# Legislative Measures to Prevent Water Pollution in India

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"Anything against nature will not able for any length of time."

- Charles Darwin

#### I. INTRODUCTION

Water pollution in India has severe consequences for human health, the environment, the economy, and society. It is crucial to take action to reduce water pollution and protect our water resources for future generations. To address this issue, the Indian government has introduced various measures aimed at controlling water pollution. These measures include the implementation of stricter environmental regulations and the promotion of sustainable practices in industries and agriculture.

The central legislation in the control of water pollution in India is the Water (Prevention and Control of Pollution) Act, 1974 (the "Water Act"). The Water Act was enacted for the prevention and control of water pollution and prohibits the discharge of pollutants into the water system in excess of standards. It also provides for setting up Central Pollution Control Board (CPCB) for the central government and State Pollution Control Boards (SPCBs) for the state governments. The Water Act is in effect the first environmental regulation in India and was enacted before the Environment (Protection) 1986 was Act, published. In 1988, the Water Act was amended to bring its provisions in line with the Environment (Protection) Act, 1986.

The Constitution of India gives the states the power to manage water and, as a rule, no water laws can be enacted at the national level. Therefore, the basic tasks of the central government are limited to the formulation of a comprehensive plan for water resources management and coordination among the states. However, the Water Act was enacted under Article 252 of the Constitution as an exceptional national law on water. In 1975, the Water (Prevention and Control of Pollution) Rules, 1975 was enacted as a sub-regulation of the Water Act. The Rules set out payment, authority, budget and functions of CPCB in detail.

Another major water law is the Water (Prevention and Control of Pollution) Cess Act, 1977 (the "Water Tax Act"). The Water Tax Act governs the taxation of water consumed by industrial entities and municipalities and the collection thereof. Under the Water Tax Act, industrial entities and local governments must install water meters and pay taxes based on the amount of water used. In 1978, the Water (Prevention and Control of Pollution) Cess Rules, 1978 was enacted as a sub-regulation.

No national regulations have been enacted for the management of groundwater resources, and some states and the Union Territory have enacted their own regulations. On the other hand, in 1970, the central government enacted the "Model Bill to Regulate and Control the Development and Management of Groundwater" as a model for states and the Union Territory to enact groundwater regulations. The Model Bill was amended in 1992, 1996 and 2005. The Model Bill provides for the establishment of Ground Water Authority by the state governments and also recommends introducing registration system of a well and a permit system for ground water extraction.

Effluent standards for wastewater discharged from industrial facilities are specified in the Environmental (Protection) Rules, 1986. Consequences of water pollution

1. Health Risks: Water pollution possesses significant health risks to humans who use it for drinking, cooking, bathing, and other daily activities. Contaminated water can cause diseases like cholera, typhoid, hepatitis A, and diarrhea, which can be fatal if left untreated.

- 2. Environmental Impact: Water pollution can harm aquatic life and disrupt ecosystems. The toxic chemicals and pollutants that enter the water can kill fish, reduce biodiversity, and harm the food chain. It can also harm plants and animals living near the water source.
- 3. Economic Impact: Water pollution can impact the economy by reducing fish populations, damaging tourist destinations, and reducing the availability of clean water for agriculture and industry. This can lead to a loss of revenue, jobs, and economic growth.
- 4. Social Implications: The consequences of water pollution can exacerbate existing social inequalities, as poorer communities may not have access to clean water and sanitation facilities. This can lead to a higher risk of diseases and a lower quality of life.

Some of the significant steps taken by the Indian Government:

- 1. The Water (Prevention and Control of Pollution) Act, 1974: This act was introduced to prevent and control water pollution in India. It sets standards for the quality of water, regulates the discharge of pollutants into water bodies, and establishes penalties for violations.
- 2. National River Conservation Plan (NRCP): The NRCP is a comprehensive plan to clean up and conserve rivers in India. Under this plan, the government is implementing several projects to reduce pollution and improve the quality of water in rivers.
- 3. Clean Ganga Mission: The Clean Ganga Mission is a flagship program of the Indian government aimed at cleaning up the Ganga river, which is one of the most polluted rivers in the world. The mission includes measures to reduce industrial pollution, improve wastewater treatment, and promote public awareness.
- 4. Swachh Bharat Abhiyan: The Swachh Bharat Abhiyan is a national cleanliness campaign launched by the government in 2014. It aims to promote cleanliness and hygiene across the country, including the cleaning up of water bodies.
- 5. Zero Liquid Discharge Policy: The Zero Liquid Discharge Policy is an initiative to reduce water pollution by promoting the reuse and recycling of industrial wastewater. Under this policy,

industries are required to treat and reuse wastewater to minimize their impact on water resources.

