considering: That many of these products and substances can cause to the population grave or incurable illness, epidemics, permanent lesions in the vital systems and genetic defects.

In view of: paragraph 17 of article 8 of the Constitution of the Republic;

In view of: law number 4471 of 29 May 1956, that institutes the Code of Public Health;

In view of: law number 311, of 22 May 1968, that regulates the management of pesticides,

Has Given the Following Law:

Article 1.- It is forbidden to bring into the country by any means, human or animal excrement, domestic or municipal wastes and their derivatives, muds or sewage sludges, treated or not, as well as toxic wastes derived from industrial processes, that contain substances that could infect, contaminate and/or degrade the environment and put in danger the lives and health of the inhabitants, including chemical compounds and combinations, traces of heavy metals, residuals of radioactive materials, undetermined acids and alkalis, bacteria, viruses, eggs, larvae, spores, fungus and phytopathogens.

Article 2.- It is prohibited to produce, import or market pharmacological products and pesticides whose use is banned, severely restricted or discontinued, because of their danger, by the health authorities and the environmental protection authorities in the country where the original patent has been registered.

Article 3.- Pharmaceuticals and pesticides the use and selling of which are restricted in their countries of origin, due to their potential danger, may only be marketed under the strict control of the Secretaries of State, of Public Health and Social Assistance, and of Agriculture.

Paragraph: - It is prohibited to import pharmaceuticals developed with human blood coming from countries that are affected by sicknesses that can be transmitted to a recipient patient as in the case of the use of Gammaglobulin.

Article 4.- The Executive Power will be entrusted with developing the corresponding regulations to duly implement that which this law requires.

Delivered in the Meeting Room of the Chamber of Deputies, Palace of the National Congress in Santo Domingo de Guzmán, National District, Capital of the Dominican Republic, on the 13th day of the month of March in the year 1984: 141 years after the Independence and 121 years after the Restoration.

Hugo Tolentino Dipp
President

Tony Raful Tejada
Secretary

Carlos B. Lalane Martinez
Secretary

Delivered in the meeting room of the Senate, Palace of the National Congress, in Santo Domingo de Guzmán, National District, Capital of the Dominican Republic, on the 22nd day of the month of May in the year 1984, 141 years after the Independence and 121 years after the Restoration.

Jacabo Majluta Azar
Presidente

Rafael Fernando Correa Rogers
Secretario

Jose Antonio Constanzo Santana
Secretario

SALVADOR JORGE BLANCO
President of the Dominican Republic

In exercise of the rights bestowed upon me in Article 55 of the Constitution of the Republic.

I proclaim the present law and mandate that it is published in the Official Gazette for its acknowledgement and completion.

Given in Santo Domingo de Guzmán, National District, Capital of the Dominican Republic, on the 28th day of the month of May in 1984; 141st year after the Independence and the 121st year after the Restoration.

SALVADOR JORGE BLANCO

ANNEX II -- ARTICLE 39, LOME IV CONVENTION

1. The Contracting Parties undertake, for their part, to make every effort to ensure that international movements of hazardous waste and radioactive waste are generally controlled, and they emphasize the importance of efficient international co-operation. in this area.

2. With this in view, the Community shall prohibit all direct or indirect export of such waste to the ACP States while at the same time the ACP States shall prohibit the direct or indirect import into their territory of such waste from the Community or from any other country, without prejudice to specific international undertakings to which the Contracting Parties have subscribed or may subscribe in the future in these two areas within the competent international fora.

These provisions do not prevent a Member State to which an ACP State has chosen to export waste for processing from returning the processed waste to the ACP State of origin.

The Contracting Parties shall expedite adoption of the necessary internal legislation and administrative regulations to implement this undertaking. At the request of one of the Parties, consultations may be held if delays are encountered. At the conclusion of such consultations each Party may take appropriate steps in the light of the situation.

2. The Parties undertake to monitor strictly the implementation of the prohibition measures referred to in the second pargraph of paragraph 1. Should difficulties arise in this respect, consultations may be held subject to the same conditions as those provided for in the second paragraph of paragraph 1 and with the same effect.

3. The term "hazardous waste" within the meaning of this Article shall cover categories of products listed in Annexes 1 and 2 to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

As regards radioactive waste, the applicable definitions and thresholds shall be those which will be ladi down in the framework of the IAEA. In the meantime, the said definitions and thresholds shall be those specified in the declaration in Annex VIII to this Convention.

