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Causes and consequences of water pollution in India-a serious environmental issue

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Abstract

Heavy population, ongoing urban activities, consumerism and ever increasing many other human activities are causing pollution in India's vast water resources such as rivers, lakes, ponds, tanks, streams etc. and many of them are also facing dangers of extinction. While everybody has a right to clean water for sustenance, it is the responsibility of individuals and agencies to protect the water bodies for ensuring better quality of life for the present and future generations. The present article focuses on the causes of pollution of inland water bodies in India and its serious consequences in the form of diseases, climate change, unwarranted migration and loss of biodiversity etc.

Key words: water body, pollution, pond, tank, religious practices, sewerage, urbanisation, eutrophication, encroachment, illegal mining, United Nations,

An account of water bodies in India

Freshwater provides water for drinking, sanitation, agriculture, transport, electricity generation and recreation. It also creates habitats for a diverse range of animals and plants and provides cool bridge and fresh air. The inland water bodies are the sources of this fresh water.

India is blessed with rich varieties of inland water resources needed to sustain human life. Approximately 74 Lakh Hectares of water bodies are available in the country in various forms, such as, (i) Rivers, streams, springs and canals; (ii) Reservoirs, lakes; (iii) tanks and ponds; (iv) floodplains, and wetlands (bogs, marshes, and swamps), derelict water; and (v) brackish water. Table 1 gives the area occupied by these water bodies in India.

The issue of water pollution

Human beings cannot live without water. Most of the human habitats, found in villages, towns and cities that have been established through time- line of development of civilizations in various parts of world, could be possible due to existence of a nearby water body useful for human consumption.

In the name of development industries, planned and unplanned urban areas have been created with use of water in massive scale as a major cost. Over time this cost has gone in the north-east direction and continues increasing today. Use of water in past and present at collective level in the society has resulted in contamination of water bodies wherein toxic chemicals and biological agents and other harmful things are pumped into these bodies that exceed what is naturally found in the water and may pose a threat to human health and/or the environment.

Table 1: Details of inland water resources of various types in India (2015-16)

Rivers & Canals (Length in kms.)	Water Bodies ((Lakh Hectares))				
	Reservoirs	Tanks, Lakes & Ponds	Floodplain Lakes & Derelict Water	Brackish Water	Total
195095	29.26	24.33	7.98	11.55	73.13

Source: Government of India Report on Water Quality



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Case study of Najafgarh Drain - A rich wetland ecosystem in Delhi turning into a highly polluted water body

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Abstract

Over the past years due to rigorous agricultural practice, urbanization, rapid industrialization and daily household activities, water pollution has become a major issue. These factors have played havoc on a water body in the national capital of India as well. The famous Najafgarh Drain in Delhi, once a rich wetland, has turned into one of the most polluted water bodies in the country. This paper discusses the ecological importance of the drain, the causes and effects of the subsequent decline in its quality. It also discusses the findings of two field visits undertaken to understand the local effects of water pollution of the drain on the lives of residents who live in proximity of the drain.

Keywords: Najafgarh Drain, pollution loads, industrialization, urbanization, sewage disposal, environmental degradation

Introduction:

The famous Najafgarh drain (See Map in Figure 1) in the national capital of the country got its name from a town called Najafgarh in South West Delhi. It is now recognized as the "Ganda Nallah" by the residents of the city due to high levels of pollution. The situation is so bad, that in 2005, the Central Pollution Control Board (CPCB) stamped it as a highly polluted drain and put it under "D" category with other 13 highly polluted wetlands (7). This wasn't always the state of the drain. The drain had ecological importance previously, which has now been undermined.

Background of the Nallah

The Najafgarh drain is in fact part of "Sahibi", a rain-fed river originating in Rajasthan. This river makes its way through the state of Haryana and then finally enters Delhi near a village called Dhansa, where it spills its overflow. This spillover led to the formation of a lake, called the Najafgarh lake, which was seasonal in nature and could span an area of 300 square kilometers. The water continued to flow from the other side of the lake, through a narrow channel called the Najafgarh drain, which eventually joined the Yamuna river. The presence of this lake created a rich habitat for birds and other wildlife. During the winter months, the lake became home to several migratory birds. Before independence, the British ornithologist, Allan Octavian Hume, reported sighting birds like the Pink-headed Duck and Siberian Crane here. Due