

Topic: Water Pollution

B.Sc. Botany (Sub.) II

Group: C

By

Dr. Sanjeev Kumar Vidyarthi

Department of Botany

Dr. L.K.V.D. College, Tajpur, Samastipur

L.N. Mithila University, Darbhanga

Water pollution is the contamination of oceans, seas, lakes, rivers, aquifers, and groundwater. This is usually caused due to human activities. Water pollution scientifically changes in the physical, chemical or biological properties of water that will have a detrimental consequence of any living organism.

Drinking water is the water that is considered safe enough for human and animal consumption. This water is generally used for drinking, cooking, washing, crop irrigation, etc. But, these days chemicals, bacteria, and other pollutants are even affecting our drinking water.

Types of Water Pollution

Surface Water Pollution

Hazardous substances when coming into contact with different sources of water, leads to surface water pollution. The harmful contaminants from various sources mix or dissolve with lakes, lagoons, oceans and lead to surface water pollution.

Ground Water Pollution

Pesticides and chemicals applied to crops and soil are washed deep into the ground during the rain. The pesticides mix with groundwater and lead to its pollution.

Suspended Matter Pollution

In this pollution, the pollutants enter into water and don't mix with the water molecules. Therefore, the suspended particles in water form silt on the waterbed. Due to this nutrient from water were removed and making it polluted.

Microbial Pollution

Microorganisms cause this type of water pollution. Although most of the microorganisms are harmless, some bacteria and viruses may cause serious health problems.

Chemical Water Pollution

Many industries and farmers use chemicals for their various purposes. It causes water pollution. Pollutants used to control weeds, insects and pests leech into the water and spreading the pollution. Also, metals and solvents from industries also lead to water

pollution.

Causes of Water Pollution:

Sewage

Disposing of sewage in water is one of the major reasons for water pollution. Sewage disposed into the sea from households as well as factories can cause water pollution. Sewage disposal leads to a number of water-related illnesses such as diarrhea which is a leading cause of death among children.

Industrial Waste

Many factories pour industrial waste like toxic chemicals into the water bodies before treatment. It leads to polluting the water. Due to dumping toxic chemicals, the oxygen levels in water decreases leading to pollution.

Dumping of Solid Waste

Another major reason for water pollution is littering by humans. Dumping solid waste such as plastics, cardboards, Styrofoam contaminates water and make water unsuitable for

consumption. Mass dumping of solid waste clogs the water bodies and leads to water pollution.

Radioactive Wastes

Discharging of radioactive wastes into the sea is also one of the main water pollution cause in today's world.

Effects of Water Pollution

Groundwater contamination

Pesticides and fertilizers used for the cultivation of crops are contaminating the groundwater as well as our ecosystem. If this groundwater is supplied to our home directly through bore-wells or tube-wells, it will lead to a number of health problems.

Affects Aquatic Life

Solid wastes that we throw in the river or lakes or in the sea can have a harmful impact on the aquatic animals. Also, this disrupts the eco-system as many species of aquatic animals are in danger. People consuming seafood are also at a risk of facing health issues.

High TDS in water

Water is the best solvent that easily dissolves a variety of substances. The TDS level in drinking water needs to be less than 500 mg/liter. The presence of a high amount of TDS in water can lead to many health problems in human beings.

Major Preventive Measures to Control the water pollution

- Stop directly dispatching of wastes into the water body.
- Impose a penalty on the industries that dispose of wastes into natural water.
- Always follow proper methods to protect the rivers, lakes, and seas
- Spread the awareness to ensure that they understand the adverse impact of water pollution.
- Educate the people about creating a culture of responsibility to minimize the disposal of wastes.