

Appendix A: Chronology

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Key

Red – major hazardous waste incidents

Blue – adoption of global treaties

Violet – adoption of regional treaties

1956

Cause of “Minamata Disease” (severe neurological damage leading to movement difficulties and loss of senses) identified eating fish contaminated with methylmercury dumped into local waters by Chisso Chemical Company plant.

1962

Publication of Rachel Carson’s *Silent Spring* draws public attention to the dangers of overusing pesticides.

1968

Hundreds of people in Yusho, Japan poisoned by eating rice accidentally contaminated with high levels of PCB (polychlorinated biphenyl).

1970

Early 1970s Major public outcry regarding use of “Agent Orange” (a dioxin-based herbicide) by US troops in South Vietnam.

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- 1972**
Adoption of International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter.
- 1973**
Feb OECD Environment Council adopts rules for restricting use of PCBs.
- 1976**
EU adopts its first directives on limiting marketing and use of hazardous chemicals.
- Jul Leak of dioxin gas from chemical plant in Seveso, Italy kills animals and sends 2000 people to hospital for treatment.
- Mid-1970s Several regional treaties on banning the dumping of hazardous substances into oceans or rivers.
- 1977**
May UNEP Governing Council resolution calls for adoption of prior informed consent rules for all shipments of hazardous chemicals from industrial to developing countries.
- Late 1970s Revelations of harm caused by leaks of toxic chemicals originally dumped in the 1930s-1950s in the Love Canal area near Niagra Falls, New York.
- 1979**
Nedlog Technology Group of Arvada, Colorado USA offers the President of Sierra Leone US\$25 million to establish a waste disposal site on that country's territory.
- 1981**
May UNEP begins its Montevideo Program promoting development of better international standards for cooperation regarding disposal of hazardous wastes.
- 1982**
Summer Dioxin-contaminated residues from the chemical plant responsible for the July 1976 Seveso disaster in Italy are removed from the plant site, packed into 41 metal drums for removal to a licensed hazardous waste site in an operation approved by the Italian government. The drums were shipped abroad and disappeared.
- Sep OECD Waste Management Policy Group proposes development of guidelines for export and import of hazardous wastes.
- Dec UN General Assembly resolution 37/137 calls for establishment of prior informed consent before export of chemicals, the use of which is banned in the exporting country.
- 1983**
Early 1983 Metal drums found in France are identified as some of the 41 missing Seveso drums.

1984

- Feb OECD Council decision on cross-border transfer of toxic and hazardous substances commits the OECD member countries to regulating transboundary movements of hazardous chemicals. The decision includes requirement that governments of countries from which chemicals are being exported and to which they are being imported have "adequate and timely" information about the shipment.
- Jun OECD Seminar on the Legal and Institutional Aspects of Transboundary Movements of Hazardous Wastes.
- Dec Leak of methyl isocyanate gas from chemical plant in Bhopal, India causes 4000 deaths and permanently disables thousands more.

1985

- Nov FAO adopts a code of conduct on sale and use of pesticides.

1986

- Aug Cargo ship *Khian Sea* is loaded with 14,000 tons of toxic waste from Philadelphia, Pennsylvania USA. The companies handling waste initially intended to dump it into a man-made island in the Bahamas, but the Bahamian government refused to permit the dumping.

1987

- XX Italian waste broker firms Ecomar and Jelly Wax sign a contract with Nigerian businessman to use the latter's properties as storage of 18,000 drums of hazardous waste for approximately \$100 a month. Though the contract is illegal under Nigerian law, the government remained unaware of it. Wastes are exported from Pisa, listed as "substances relating to the building trade, and residual and allied chemicals" to evade customs inspection.
- Early 1987 Piles of hazardous waste transported from Italy to the small town of Koko, Nigeria are discovered. Nigerian officials hire more than 100 local workers to remove the wastes. Many of them were hospitalized with chemical burns, nausea, or paralysis because they lacked sufficient protective equipment. The Italian government later agreed to pay for returning the wastes to Italy.
- Jun UNEP adopts Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes. The exporter is required to ensure the site where the wastes will be sent meet safety requirements. Exporters are also required to secure prior informed consent from governments of states whose territories will be crossed or where the wastes will be stored before moving them.
- UNEP adopts London Guidelines on trade in hazardous chemicals; it does not include prior consent for international shipments.

