

# Garbage In, Garbage Out

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All of us throw away things that are not needed by us on a regular basis.

- The things that we throw are called Garbage.
- This Garbage is thrown away by individuals, an entire town and is collected by the municipal authorities.
- All the garbage that is disposed off not be burnt as it would lead to generation of smoke and poisonous gases.
- It cannot also be thrown in to water as it will pollute the water.
- The garbage of a city is disposed off in low lying open areas called Landfill.
- Here the garbage that can be used again that separated out.
- The non useful part is spread over the landfill and is covered with a layer of soil.
- After the landfill is completely full, it is converted into a park (by growing grass and trees over it)
- The Millennium Indraprastha Park is a park on the Outer Ring Road in the east of Delhi, India. It was constructed in 2004 by the Delhi Development Authority.
- It is built on such a landfill.

## **TYPES OF WASTE**

- Garbage or waste materials can be divided into two types :

1. Biodegradable Wastes

2. Non-biodegradable Wastes

### **1. BIODEGRADABLE WASTES**

- Waste material that decay and mix with the soil are called Biodegradable Wastes.
- These materials get broken down by microorganisms like Bacteria and Fungi into simpler substances and become biodegradable.
- All dead plants and animals and their wastes, waste of fruits or vegetable, leaves, flowers, paper and pencil shavings are biodegradable.

## 2. NON-BIODEGRADABLE WASTES

- Waste material which will not decay and which cannot be broken down by microorganisms are called Non-biodegradable wastes.
- For e.g. Plastics (Bags, packaging materials), Metals (Containers, Cans etc.), and Glass (Old bottles, broken pieces of glass, bulbs, crockery etc.)

## SEGREGATING WASTE

- Since waste can be biodegradable or non-biodegradable, hence the first step is to segregate it into the right category.
- Though every household should ideally have two separate bins to segregate these wastes ideally, a third bin containing toxic wastes like batteries, dried paints, medicines, etc. should also be maintained.
- The waste thrown by individuals is collected by the Municipal Corporation of City.
- The Municipal Corporation have recently introduced a Green and Blue bin for segregating.
- The Green bin is for Biodegradable wastes and the Blue one is for Non-biodegradable Wastes.

## REUSING AND RECYCLING WASTE

- Garbage generated should be intelligently Reused or Recycled.

### Recycling Waste

- Biodegradable waste can be recycled using various methods like :
  - a) Composting
  - b) Vermicomposting
  - c) Incineration
  - d) Recycling / Reusing Paper

## **a) COMPOSTING**

- Composting is a natural process of decomposition or recycling of kitchen and garden wastes into manure or compost which is very rich in nutrients and is an excellent medium for growing plants.
- It is done by microorganisms like bacteria and fungi which act on the waste to decompose it.
- The finished product after composting is called Humus which looks like soil.
- It is very rich in Nitrogen and Carbon and hence makes the soil very fertile.
- Humus also:
  - increases ability of the soil to hold water and nutrients
  - helps to keep the soil cool in summer and warm in winter
  - helps in preventing soil erosion by keeping the soil intact
- Compositing is one of the oldest form of disposal.
- Apart from being clean, cheap and safe it also reduces the amount of garbage.

## **B) VERMICOMPOSTING**

- It is a method of composting where the compost is made with the help of an earthworm called the Redworm.
- Vermiculture means artificial rearing or cultivation of earthworms.
- Vermicompost is the excreta of earthworms which in humus and nutrients
- Hence Vermicomposting is the method of preparing compost with the help of redworms.
- After earthworms eat plant wastes, cow dung or other materials on a farm, they pass the material through their bodies and convert it into Vermicompost.
- Hence earthworms consumes garbage and convert it valuable manure which cleans the environment.
- Scientists have made a bacterium that can digest sugars from plant waste and turn them into bio-fuels that can be used in case of petrol – hence reducing pollution.

## **C) INCINERATION**

- The burning up of dry leaves and other wastes is called Incineration.
- It results in increase of Carbon Monoxide and Carbon Dioxide in air, which is bad for the health.

- Hence, even though some amount of waste is incinerated yet it is not an ideal solution to get rid of wastes.
- Good **waste management** follows the **4 Rs**: Reduce, Reuse, Recycle and Recover, as well as avoiding illegal dumping and littering.

### **1<sup>st</sup> R – Reduce**

- We should reduce the amount we create.
- We should reduce use of paper, plastics, other non biodegradable wastes.
- We should use products of less packaging

### **2<sup>nd</sup> R – Reuse**

- We should use waste as much as possible
- Furniture, clothing, paper etc should be reused
- Paper should be printed on both sides
- Plastic carry bags should be reused

### **3<sup>rd</sup> R – Recycle**

- We should recycle waste as much as possible
- Paper, plastic, aluminium cans, broken bottles should be recycled
- Newspaper now a days are made from recycled paper

### **4<sup>th</sup> R – Refuse**

- We all have the right to make a choice and refuse wasteful and polluting products.
- For too long, we have been buying products that have been packaged in a way that can cause environmental harm once we dispose of the plastic wraps, boxes and cartons.
- From way too much plastic to too much cardboard and even oversized packaging.
- Despite this, we can choose to refuse to buy items that contain single-use plastics or items that are individually packaged.
- Single-use plastic bags are a big problem and one of the reasons why our oceans are suffering.
- Commonly, these plastics cannot be recycled easily. They are therefore a problem for the environment.

## DISPOSING PLASTICS

- Even though plastics are lightweight durable and low in cost yet they are a big problem because:
  - they are non biodegradable
  - if burnt, harmful fumes impact humans and the atmosphere
  - If thrown they clog drains and sewage pipes
  - if ingested by animals or kids, it suffocates and can even lead to death
  - **Plastics could be Recyclable or Non-Recyclable**
    - Recyclable plastic can be sent to recycling plants where it can be melted and remoulded into different articles
    - Therefore, government should ban the use of non-recyclable plastics.
    - The local authorities in Ladakh impose the ban in 1998

## ELECTRONIC OR ELECTRIC WASTES

- Electronic or electric waste also known as e-waste is made up of all the electronic and electric items that thrown away when they become old or outdated.
- Nokia launched an e-waste management initiative that encourages mobile phone users to dispose of their used accessories regardless of any brand at any of the recycling bins set up across Nokia centres.
- Nokia India also plants sapling for every old mobile phones or accessory deposit.

NOTE :

1. Carry cloth or jute bag
2. Reduce / Refuse paper bags
3. Refuse plastic bottles
4. Segregate waste in the house
5. Dig a compost pit in a garden
6. Don't litter your city - throw garbage in Municipal bins
7. Try to sell recyclable items to the kabadi walla.