Importance of community involvement in addressing water pollution

Community involvement is crucial in addressing water pollution in India as it can help in identifying and addressing pollution incidents before they become severe. Citizen science and grassroots movements play a significant role in monitoring and reporting pollution incidents, which can help in taking prompt action to mitigate the impact of pollution.

Citizen science involves engaging the general public in scientific research to monitor and report pollution incidents. This can include activities like water quality testing, monitoring the health of aquatic life, and identifying pollution sources.

Grassroots movements involve community members coming together to raise awareness about pollution issues and advocate for change. Grassroots movements can pressure local authorities to take action to address pollution incidents and implement policies to prevent future pollution.

## Water Quality Standards

Agricultural Use: The Central Pollution Control Board (CPCB) has set the water quality standards for irrigation and agricultural use in India. The maximum permissible limit for pH is 6.5 to 8.5, electrical conductivity (EC) is 2250 micro Siemens per centimeter (S/cm), and total dissolved solids (TDS) is 2000 milligrams per liter (mg/L).

Groundwater Quality: The Bureau of Indian Standards (BIS) has set the groundwater quality standards in India. The maximum permissible limit for pH is 6.5 to 8.5, total hardness is 600 mg/L, fluoride is 1.5 mg/L, arsenic is 0.01 mg/L, and nitrate is 45 mg/L.

#### Drinking Water Quality Standards:

The BIS has set the drinking water quality standards in India. The maximum permissible limit for pH is 6.5 to 8.5, total dissolved solids (TDS) is 500 mg/L, fluoride is 1 mg/L, arsenic is

0.01 mg/L, and nitrate is 45 mg/L. The World Health Organization (WHO) also recommends that drinking water should be free from bacteria, viruses, and harmful chemicals.

Note that these standards are only minimum requirements and do not guarantee the safety of water for human consumption. The quality of water can vary widely across different regions. It can be affected by a variety of factors, such as industrial and agricultural activities, urbanization, and climate change. Regular testing of water quality and implementation of appropriate treatment measures is essential to ensure safe and clean water for all.

What are the measures to be taken to prevent water pollution?

A. The sewage should not be discharged directly into the rivers.

B. Increased use of excess fertilizers and pesticides.

C. It is recommended to use biodegradable detergents.

D. Dead human and animal bodies should not be thrown into rivers.

- The sewage should not be dumped directly into the rivers. To remove the organic matter from it in the form of manure, it should first be handled at the sewage treatment plant.
- To save aquatic life, the use of excess fertilizers and pesticides should be prevented.
- It is necessary to minimize the use of synthetic detergent or use biodegradable detergents.
- Dead human and animal bodies should not be taken into the rivers.

Ten Things You Can Do To Reduce Water Pollution

- 1. DO NOT pour fat from cooking or any other type of fat, oil, or grease down the sink. Keep a "fat jar" under the sink to collect the fat and discard in the solid waste when full.
- DO NOT dispose of household chemicals or cleaning agents down the sink or toilet. Simsbury has a Hazardous Waste Collection day usually from 8:00am to 1:00pm at Henry James School. Connecticut Resource Recovery Authority lists all collection dates.

- DO NOT flush pills, liquid or powder medications or drugs down the toilet. For recommendations on proper disposal for all types of medical wastes, visit the CT DEP publication here.
- 4. Avoid using the toilet as a wastebasket. Most tissues, wrappers, dust cloths, and other paper goods should be properly discarded in a wastebasket. The fiber reinforced cleaning products that have become popular should never be discarded in the toilet.
- 5. Avoid using a garbage disposal. Keep solid wastes solid. Make a compost pile from vegetable scraps.
- 6. Install a water efficient toilet. In the meantime, put a brick or 1/2 gal container in the standard toilet tank to reduce water use per flush.
- 7. Run the dishwasher or clothes washer only when you have a full load. This conserves electricity and water.
- Use the minimum amount of detergent and/or bleach when you are washing clothes or dishes. Use only phosphate free soaps and detergents.
- 9. Minimize the use of pesticides, herbicides, fertilizers. DO NOT dispose of these chemicals, motor oil, or other automotive fluids into the sanitary sewer or storm sewer systems. Both of them end at the river.
- If your home has a sump pumps or cellar drain, make certain it does not drain into the sanitary sewer system. If you are unsure, please call Simsbury Water Pollution Control at (860) 658-1380 and we can assist in determining the discharge point.

## FOOT NOTES

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