

SOLID WASTE AND ITS MANAGEMENT

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WASTE

- ▶ It is defined as:
Waste is any unwanted or useless materials.
- ▶ Waste is also known as **rubbish, trash, refuse, garbage or junk**



TYPES OF WASTE

- ▶ Solid Waste
 - ▶ Liquid Waste
 - ▶ Gaseous Wastes
 - ▶ Biodegradable waste
 - ▶ Biomedical waste
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- ▶ Chemical waste
 - ▶ Commercial waste
 - ▶ Construction waste
 - ▶ Consumable waste
 - ▶ Composite
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SOLID WASTE

- ▶ It is defined as:
“Non-liquid, non-soluble materials ranging from municipal garbage to industrial wastes that contain complex and sometimes hazardous substances”



TYPES OF SOLID WASTE

- ▶ Broadly there are 3 types of waste which are as follows:
 1. **Household waste** is generally classified as **Municipal waste**
 2. **Industrial waste** as **Hazardous waste**
 3. **Biomedical waste** or **Hospital waste** as **Infectious waste**

MUNICIPAL SOLID WASTE

- ▶ **Municipal solid waste consists of:**
 - Household waste
 - Construction and demolition debris
 - Sanitation residue
 - Waste from streets

▶ Household wastes that can be categorized as hazardous waste include:

- Old batteries
- Shoe polish
- paint tins
- Medicine bottles
- Clothes etc.



HAZARDOUS OR INDUSTRIAL WASTE

- ▶ Industrial is considered hazardous as they may contain toxic substances.
- ▶ Hazardous wastes could be highly toxic to humans, animals, and plants.
- ▶ **They are:**
 - Corrosive
 - Highly inflammable, or explosive
 - React when exposed to certain things e.g. gases

- ▶ In the industrial sector, the major generators of hazardous waste are the metal, chemical, paper, pesticide, dye, refining, and rubber goods industries.



HOSPITAL WASTE OR BIOCHEMICAL WASTE

- ▶ Hospital waste is generated during the diagnosis, treatment, or immunization of human beings or animals
- ▶ It may include wastes like
 - Sharps
 - Soiled waste
 - Disposables
 - Discarded medicines
 - Chemical wastes



CAUSES OF SOLID WASTE

- ▶ The increase in the quantity of solid waste is due to:
 - Overpopulation,
 - Affluence (material comfort)
 - Technological advancement
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EFFECTS OF SOLID WASTE

- ▶ **A) HEALTH HAZARD**
 - ▶ **B) ENVIRONMENTAL IMPACT**
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A) HEALTH HAZARD

- ▶ If solid wastes are not collected and allowed to accumulate, they may create unsanitary conditions.
- ▶ Many diseases like cholera, diarrhea, dysentery, plague, gastro-intestinal diseases may spread and cause loss of human lives.
- ▶ In addition, improper handling of the solid wastes is a health hazard for the workers who come in direct contact with the waste

B) ENVIRONMENTAL IMPACT

- ▶ If the solid wastes are not treated properly, decomposition and decay may take place.
 - ▶ The organic solid waste during decomposition may generate obnoxious (intolerable) odors.
 - ▶ Ground water pollution
 - ▶ Air pollution and global warming
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WASTE MANAGEMENT

4 R's CONCEPT

- ▶ Four R's (Refuse, Reuse, Recycle and Reduce) to be followed for waste management.



REFUSE

- ▶ Instead of buying new containers from the market, use the ones that are in the house.
- ▶ Refuse to buy new items though you may think they are prettier than the ones you already have.

REUSE

- ▶ Do not throw away the soft drink cans or the bottles; cover them with homemade paper or paint on them and use them as pencil stands or small vases.



RECYCLE

- ▶ Use shopping bags made of cloth or jute, which can be used over and over again.



REDUCE

- ▶ Reduce the generation of unnecessary waste, e.g. carry your own shopping bag when you go to the market and put all your purchases directly into it.



THANK YOU