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COMMENTARY

Legal institutional inefficiency and water pollution problem in Bangladesh

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Abstract: In recent years the economy of Bangladesh has increased significantly due to rapid industrialization. Despite economic prosperity, it causes serious damage to the environment by polluting water resources. Factors like discharging industrial effluents, urban runoff, and agricultural wastage are primarily responsible for polluting the water bodies in Bangladesh. This kind of pollution not only harms the environment but also severely affects human health, and in Bangladesh, nearly 80 percent of all diseases are related to water pollution, and arsenicosis is one of them. To prevent and control water pollution, the government has primarily enacted various laws and policies, including Environment Conservation Act 1995, Environment Protection Act (EPA) 1995, Environment Court Act 2000, and Bangladesh Water Act 2013. Despite numerous initiatives, legal loopholes, institutional weaknesses and lack of enforcement of Environment Impact Assessment (EIA) are the main obstacles to preventing and controlling water pollution in Bangladesh. Therefore, this paper addresses the legal shortcomings and functions of respective bodies in preventing and controlling water pollution.

Keywords: environmental pollution, environmental law, industrial effluents, water pollution, water quality

1 Introduction

As a rising economy in Asia, Bangladesh is heading toward industrialization and causing severe environmental pollution simultaneously [1–3]. The environmental degradation in Bangladesh, especially water pollution, has increased alarmingly in recent years, and the country is facing a serious water pollution problem [4]. The main causes of water pollution in Bangladesh are over-population, development activities nearby water bodies, discharge of industrial effluents, municipal wastes and hospital wastes, toxic environmental wastes, plastic debris, agricultural wastes, pesticides and fertilizers to water, river grabbing, ineffective management of solid waste, poverty, poor sanitation, and lack of consciousness [5]. Among them, industrial discharges and plastic debris are potential threats to the freshwater and marine environments as they can be reduced to only a limited point [6–8]. Studies show that water can be polluted by both natural and anthropogenic sources [9]. However, most water sources, chiefly surface water bodies, are polluted because of industrial growth, urbanization, and man-made problems [10]. Being a primary authority, the Department of Environment (DoE) regularly monitors the surface and groundwater quality of the country. The year-long monitoring programs have shown increased pollution rates in rivers and other surface water sources over time [11].

The geographical characteristics of Bangladesh bless the country with a pour of water in the wet season and a scarcity of water in the dry season. Being a riverine country and having water bodies like the sea, rivers, canals, ponds, *haors* (extended depression between the levees of a river), *baors* (an oxbow lake type water body) and *beels* (low-lying depression have water round the year), Bangladesh, has become a threat to human civilization due to water pollution [5]. The United Nations Conference on Environment and Development (UNCED) report reveals that nearly 80% of all diseases and more than one-third of deaths in developing countries like Bangladesh are water-associated, and children suffer more from waterborne diseases like arsenicosis. The water resources of Bangladesh have become a major health hazard due to arsenic contamination in both cities and villages.

Legislation directly or indirectly related to water pollution protection is present in Bangladesh. A total of 23 laws supported by additional policies and regulations have been identified, which contain provisions regarding the conservation of the environment and control of environmental pollution. It's therefore, the laws prescribe taking measures relevant to environmental offences, prohibit certain activities, and establish guidelines for the controlling authority and the public.

Several studies reported that the execution of the environmental arrangement and the Environmental Protection Act 1977 had been hindered because of some institutional and utilitarian impediments. Other problems lie in the execution of environmental policy are insufficient funding, skilled humans, lack of inter-agency relations, irregularity with different policies, absence of inter-sectoral arrangement, lack of administrative and institutional capacity, impediments of the environment laws, outdated environmental laws as well as ignorance about these laws by the ordinary people, the non-punitive approach of laws, political corruption and so on.

2 Legal measures for preventing and controlling water pollution

The first water pollution prevention law was enacted in then East Pakistan (present Bangladesh), entitled the East Pakistan Water Pollution Control Ordinance 1970 [12]. However, after the liberation of Bangladesh, this law was repealed by the Environmental Pollution Control Ordinance 1977 [13]. The government revised the old laws [14] by enacting the Bangladesh Environment Conservation Act 1995 (amended 2010) [15] and the Environment Protection Act (EPA) 1995 [16]. Moreover, Irrigation Act 1876 [17], Pesticides Ordinance 1971 [18], Water Quality Standards (WQS), EIA Guidelines for Industries 1997 [19] Environment Court Act 2000 [20] and Bangladesh Water Act 2013 are directly or indirectly related to the protection of inland water pollution.

Article 18A of the Constitution of Bangladesh states that “the state shall endeavor to protect and improve the environment and to preserve and safeguard the natural resources, bio-diversity, wetland, forests and wildlife for the present and future citizens”. Although the Constitution of Bangladesh does not clearly mention environmental protection, Article 31 and 32 ensures ‘right to life’ [21]. However, the Supreme Court of Bangladesh further interpreted the ‘right to life’ as a healthy and sound environment for all influenced by theIndian Supreme Court decisions [22, 23], including anything that affects life, public health and safety [24].

Despite various legislations to prevent and control water pollution, legal loopholes and institutional weaknesses hinder the implementation process. For example, the function and enforcement of the Environment Impact Assessment (EIA) are poor due to the lack of institutional requirements [25]. Moreover, the function of the EIA was relaxed by the Environment Protection Agency (EPA) in 1995, although the role of EIA sets for the analysis of cause-and-effect relationships and forecasts the impact of any project activity before and after post-construction [26].

3 Obstacles and challenges for combating water pollution

The DoE bears the responsibility for controlling inland water pollution, but sadly its actions against environmental polluters limit to issuing notices only [5]. In Bangladesh, the Ministry of Water Resources (MoWR), along with its associate departments Bangladesh Water Development Board (BWDB), and Water Resources Planning Organization (WARPO), work as the apex body to manage and develop the water resources. The role of WARPO is significant as it is vested powers to plan, monitor, coordinate inter-sectoral water plans, formulate water regulations and regulations, and maintain the central data system [27]. Similarly, the importance of the National Water Policy (NWPo) is seen in implementing water planning and utilization for protecting the natural environment [28]. However, Bangladesh passed a National Water Management Plan (NWMP) in 2004 covering 2000–2025 [29].

It is a matter of regret that despite having numerous institutions for water resources conservation, particularly preventing water pollution, no single authority solely takes adequate measures for minimizing and controlling water pollution. The government’s initiatives often remain unsuccessful or ineffectively implemented for several reasons [30], such as failure to engage local people in the water pollution prevention process, to mobilize sufficient public interest and participation, lack of national consensus on policies, lack of coordination between national and local institutions in terms of implementing laws and policies, legal gaps and loopholes and institutional weaknesses, financial limitations. These are major blockages that hinder the successful water pollution prevention process.

4 Conclusion

However, the Bangladesh government has taken some important steps toward meeting the challenges of inland water management. These initiatives include implementation, the procedure of existing laws, making changes to overcome the barriers, and ensuring sufficient institutional and policy support. Besides government, civil activism emerges as a preventive tool against water pollution. Though different government units, *e.g.*, DoE, MoWR, BWDB, and WARPO combinedly work to prevent water pollution, inter-departmental conflict hinders the prevention process.

Conflict of interest

The authors report there are no competing interests to declare.

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[16] The EPA 1995 was enacted 'to provide for conservation, improvement of environment standards and to control and mitigate the pollution of the environment' (preamble).

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