- Jul Greenpeace begins a global campaign against international trade in hazardous wastes. It claims that waste traders have already exported more than 163,000,000 tons of waste by 1986.
- Sep Jelly Wax begins shipping more than 2400 tons of chemical wastes from Italy to Lebanon, using ports outside government control.
- Oct Organizational meeting of the [UNEP] Ad Hoc Working Group of Legal and Technical Experts to Prepare a Global Convention on the Control of Transboundary Movements of Hazardous Wastes.
- 1988**
- May Organization of African Unity foreign ministers meeting adopts a resolution calling on member states to "refrain from entering into a gray mess or arrangements with any industrialized countries on the dumping of nuclear and hazardous industrial waste on African territories."
- Jun Barrels of Italian-origin hazardous waste that had been dumped at sea are discovered on beaches near the southern port of Tyre. The Lebanese government is unable to get the Italians to remove the wastes, but threats by a group calling itself the "Organization of Preserving the Lebanese Right" threatened to attack Italian interests in Lebanon unless the Italian government removed the wastes within one week.
- 11th Summit of the Economic Community of West African States adopt a resolution condemning toxic waste exports, calling on member governments to adopt national legislation against acceptance of foreign wastes, and establishes a committee—"Dumpwatch"—to monitor the waste trade in West Africa.
- Jul Meeting of the Latin American and African states participating in the Zone on Peace and Cooperation of the South Atlantic adopt a resolution strongly condemning the transfer of hazardous wastes into the region. Nigeria suggests the South Atlantic states join "Dumpwatch." 7/1988
- Return of the wastes shipped to Nigeria in 1987 precipitate massive protests among populations living in the Italian cities where they will be unloaded or stored.
- 1989**
- Jan 4000 tons of the *Khian Sea's* waste is dumped in Haiti as "topsoil fertilizer" after efforts to get disposal permits from the governments of Honduras, Panama, Bermuda, the Dominican Republic, and the Dutch Antilles all failed. Haitian government identified the cargo as toxic and demanded it be reloaded but the ship had already left port.
- Mar Lebanese delegate to the conference negotiating the Basel convention gives a report on imports of Italian waste. The Lebanese government claims a total of 16,000 barrels and many other containers of chemical wastes were delivered as raw materials or as recycling goods to various Lebanese companies, with 9000 barrels of waste still on location in the

mountains. He characterizes the exporters as “Italian Mafia-dealers”. He shows photographs of children suffering from skin burns caused by contact with toxic wastes.

Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal is signed on the 22nd. It establishes a set of rules intended to reduce the cross-border of hazardous waste and to prevent the transfer of hazardous waste from industrial countries to developing countries. The convention also requires parties to make illegal hazardous waste traffic a criminal offense under their national laws.

May OAU health ministers adopt a resolution establishing a regional environmental surveillance agency for Africa to monitor radioactive and toxic waste contamination on the continent.

UNEP adds prior informed consent procedure to London Guidelines on Hazardous Chemicals.

Nov The rest of the *Khain Sea* cargo is dumped in the Atlantic and Indian Oceans after efforts to receive permission from several countries – including Senegal, Morocco, Yugoslavia, and Singapore – also fail.

Dec African, Caribbean, and Pacific (ACP) states get European Union to include a ban on sending toxic wastes to the 69 ACP states in Article 39 of the Lome IV Convention revising the EU trade preference system for the ACP.

1990

Oct Seventh Ministerial Meeting on the Environment in Latin America and the Caribbean. Environment Ministers agree to reject waste trade proposals that would involve accepting imports for disposition in their countries.

Dec Presidents of 6 Central American states agree to propose laws banning all imports of toxic wastes (actual adoption lagged because of need for separate legislative action).

1991

Jan 12 African states signed the Bamako Convention on the Ban on the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa. The convention bans imports from outside Africa, bans dumping toxic waste at sea, and establishes a prior informed consent regime for waste trade between African countries.

1992

Mar A South Carolina, USA-based company exports more than 3000 tons of toxic waste to Bangladesh in containers labeled “fertilizer”.

G77 and China agree to press for a ban on international trade in hazardous wastes during a preparatory meeting for the Rio Conference.

May Basel Convention takes effect for participating states.

