WATER POLLUTION

It is the second most imperative environmental concern along with air pollution.

What Is Water Pollution?

Any change or modification in the physical, chemical and biological properties of water that will have a detrimental consequence on living things is water pollution.

- We take for granted that we have easy access to clean water for drinking, washing dishes and cleaning our clothes, but water isn't always clean.

- A body of water, such as a lake, stream, river, pond, ocean and even the water underground in the soil, can become polluted when it's contaminated by sewage leaks, agricultural runoff or chemical spills.

- When water is polluted, it becomes unsafe for human consumption because the water contains dangerous or toxic substances and disease-causing bacteria and organisms.

Two Sources of Water Pollution

- When water is polluted from **point sources,** this is pollution from a discrete location.
- This discrete location could be a factory, a sewer pipe or a runoff from a single farm.
- The BP oil spill in 2010 is an example of point source pollution, because the massive amount of oil leaked from a single point of origin.

- Water pollution may also be from **non-point source pollution,** which is when several points of contamination over a large area contribute to the pollution of a water body.

- For example, one water body may be contaminated by multiple sources like agricultural runoff, city street runoff, construction sites and residential lawns.

Surface Water Pollution

- It is the pollution of aquatic systems that are above ground, such as streams, lakes and rivers.

- These waters become polluted when rainwater run off carries pollutants into the water.

- The pollutants transported by runoff are things like salts and chemicals from city and highway roads and nutrients and fertilizers from farms and lawns.
- When pollution is caused by nutrients and fertilizers, this is called nutrient pollution, and it leads to an overproduction of algae and other aquatic plants.

- This overabundance of plants and algae causes problems, because they cover the water surface and prevent sunlight from reaching the plants underwater.

- This then leads to less oxygen production, which causes harm to oxygen-breathing organisms in the water, like fish.

- Surface water may also be polluted with pathogens and waterborne diseases, which is usually the result of sewage leaks and runoff from animal factories.

- These viruses and bacteria that pollute the water may cause dangerous human health problems such as giardia, typhoid and hepatitis.

- One way to monitor is checking the water for fecal coliform bacteria, which comes from the waste of people and other animals.

- If the water is contaminated with this type of bacteria (which itself is not harmful to human health), it indicates that other types of bacteria that are very dangerous to humans may also present, because they often come from the same sources.

Ground Water Pollution

- When humans apply pesticides and chemicals to soils, they are washed deep into the ground by rain water.

- This gets to underground water, causing pollution underground.

- This means when we dig wells and bore holes to get water from underground, it needs to be checked for ground water pollution.