

Hazardous Wastes and their Disposal

Wastes have been understood globally to mean substances or objects that are :-

- disposed of, intended to be disposed of,
- or required to be disposed of under provisions of national law.

Hazardous wastes are a subset of waste that can cause harm to human health and/or damage to the environment.

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Hazardous substances include by products that are explosive; flammable, radioactive; liable to spontaneous combustion, emit flammable gases upon contact with water, poisonous, infectious, corrosive, toxic and those that are capable of yielding another harmful substance after disposal.

They include waste containing harmful compounds such as *arsenic, cadmium, mercury, lead, acidic solutions, organic phosphorus, halogenated organic solvents phenols.*

Hazardous Wastes and their Disposal

- The wastes **originate** from a variety of **sources** including a wide range of production processes medical care in hospitals and domestic garbage.
- As the world becomes more developed and societies become larger with affluent consumption patterns, a wide range of industrial, commercial, construction, agricultural, medical and even domestic activities have increased and increased waste including hazardous as well.
- Eg. A report recorded that the EU generate some 1.3 billion tonnes of waste every year of which over 36 million tonnes are Hazard-wastes.

Hazardous Wastes and their Disposal

Other concerns of Hazardous wastes include:-

- The amount of waste generated, the adverse health and environmental impacts of hazardous substances & their by products;
- Increase of improper handling and unsafe disposal methods and practices;
- Industry and other sectors are in dire need of alternative disposal sites/facilities;

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Eg effects of hazardous waste

The mishandling of sulfur can cause Chemical burns. A chemical used to control pests called (dibromochloropropane) when mishandled has the propensity to cause toxic effects on the reproductive system, resulting in reduction in sperm count in men which leads to sterility.

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Other concerns of Hazardous wastes include:-

Although there is no scientific certainty about the hazards of all wastes, studies have confirmed & revealed the danger of many wastes their toxicity, carcinogenicity, mutagenicity, corrosivity and other characteristics harmful to human health and environment.

The revelations were a basis for international action, they stimulated tightening of regulations, the cost of haz waste disposal rose, search for cheaper ways of disposing waste within and abroad, including in the high seas began.

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The result was:-

A lucrative and scandalous international trade in hazardous wastes (illegal traffic/trade in waste), basically involving exports of hazardous wastes from industrialized countries where they could no longer be economically disposed off safely, to developing countries in need of hard currency, with no knowledge of the hazardous nature nor capacity to safely dispose off the waste safely.

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Other problems of Hazardous wastes include

- The practice of manufacturers of concealing information about the nature of waste generated in their production processes in the name of trade and business secrets.
- Another problem is traders in toxic wastes conceal the nature of waste they handle especially waste exports.
- This affects the ability of recipient countries to take appropriate measures.

International response to hazardous waste

- Bilateral and Multilateral agreements;
- 1972 Prevention of Marine Pollution by dumping of waste and other matter (London Dumping);
- 1989 Basel Convention; 1991 Bamako Convention; 1992 Agenda 21 Chapter 20,21; 1995 Waigani Convention of South Pacific region; 1999 Protocol to Basel on Liability and Compensation for damage ..; Marine Environmental Compensation and Liability Agreements; Marine Pollution Prevention Agreements; Regional Seas Agreements.

Basel Convention on the Control of Trans-boundary Movement of Hazardous Wastes and their Disposal

- The Basel Convention was adopted in 1989, it came into force in 1992;
- The Convention has 170 Parties;
- It is a most comprehensive global environmental agreement on hazardous and other wastes adopted for the purpose of protecting human health and the environment against the adverse effects resulting from the generation, management, transboundary movement and disposal of hazardous and other wastes.

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Scope of the Convention

Wastes contained in Annex 1 and II and further clarified in Annex 8 & 9 unless they do not possess characteristics of Annex III;
Wastes considered to be hazardous by national legislation;

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The Main goal of the Convention

To protect, by strict control, human health and the environment against the adverse effects which may result from the generation and management of hazardous waste and other wastes;

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Definition of waste accord to Article 2

for the purpose of the Basel Convention
Wastes are substances or objects which are disposed of or are intended to be disposed of or required to be disposed of by the provisions of national law.