- Jun Rio Conference adopts Agenda 21. Chapter 19 calls for establishment of a legally binding mandatory PIC regime for all hazardous chemical shipments.
- 1993**
- Feb EU adopts Regulation 259/93 banning all exports of hazardous wastes intended for disposal as of 1 Jan 1994.
- Jul Owners of Coastal Carrier, the company managing the Khian Sea, are charged with illegal dumping and perjury.
- Sep Association of Southeast Asian Nations (ASEAN) agrees to establish a regional ban on importation of hazardous wastes.
- Oct Participants in the UNEP Mediterranean Sea program agree to support banning exports of hazardous wastes from developed to developing countries.
- 1994**
- Jan IUCN adopts resolution calling for ban on all exports of hazardous wastes from developed to developing countries covering wastes to be recycled as well as wastes for disposal.
- Mar Second Conference of the Parties to the Basel Convention (Basel COP-2) agrees to ban export of hazardous wastes from OECD countries to non-OECD countries. Ban on exporting wastes meant for final disposal is effective immediately; ban on exporting wastes intended for recovery or recycling will take effect on 31 December 1997.
- 1995**
- May Experts participating in Basel Convention sponsored Dakar Workshop on Ban Implementation agree that definition of the term "hazardous waste" needs to be clarified.
- Sep Waigani Convention to Ban the Importation into Forum Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movements and Management of Hazardous Wastes within the South Pacific Region adopted by members of the South Pacific Forum. The convention bans imports from outside and establishes a mechanism for mutual assistance in cleaning up hazardous and nuclear wastes.
- Basel COP-3 proposes amendment to Basel Convention banning all exports of hazardous wastes from OECD-member states to other states. Ban requires ratification by a majority of participating states to become effective.
- Dec Basel Convention technical Working Group begins work on identifying wastes to be put on Annex I (categories of wastes to be controlled), Annex II (categories of waste requiring special consideration), and Annex III (list of hazardous characteristics) lists of wastes.
- 1997**
- Jan Basel COP-4 adds plastics to the list of wastes being considered for possible classification as hazardous.

- Feb Basel Technical Working Group presents completed lists of substances to be defined as hazardous.
- Aug City of New York agrees to license Joseph Paolino and Sons, the disposal firm that hired the Khian Sea, to operate in the city on condition they take responsibility for the cleanup of the wastes in Haiti. The company agrees to take the waste back. Greenpeace and Haitian environmental groups launch a fund-raising campaign to which the city of Philadelphia contributes \$50,000.
- 1998**
- Jan OECD ban on exports of hazardous wastes from member countries to non-OECD countries becomes effective.
- Feb OECD countries refuse to allow exceptions to the ban covering exports of hazardous waste to Israel and Slovenia. The USA, Australia, Canada, and New Zealand had sought exception but were denied. The meeting also agreed on 20 amendments to clarify the ban, including provisions for lists of hazardous and non-hazardous substances.
- Apr Bamako Convention becomes effective on the ninetieth day after the date of deposit of the tenth instrument of ratification from Parties' signatory to this Convention.
- Jun Parties to Convention on Long-Range Transboundary Air Pollution add protocol, limiting emissions of listed POPs.
- Multilateral conference on regulating POPs.
- Sep Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade is signed. This extends prior informed consent procedures to all trade in 27 listed substances.
- Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade is adopted.
- Dec Formosa Plastics Group (Taiwan) arranges for illegal dumping of 3,000 tones of mercury-contaminated wastes in a village near the port of Sihanoukville, Cambodia. Two of the workers handling the waste die, more are killed in panic-induced rioting afterward. Formosa Plastics refuses to pay compensation for any losses and continued trying to export their wastes to other communities around the world.
- 1999**
- Apr Basel Working Group agrees to consider whether ship breaking should be regarded as producing hazardous wastes despite opposition from JUSCANZ (Japan, USA, Canada, Australia, New Zealand) and South Korea.
- Dec Parties to the Basel Convention adopt a Protocol on Liability and Compensation.

- 2000
Apr Waste Management Inc. removes 2500 tons of hazardous waste from Haiti and takes it to Florida. In June 2002 it is moved to a hazardous waste site in Pennsylvania.
- 2001
May Stockholm Convention on Persistent Organic Pollutants (POPs) adopted.
- 2003
Oct Convention on Long-Range Transboundary Air Pollution POPs protocol becomes effective.
- 2004
Feb Rotterdam Convention becomes effective.
May Stockholm Convention becomes effective; covers 12 POPs.
- 2006
Feb Rotterdam rules take effect for 39 specified chemicals.
Nov Basel 8th COP formally adds disposal of electronic waste and ship breaking to the list of activities to be assessed for hazards.

Main Sources used to develop this chronology:

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