Different Disposal Methods of Solid Waste Management

1. **Ocean Dumping**

In this method, waste material is collected and transported in barges sufficiently far away from the coast (15-30 km) and dumped there. This method is applicable only in coastal cities. It is not an ideal method because is nit environment friendly.

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|  **Advantages:*** Convenient
* Inexpensive
 |  **Disadvantages:*** Ocean overburdened
* Destruction of sea food source
* Killing of plankton
* Not environment friendly
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1. **Sanitary Landfilling**

In sanitary landfilling method, waste material is collected and dumped into a trench or in small rows (area method), compacted, and covered each day. The waste is placed in a large excavation (pit or trench) in the ground, which is back-filled with excavated soil each day waste is tipped. Ideally, about 0.5m of soil should cover the deposited refuse at the end of each day to prevent animals from digging up the waste and flies from breeding

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|  **Advantages:*** Effective method
* Volume can increase with little addition of people/equipment
* Filled land can be reused for other community purposes
 |  **Disadvantages:*** Completed landfill areas can settle and requires maintenance
* Requires proper planning, design and operation
* Reasonably large area is required
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1. **Incineration**

Burning or incineration is often used for the disposal of combustible waste. Burning refuse within dwelling areas may create a significant smoke or fire hazard, especially if several fires are lit simultaneously. Burning may be used to reduce volume waste and may be appropriate where there is limited space for burial or landfill. Waste should be ignited within pits and covered with soil once incinerated, in the same manner as landfilling.

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|  **Advantages:*** Requires minimum land
* Can be operated in any weather
* Produces stable odor-free residues
* Refuse volume is reduced by half
 |   **Disadvantages:*** Expensive to build and operate
* High energy requirement
* Requires skilled personnel and continuous maintenance
* Unsightly smell, waste, vermin
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1. **Open Dumping**

Open dumping is defined as a land disposal site at which solid wastes are disposed of in a manner that does not protect the environment, are susceptible to open burning, and are exposed to the elements, vectors, and scavengers. An officially designated Municipal Solid Waste Landfill (MSWLF) is not an open dump.

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|  **Advantages:*** Inexpensive
 |  **Disadvantages:*** Health- hazards- insects, rodents etc.
* Damage due to air pollution
* Ground water and run-off pollution
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1. **Recycling**

Plastic bags, containers, tins and glass will often be automatically recycled since they are likely to be scarce commodities in many situations. In most developing country contexts there exists a strong tradition of recycling leading lower volumes of waste than in many more developed societies.

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|  **Advantages:*** Environmentally friendly
* Key to providing a livable environment for the future
 |  **Disadvantages:*** Expensive
* Some wastes cannot be recycled
* Technological push needed
* Separation of useful material from waste difficult
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1. **Composting**

Waste can be dug into the soil to add humus and fiber, where people have their own gardens or vegetable plots. This makes the waste perfectly safe and also assists the growing process. This should be encouraged wherever possible, particularly in the later stages of an emergency program.

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|  **Advantages:*** Environmentally friendly
* Beneficial for crops
 |  **Disadvantages:*** Requires skilled personnel
* Difficult to handle on large scale
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1. **Source reduction**

Source reduction, also known as waste prevention or pollution prevention, is the elimination of waste before it is created. Waste Minimization: The reduction of the generation and toxicity of hazardous waste materials such as paint cans, pesticides, and motor oil before disposal or storage.

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|  **Advantages:*** Reduces the consumption of energy
* Emission at treatment and disposal sites are reduced
* Pressure on vegetative cover and trees are decreased due to less demand of raw material
 |  **Disadvantages:** **---------------------------------------------------** |