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- Examples of wastes:

Obsolete stocks of pesticides

Biomedical/healthcare wastes

Used oils; Used lead acid batteries; POPs waste; Electronic Waste (e-waste); Mobile phones; Ships destined to be dismantled

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Mechanisms of the Convention

The regulation of the transboundary movement of hazardous wastes; Prior Informed Consent (PIC) Procedure; Prohibition of exports without an Art 11 agreement;

Shipments made without following the procedures are illegal. Illegal traffic is criminal through each parties legislation;

Parties to take measures to ensure environmentally sound management of hazardous waste (ESM).

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Notification Procedure to involve exporter generator to agree with disposer on ESM of waste. State of Export, Import and Transit States to be involved.

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Obligations of parties,

- Inform the secretariat within six months of becoming a party waste considered by their national law to be hazardous other than those listed in Annex 1 and 2;
- Inform other parties on measures taken to prohibit the import of haz wastes;
- Ensure reduction waste to a minimum;
- Ensure adequate disposal facilities for Env Sound Management of Waste

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- Ensure persons involved in management of waste take steps to prevent pollution or minimize the consequence if the pollution occurs;
- Reduce to a minimum the transboundary movement of hazardous waste and other waste consistent to the sound and efficient management of such waste
- Not allow export to countries who have prohibited by legislation all such imports;
- Prevent waste if there is reason to believe the waste will not be handled in an environmentally sound manner.

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- Take appropriate legal, administrative and other measures to implement the Conv;
- Prohibit all persons under its jurisdiction from transporting or disposing of waste unless authorized
- Require that waste being transported be packaged, labelled and transported according to the rules;
- Require that the consignment be accompanied by a movement document from the export country to the point of disposal.

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- Require the exported waste to be managed in the environmentally sound manner;
- Export only when unable to dispose waste efficiently and in sound manner, or when required as raw material for recycling and recovery industry in the state of import;
- Designation of competent authorities and focal point, one authority to be designated to receive notification in case of a State of transit

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- Transboundary movement between parties is regulated under article 6 of the Convention;
- Notification by export country generator or exporter has to be done in writing;
- Consent has to be in writing from transit country and importing country as well before the movement begins.
- If the transboundary movement cannot be completed there is a duty of the state of export to re-import.

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- Developments after the adoption of the Convention;
- -The 1995 Ban amendment
- -Illegal traffic
- -Financial mechanisms;
- -Secretariat; Regional Capacity building Centres;

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- Theme - *Waste Management for Human Health and Livelihood*
- Basel Convention Regional Coord Centres
- Env Sound Management of used tyres; mercury wastes; persistent organic pollutants (POPs)
- Nairobi Decl on the Environmentally Sound Management of Electrical and Electronic Waste.
- Dismantling of ships (steered by IMO in collaboration with the Basel Secretariat (joint working group of IMO and Basel convention);

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- Co-operation and coordination among the Basel, Rotterdam and Stockholm Conventions
- -to strengthen implementation of the 3 conventions at all levels;
- -to maximize efficiency on the use of resources, to respect legal autonomy of the conventions,
- -to focus on joint activities, (resource mobilization services, joint legal services, information technology public awareness),
- -to adopt a step by step approach while avoiding additional bureaucratic layers.

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- Co-operation and coordination among the Basel, Rotterdam and Stockholm Conventions-CONT
- The recommendations made are mainly in five clusters namely organizational, technical matters, public awareness, administrative issues, and decision-making.
- Most of the delegates of COP 8 supported the recommendations as a way of supporting the UN system-wide coherence and coordination and as a good example of the International Environmental Governance debate.

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boundary Movement of Hazardous Wastes and
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Thank you.