

Pollution

Unwanted changes in the chemical and physical features of air, water and land (environment) that are dangerous to human and other organisms, their life conditions, industrial process and cultural achievements are called pollution.

The types of pollution are mainly –(i) Air pollution, (ii) Water pollution, (iii) Sound pollution, (iv) Soil pollution, (v) Nuclear pollution.

(i) Air pollution : When the pollution is in the atmosphere and the sufficient quantity of atmosphere reduces then it is called Air pollution.

Main air pollutants – Carbon monoxide (CO), Sulphur dioxide (SO₂), Hydrogen sulphide (H₂S), Hydrogen fluoride (HF), Nitrogen oxide (NO and NO₂), Hydrocarbon, Ammonia (NH₃), Smoke of tobacco, Fluorides smoke and particles of smoke, Aerosols etc.

Sulphur dioxide (SO₂), Sulphur trioxide (SO₃), Nitrogen oxide (NO) react with environmental water and creates Sulphuric acid and Nitric acid. These acids reach the earth with rain water and this is called acid rain.

On 3rd December, 1984 an incidence of leakage of Methyl Isocyanide gas took place in the fertilizer making Union Carbide Factory. (Bhopal)

(ii) Water pollution : Mixing of unwanted substances with water is called water pollution.

Sources of water pollution : The water pollution takes place mainly due to mixing up of Carbonate, sulphates of Magnesium and Potassium, Ammonia, Carbon monoxide, Carbon dioxide and Industrial remains in water. Sea-water pollution is due to mixing up of heavy metals, hydro carbon, petroleum etc. in water.

(iii) Sound pollution : The unwanted and undesirable sounds scattered in atmosphere are called sound pollution.

Sources of sound pollution : The source of sound pollution is loud sound or noise, in whatever ways it has produced.

(iv) Soil pollution : Distorted form of soil is called Soil pollution. Sources of Soil pollution : acid rain, water from mines, excessive use of fertilizers and germicide chemicals, garbage, industrial remainins, excretion in open field etc. are the main sources of soil pollution.

(v) Nuclear pollution : This pollution is created by radioactive rays. Following can be the sources of radioactive pollution —

(i) Pollution from the rays which are used in treatment.

(ii) Pollution created from fuels used in Atomic reactors.

(iii) Pollution created from the use of nuclear weapons.

(iv) Pollution created remaining substances coming out of Atomic power-houses.

Population, Biotic Community

1. **Population** : Population is a group of individuals of same species occupying the same area at a given time.

2. **Population density** : Total number of individual present in per unit area.

3. **Natality** : Increase in the number of individuals in a given population by birth is called natality

4. **Mortality** : Number of individuals removed from a population due to death under given environmental condition at a given time is called mortality

5. **Biotic potential** : It refers the maximum capacity of inherent of an organism to reproduce.

6. **Environmental resistance** : Environmental factors, which put a check on the growth of population.

7. **Mutualism** : It is a functional association between two different species in which both the species are benefited.

8. **Commensalism** : It is an association between individuals of two different species in which one species is benefited and other one is neither benefited nor affected.

9. **Population Explosion** : The dramatic increase in population size over a relatively short period is called population explosion.

10. **Demographic transition** : If the birth rate is equal to the death rate, it results in zero population growth, which is called demographic transition.

11. **Psychosis** : It is a mild form of mental illness where the patient show prolonged emotional reaction.

12. **Drug abuse** : When drugs are taken for a purpose other than their normal clinical use in an amount that impairs ones physical, physiological and psychological function of body is called drug abuse.