

Tenden Heart High School

Section 33 B, Chandigarh

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Subject : Geography

Class : X

Waste Management - Impact of Waste Accumulation

(1) Introduction - Impact of Waste Accumulation :

- Waste is useless or unwanted material that has no use, so it is thrown away.
- It may be generated during the extraction of raw materials, processing of Raw materials and consumption of final products.
- Due to lot of development taking place in towns and cities, so due to this a major problem of solid waste disposal have arisen. This led to many environmental issues.
- This man made waste have polluted Air, water and land that also caused various health problems.
- Thus, this solid waste are dumped in open yards due to lack of space. This results in Environment pollution.

(2) Spoilage of Landscape :

- Spoilage of Landscape refers to heap of rubbish, Garbage and trash that is left untreated in Urban Cities.
- It causes damage to environment and also spoils the aesthetic beauty.
- It becomes the breeding ground of insects, flies and mosquitoes.
- It also spreads infectious diseases.
- The waste collected from Industries, Mines, hospitals etc contaminates Ground Water and spoils the Agricultural Land.
- The diseases caused by waste may even enter the food chain through water and soil.
- Thus, efficient management of waste can save the land and at the same time the waste should be recycled.

(3) Pollution - Impact on Human and Environment:

* Substances causing pollution are known as pollutants.

(A) Air Pollution

- It is the introduction of Particulate material into atmosphere that cause discomfort to humans and other living organisms and also causes damage to natural environment.
- Air pollutants are in the form of Solid particles, liquid droplets or Gases. Moreover, they may be primary or secondary.
- Primary Pollutants are directly released in air like Ash from Volcanoes, carbon monoxide from Vehicles, Sulphur dioxide from factories and suspended particulate matter (SPM).
- Secondary Pollutants are those that form due to reaction between primary pollutants and Atmospheric Compounds. eg: Ozone.

* Impact of Air Pollution

(i) Acid Rain:

- When air pollutants like sulphur dioxide, Nitrous oxide etc mix with moisture in air, they become sulphuric Acid and nitric acid and falls on earth surface in the form of Rain and does damage to forest, marine life, Animals and Humans.
- It may also damage statues and buildings and also causes crop destruction and respiratory problems in childrens.

(ii) Global Warming:

- This problem is caused when gases like carbon dioxide, carbon monoxide etc are released in Atmosphere. CFCs
- These gases trap heat and increases the earth's temperature which leads to rise in different problems like melting of glaciers, increase in water level, submergence of land, climatic variations etc.

(iii) Depletion of Ozone Layer:

- Due to Air pollution, the earth becomes more and more warm that makes the Atmosphere of the Earth damp and also heats up the Stratosphere that contains ozone. This ultimately increased the speed of chemical reaction that led to Ozone destruction.
- Thus, the depletion of Ozone Layer have caused damage to plant, Animal, Human and Marine life.
- The depletion of Ozone Layer also resulted in Skin cancer, Cataract disease in eyes etc.

(iv) Formation of Smog:

- When the Smoke released in Atmosphere mixes with Fog, it results in formation of Smog.

$$\text{Smoke} + \text{Fog} = \text{Smog}$$

- It results in breathing problems, Eyes infection, lungs infection, nose and throat allergies etc.
- It may decrease life span of plants and also lead to death of Animals.

(B) Water Pollution

- Water pollution occurs when harmful substances contaminates a waterbody and makes it toxic for humans, plants, animals and also the environment.

* causes of water pollution

(i) Disposing of Sewage waste:

- It is a major problem in developing countries as these countries have poor sanitation. This ultimately leads to water related illness like diarrhoea, typhoid etc.

(ii) Eutrophication:

- It is a process that occurs when a body of water becomes enriched with nutrients that leads excessive growth of Algae and Plants
- This happens due to discharge of domestic waste, Industrial effluents, fertilizers etc.

(iii) Oil Spills:

- It is another cause of Oceanic water pollution
- It is hazardous for marine life as it kills fishes, mammals and birds also.
- During oil spills, the oil floats on water and decreases the level of Oxygen

* Minamata Disease

- It was first discovered in city of Minamata, Japan.
- It is a neurological disease that was caused due to severe mercury poisoning.
- It was caused due to release of methyl mercury by a industry in Minamata bay.
- This methyl mercury was consumed by the fishes of Minamata bay and ultimately the fishes were consumed by the humans, that resulted in mercury poisoning in body.

* Impact of water pollution on life:

- The acidity in water is hazardous to marine life.
- excessive CO_2 and chlorine in water kills fish.
- The polluted water results in illness like cholera, typhoid, dysentery etc in humans.
- Contaminated water can cause liver damage and reproductive problems also.
- Polluted water also depleted marine ecosystem.
- It also reduces the growth of plants.
- It also resulted in deficiency of nutrients in plants.