

6. Water Pollution

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Introduction

India's water is becoming increasingly hazardous as the country develops and urbanizes. Around 70% of India's surface water is unsafe for human consumption, according to estimates. Every day, about 40 million gallons of wastewater are discharged into rivers and other bodies of water, with just a small percentage being appropriately cleaned. According to a recent World Bank analysis, releasing pollution upstream reduces economic growth in downstream areas by up to a third, lowering GDP growth by up to a third. To make matters worse, in middle-income nations such as India, where water pollution is a major issue, the impact can amount to over half of GDP growth. According to another study, living downstream of polluted stretches in India results in a 9% decline in agricultural earnings and a 16% drop in downstream agricultural outputs.

India has a population of over 1.2 billion people, although only around a third of them live on less than \$1.25 per day. People throw raw sewage, silt, and debris into India's rivers and lakes, polluting around 80% of the country's water. As a result, the water has become undrinkable, forcing the people to rely on illicit and costly sources. Diarrhea kills around 1.5 million Indian children every year. Experts estimate that by 2030, 40% of India's population would lack access to safe drinking water. So, how did India's water pollution grow so bad, and how can Indians undo the damage?

Water Pollution in India

India is plagued by increased urbanisation, unregulated slums, and a lack of pipe planning. Estimates suggest that by 2030, 608 million Indians would be living in slums due to the country's fast growing population. As a result, tanker mafias have become well-known. Owners of septic tanks that illegally sell water from lakes, wells, and groundwater are known as tanker mafias. They price roughly \$50 per 1,000 litres, which is beyond of reach for most Indians.




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Types of Water Pollution

1. Ground Water

Groundwater is formed when rain falls and seeps deep into the soil, filling the fractures, fissures, and porous areas of an aquifer (essentially an underground storage of water). Nearly 40% of Americans get their drinking water from groundwater that is pumped to the surface of the earth. It is the only source of freshwater for some people in remote regions. When pollutants such as pesticides and fertilisers, as well as trash leached from landfills and septic systems, find their way into an aquifer, they make it unsuitable for human consumption. Contaminant removal from groundwater can be difficult, if not impossible, as well as expensive. An aquifer that has been poisoned may be useless for decades, if not thousands, of years. As it seeps into streams, lakes, and seas, groundwater may spread contaminants far from the initial contaminating source.

2. Surface Water

Surface water, which makes up around 70% of the earth's surface, is what fills our oceans, lakes, rivers, and all the other blue spots on the globe map. More over 60% of the water distributed to American houses comes from surface water from freshwater sources (i.e., sources other than the ocean). However, a large portion of that water is in jeopardy. According to the EPA's most current national water quality studies, over half of our rivers and streams, as well as more than a third of our lakes, are filthy and unsafe for swimming, fishing, or drinking. The most common kind of contamination in these freshwater sources is nutrient pollution, which includes nitrates and phosphates. While plants and animals require these minerals to develop, agriculture waste and fertiliser runoff have made them a serious contaminant. Municipal and industrial waste discharges also contribute a significant amount of pollutants. There's also all the trash that businesses and individuals throw straight into rivers and streams.

3. Ocean Water

Eighty percent of ocean pollution (also known as marine pollution) comes from land, whether it's near the shore or far inland. Chemicals, fertilisers, and heavy metals are transported by streams and rivers from farms, industry, and towns into our bays and estuaries, where they flow out to sea. Meanwhile, wind-borne marine trash, notably plastic, gets swept into storm drains and sewers. The ocean absorbs up to a quarter of all carbon emissions produced by humans.



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4. Point Source

Point source pollution occurs when contamination comes from a single source. Contamination from leaking septic systems is examples of wastewater (also known as effluent) released lawfully or illegally by a manufacturing, oil refinery, or wastewater treatment plant. The Environmental Protection Agency (EPA) controls point source pollution by defining restrictions on what can be released directly into a body of water by a facility. While point source pollution begins in a single location, it has the potential to pollute kilometres of streams and the ocean.

5. Transboundary

Water contamination cannot be limited by a line on a map, it goes without saying. Contaminated water from one nation spills into the waterways of another, causing transboundary pollution. Contamination can occur as a consequence of a natural calamity, such as an oil spill, or as a result of the gradual downriver creep of industrial, agricultural, or municipal discharge.

Effects of Pollution of Water

The effects of Water Pollution are:

- Diseases: Drinking or eating dirty water in any form has several negative health consequences in people. Typhoid, cholera, hepatitis, and other illnesses are caused by it.
- Ecosystem eradication: Ecosystems are incredibly dynamic and react to even little changes in the environment. If left uncontrolled, rising water pollution can lead to the collapse of a whole ecosystem.
- Eutrophication is the buildup and infusion of chemicals in a water body that promotes the development of algae. On the surface of the pond or lake, algae develop a layer. Bacteria feed on this algae, reducing the amount of oxygen in the water body and negatively impacting aquatic life.
- Turmoil in the food chain occurs when aquatic species (fish, prawns, seahorses, and so on) absorb poisons and contaminants in the water, which are subsequently consumed by humans.

Prevention of Water Pollution

- Conserve Water: Water conservation should be the first priority. We are just now becoming aware of the seriousness of water waste as a global issue. You may make a big difference in your life by making a few small changes at home.




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- Treatment of sewage: Waste materials should be treated before being disposed of in water bodies in order to reduce the likelihood of large-scale water pollution. Agriculture and other enterprises may be able to reuse wastewater if the toxic component of the wastewater is reduced.
- Use of environmentally friendly items: The quantity of water pollution generated by a household can be reduced by the use of soluble items that do not pollute water.

Conclusion:

It is ultimately up to us to decide whether or not to pollute the environment with our waste. With sewage-strewn beaches, dirty rivers, and potentially harmful seafood to drink and eat, we can't continue to exist. In order to avoid these scenarios, we may work together to keep the environment clean, so guaranteeing the health of water bodies, plants, animals, and the people who depend on it. Taking individual or collective action to help reduce water contamination can help. For example, choosing environmentally friendly detergents, avoiding throwing oil down the drain, and reducing pesticide use are just a few instances of how we can help the environment. Our rivers and oceans can be kept clean if we all work together to do so. The establishment of legislation to address water pollution is something that we can do as nations and continents. Together, we can reduce the severity of water contamination and make the world a better place by taking action.

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