ANNEX III -- RESOLUTION NO. 1 OF THE FIFTH INTERGOVERNMENTAL MEETING ON THE CARIBBEAN ENVIRONMENT PROGRAMME AND SECOND MEETING OF CONTRACTING PARTIES TO THE CARTAGENA CONVENTION

TRANSBOUNDARY MOVEMENT OF ALL FORMS OF HAZARDOUS WASTES

The meeting:

NOTING with great concern the problems created in the Wider Caribbean Region by the transboundary movement of all forms of hazardous wastes,

RECALLING the Basel Convention on the Control of Transbounary Movements of Hazardous Wastes and the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter,

AUTHORIZES the Secretariat to address an appeal to the Contracting Parties and to the other States and territories of the Wider Caribbean Region urging them to adopt strong national and international measures to control the transboundary movement of all forms of hazardous wastes in the region,

INVITES Governments to provide the Secretariat with information about movements of hazardous wastes in the Wider Caribbean Region,

REQUESTS the Secretariat to prepare within six months as assessment of the nature of such movements in the Wider Caribbean Region, including the carriage of all forms of hazardous wastes by ships transiting the Wier Careibbean Region, and to submit it to the next meeting of the Monitoring Committee,

FURTHER REQUESTS the Secretariat to suggest a mechanism to assist Contracting Parties and the other states and territories of the Wider Caribbean Region in monitoring the movement of all forms of hazardous wastes in and through the Wider Caribbean Region, and, in the light of this assessment,

INSTRUCTS the next Meeting of the Monitoring Committee and of the Bureau to examine the information provided by the States and Territories on the problems they have encountered by the transboundary movement of hazardous wastes, examine similar protocols, and take into account the comments of the governments,

The meeting **FURTHER URGES** the Monitoring Committee and the Bureau at their next meeting to decide on the steps deemed appropriate in order to mitigate and avoid the negative environmental implications of the transboundary movement of hazardous wastes into the Wider Caribbean Region.

ANNEX IV -- RELEVANT GREENPEACE PUBLICATIONS

1. Jim Vallette, The International Trade in Wastes: A Greenpeace Inventory, Fifth Edition. (Greenpeace USA, Washington D.C.) December 1990.

2. Greenpeace Waste Trade Updates, published quarterly, Volumes 1-3, 1988-1990.

3. "Critique of the Proposal for a Council Regulation on the Supervision and Control of Shipments of Waste Within, Into and Out of the European Community", Greenpeace International, 14 January 1991.

4. "Briefing On Radioactive Waste Dumping At Sea. The Controversy Over Ocean Dumping of Radioactive Wastes: The London Dumping Convention", Stichting Greenpeace Council, 1989

5. Lisa J. Bunin, Ocean Incineration: The Case for a Global Ban, 2nd Edition, Stichting Greenpeace Council, October 1988.

6. "Let the Earth Breathe...Stop Incineration", Greenpeace International, Fact Sheet, December 1990.

7. Leo Baas, et al., Protection of the North Sea: Time for Clean Production, Erasmus Centre for Environmental Studies, Erasmus University, Rotterdam, February 1990.

8. "Clean Production Contact and Reference List", Greenpeace International, March 1990.

9. "The Saga of the Philadelphia Ash Flotilla, Including the KHIAN SEA, the BARK and the BANYA (A Chronological review through newspaper clippings 1984-1988)", Greenpeace USA, 1988.

10. "Burnt Offerings: Greenpeace's Report on Philadelphia's Planned Ash Shipments to Panama", Greenpeace USA, 8 September 1987.

11. Judy Christup, "Return to Sender: Clamping Down on the International Waste Trade," Greenpeace Magazine, Vol. 13, No. 6, November/December 1988, P. 8 - 11.

12. "A Critical Analysis of the Assimilative Capacity Approach, Greenpeace submission to the Thirteenth Meeting of the London Dumping Convention's Scientific Group on Dumping", 23-27 April 1990.

13. "Precaution; a Scientifically Rigorous Approach", Greenpeace submission to the Thirteenth Meeting of the London Dumping Convention's Scientific Group on Dumping, 23-27 April 1990.

Note: All documents are available from Greenpeace International Waste Trade Campaign. Greenpeace International, Keizersgracht 176, 1016 DW Amsterdam, Netherlands, or Greenpeace U.S.A., 1436 U Street N.W., Washington, D.C. 20009, U.S.A.