WATER POLLUTION

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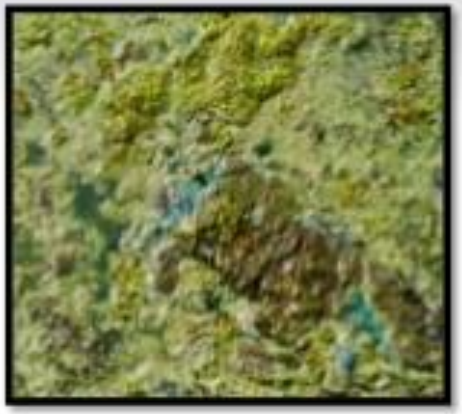
What is water pollution?

Water pollution is the contamination of water bodies (e.g. lakes, rivers, oceans, aquifers and groundwater), very often by human activities. It occurs when pollutants (particles, chemicals or substances that make water contaminated) are discharged directly or indirectly into water bodies without enough treatment to get rid of harmful compounds.

TYPES OF WATER POLLUTANTS AND THEIR SOURCES



1. Nutrients pollution

Some waste water, fertilizers and sewage contain high levels of nutrient. If they end up in water bodies, they encourage algae and weed growth in the water which can make the water undrinkable and even clog filters. Too much algae will also use up all the oxygen in the water and other water organisms in the water will die out of oxygen from starvation.

2. Surface water pollution

Surface water includes natural water found on the earth's surface like rivers, lakes, lagoons and oceans. Hazardous substances coming into contact with this surface water dissolving or missing physically with the water can be called surface water pollution.

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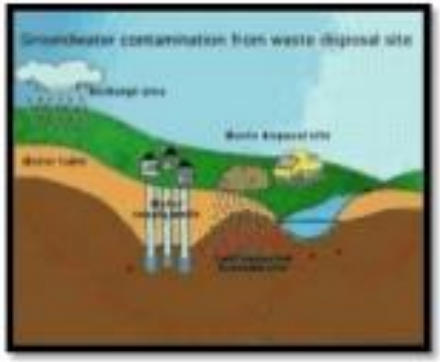
3. Oxygen depleting

Water bodies have microorganisms. These include aerobic and anaerobic organisms. When too much biodegradable matter (things that easily decay) end up in water, it encourages more microorganism growth and they use up more oxygen in the water. If oxygen is depleted, aerobic organisms die and anaerobic organism grow more to produce harmful toxins such as ammonia and sulfides.



4. Ground water pollution

When humans apply pesticides and chemicals to soils, they are washed up 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.

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5. Microbiological

In many communities in the world, people drink untreated water (straight from a river or stream). Sometimes there is natural pollution caused by microorganisms like viruses, bacteria and protozoa. This natural pollution can cause fishes and other water life to die. They can also cause serious illness to humans who drink from such waters.

6. Suspended matter

Some pollutants (substances, particles and chemicals) do not easily dissolve in water. This kind of material is called particulate matter. Some suspended pollutants later settle under the water body. This can harm and even kill aquatic life that live at the floor of water bodies.

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7. Chemical water pollution

Many industries and famers work with chemicals that end up in water. These include chemicals that are used to control weeds, insects and pests. Metals and solvents from industries can pollute water bodies. These are poisonous to many forms of aquatic life and may slow their development to make them interfile and kill them.

6. Oil spillage

Oil spills usually have only a localized affect on wildlife but can spread for miles. The oil can cause death of many fish and stick to the feathers of seabirds causing them to lose the ability to fly. Do you remember the BP Oil Spill in 2010? Over 1000 animals (birds, turtles, mammals) were reported dead including many already on the endangered species list. Of the animals affected by the spill that are still alive only about 6% have been reported cleaned but many biologists and other scientists predict they will die too from the stress caused by pollution.

Solutions

Water Pollution

- Prevent groundwater contamination
- Reduce nonpoint runoff
- Reuse treated wastewater for drinking and irrigation
- Find substitutes for toxic pollutants
- Work with nature to treat sewage
- Practice the three R's of resource use (reduce, reuse, recycle)
- Reduce air pollution
- Reduce poverty
- Slow population growth