



Consequences of Water Pollution

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Abstract: -

Water pollution is one of the key studies that has drawn the attention of academics and people interested in the environment due to its enormous impact on the lives of humans, animals, and plants alike. It is not less dangerous than air and soil pollution, but it is more intimately related to both. The research focused on the concept of pollution in general, followed by the concept of water contamination and its origins. In addition to groundwater contamination, several pollution processes have occurred, the most significant of which are biological, physical, and through dumping solid and liquid waste into rivers, lakes, and oceans.

Key words: - Air, Environment, Factories, Germs, Ocean, water

Introduction: -

Pollution is the negative change that occurs to one of the environmental components as a result of vital and industrial human activity, in comparison to the natural situation that existed prior to human intervention, and begins to occur in energy changes, different radiation levels, and unwanted biological, physical, and chemical changes that occur in the biosphere that surrounds us, in which all other living creatures live. [1].

It is also described as the quantitative and qualitative change - accidental and purposeful - that occurs to one or more aspects of the environment that threatens the organism's survival and the capacity of ecosystems to continue producing. [2].

Effects and challenges: -

Water is a basic and universal necessity that has an unmistakable influence, either directly or indirectly. Water is required for all industrial, environmental, and physiological activities. Water serves a variety of functions in living organisms, including solvent, temperature buffer, metabolite, living habitat, and lubricants. [3]. Water, on the other hand, is considered to be contaminated when some of the water quality metrics have been inhibited by unguided and irregularities caused by a variety of anthropogenic activities, leaving the water unsuitable for intended use.

Water contamination may endanger both the environment and people's lives. Pollutant impacts might vary based on the nature and source of the pollutant. For example, while heavy metals, dyes, and certain other organic pollutants have been recognised as carcinogens, endocrine disrupting substances include hormones, medications, cosmetics, and personal care product waste. [4]. These contaminants, which enter the water body through many channels but are primarily manmade, have become a major source of worry for environmentalists owing to the various hazards they represent to the ecosystem.

Effects of Water Pollution on Human Health: -

Drinking or consuming dirty water can cause stomach disorders, poisoning, and mortality, as well as persistent toxicity and neurological concerns from more significant chemical pollution. The most prevalent cause of sickness in people from dirty water is waterborne microorganisms. Giardia, typhoid, and cholera are among the diseases caused by polluted water. Even in prosperous countries, accidental and illegal sewage leaks and runoff from urban areas and agriculture farms occur, impacting everyone's water quality. In fact, the United Nations says that 85,700 children die each year as a result of diarrhoea caused by unclean water.

Effects of Water Pollution on Environment: -

Water pollution frequently has a negative impact on aquatic life. Animals and plants in polluted water sources "may perish or fail to reproduce normally." Heavy metals and chemicals from municipal and industrial wastewater are instances of water pollution that impair the lifespans and reproduction ability of aquatic creatures. Mercury levels in tuna and other bigger fish are frequently high. Furthermore, algal blooms in lakes and marine settings, caused by excess nutrients such as nitrates and phosphates from agricultural runoff, have a significant impact on aquatic life. The Great Lakes are home to these algal blooms. Debris and litter, which may smother and harm many aquatic animals, are also a hazard to marine life. Plastics, for example, can withstand high temperatures.

Water Pollution-Induced Skin Diseases: -

Additionally, chemical pollutants in contaminated water come into touch with our skin by swimming in filthy water or washing clothes, and can cause a variety of skin irritations ranging in severity.

Air pollution has an impact on water pollution: -

Furthermore, air pollution caused by climate change has a significant impact on the water. As our enormous bodies of water absorb much of the carbon pollution in the air, it causes ocean acidification, heat, and expansion.

Types of water pollution: -**Ground Water Pollution:**

Pesticides and chemicals applied to crops and soil are carried deep into the earth after rain. Pesticides bind to groundwater and pollute it.

Surface Water Pollution:

Hazardous chemicals damage surface water when they come into contact with numerous sources of water. Harmful contaminants from many sources mix or dissolve in lakes, lagoons, and oceans, contaminating surface water.

Microbial Pollution:

Microorganisms create this type of water pollution. Although the vast majority of microorganisms are harmless, many bacteria and viruses can cause serious health problems.

Suspended Matter Pollution: -

In this type of pollution, pollutants enter the water but do not interact with the water molecules. As a result, suspended particles in the water settle and form silt on the waterbed. As a result, the water's nutrients were lost, leading it to become polluted.

Water Pollution Caused by Chemicals: -

Many businesses and farmers rely on chemicals for a number of purposes. It contaminates the water. Pollutants used to control weeds, insects, and pests leak into the water, spreading contamination. Metals and solvents from industries damage the water as well.

MANAGEMENT AND CONTROL OF POLLUTION: -

There are several ways that might be used to mitigate and manage water contamination. It might be through preventive, practise efforts, or participation in a project/program; regulation and monitoring, or participating in control methods such as waste reduction or minimization. The following methods are used to prevent water pollution:

- (i) Wash your automobile well away from storm drains.
- (ii) Never pour garbage, chemicals, or solvents into sewage drains.
- (iii) inspects your septic system once every three to five years.
- (iv) prevent the use of pesticides and fertilisers that can pollute water systems.
- (v) instead of hosing down your driveway, sweep it.
- (vi) aboard your yacht, always pump out your waste-holding tanks.
- (vii) Use non-toxic cleaning products.
- (viii) remove grease and other contaminants

CONCLUSION: -

Water pollution is a serious environmental issue that both India and the rest of the globe are concerned about. Humans contribute significantly to water contamination through defecating, dumping rubbish, industrial pollutants, and washing clothing, among other things. [5] Environmental education appears to be extremely important to utilise, particularly in schools, and should be included in the school curriculum. They will be less likely to damage our rivers this way.

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