

## **ENVIRONMENTAL STUDIES**

### **LECTURE-22**

#### **Environmental Pollution**

When there is an undesirable change in the surrounding that has harmful effects on plants and animals, it leads to environmental pollution. A pollutant is a substance that causes pollution. We can have pollutants in liquid, solid or gaseous form. A substance becomes a pollutant when its concentration is greater than the natural abundance and this increase in concentration is either due to human activities or natural phenomenon. There are pollutants which can be degraded and rapidly broken down by natural processes similar to the degradation of vegetables. We also have pollutants which take decades to degrade, once released cannot be easily removed. For example, DDT, plastic materials, heavy metals and nuclear waste.

#### **Effects of Environmental Pollution:**

It has been seen that pollutants originate at a point and are then transported to other places by the action of wind or water. Some pollutants are dumped into the soil by human beings. This leads to air, water and soil pollution respectively. If the soil is polluted, the useful microorganisms in it will die and the fertility of soil will be lost. The production of crops will decrease. If the soil is not fertile; it will have a harmful impact on the human society. Similarly, if water is polluted then we have to purify it before drinking. Purification needs resources. Lastly, if air is polluted, respiration will become an issue and survival of life will be under threat. Air pollution leads to many respiratory diseases and harms the human body.

We can conclude by saying that environmental pollution will affect the life on earth and should be reduced as far as possible. We harm the nature and in turn, nature will harm us more. This should be stopped, our survival depends on this environment so care should be taken and its balance should be maintained.

#### **Sources and Causes of Environmental Pollution**

The sources and causes of environmental pollution includes the following:

- **Industrial activities:** The industries all over the world that brought prosperity and affluence, made inroads in the biosphere and disturbed the

ecological balances. The pall of smoke, the swirling gases, industrial effluents and the fall-out of scientific experiments became constant health hazards, polluting and contaminating both air and water. The improper disposal of industrial wastes are the sources of soil and water pollution. Chemical waste resulting from industry can pollute lakes, rivers and seas and soil too as well as releasing fumes.

- **Dumping solid waste:** Household and commercial waste pollutes the environment when not disposed of properly.
- **Vehicles:** The smoke emitted by vehicles using petrol and diesel and the cooking coal also pollutes the environment. The multiplication of vehicles, emitting black smoke that, being free and unfettered, spreads out and mixes with the air we breathe. The harmful smoke of these vehicles causes air pollution. Further, the sounds produced by these vehicles produces causes noise-pollution.
- **Rapid urbanization and industrialization:** The urbanization and the rapid growth of industrialization are causing through environmental pollution the greatest harm to the plant life, which in turn causing harm to the animal kingdom and the human lives.
- **Population overgrowth:** Due to the increase in population, particularly in developing countries, there has been surge in demand for basic food, occupation and shelter. The world has witnessed massive deforestation to expand absorb the growing population and their demands.
- **Combustion of fossil fuels:** The combustion of fossil fuels pollutes the air, the soil and the water with noxious gases such as CO<sub>2</sub> and CO.
- **Agricultural waste:** Fertilizers and pesticides used in agriculture are key causes of environmental pollution.

