

Water pollution in bangladesh assignment



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Water is the most vital element among the natural resources, and is crucial for the survival of all living organisms. The environment, economic growth and development of Bangladesh are all highly influenced by water – its regional and seasonal availability, and the quality of surface and groundwater. Spatial and seasonal availability of surface and groundwater is highly responsive to the monsoon climate and physiographic of the country.

Availability also depends on upstream withdrawal for consumptive and nonconsecutive uses. In terms of quality, the surface water of the country is unprotected from untreated industrial effluents and municipal wastewater, runoff pollution from chemical fertilizers and pesticides, and Oil and lube spillage in the coastal area from the operation of sea and river ports.

Bangladesh is the lower riparian of three major river systems, the Ganges-Pad, the Paramount-Jejuna and the Meghan.

The aquatic environment for living organisms can be affected and fasciculation of harmful substances in the water-dependent food chain can occur. A variation of inland surface water quality is noticed due to seasonal variation of river flow, operation foundational units and use of agrochemicals. Overall, inland surface water quality in the monsoon season is within tolerable limit with respect to the standard set by the Department of Environment (DoE).

Causes of Water Pollution The major causes of degradation of inland water quality are related to land based activities, when adequate regulatory measures are not incorporated and the stakeholders do not show proper concern. The underlying driving forces for this are poverty, an unhealthy

national economy, lack of institutional strength, and lack of awareness and education. Pollutants that enter the marine and coastal environment originate on land in the form of runoff from municipal, industrial and agricultural wastes, and from commercial seafaring activities.

Industrial effluent In Bangladesh, industrial units are mostly located along the banks of the rivers. There are obvious reasons for this such as provision of transportation for incoming raw materials and outgoing finished products. Unfortunately as a consequence, industrial units drain effluents directly into the rivers without any consideration of the environmental degradation. Region, which comprises about 49 per cent of the total sector. Inorganic pollutants are mostly metallic salts, and basic and acidic compounds.

These inorganic components undergo different chemical and biochemical interactions in the river system, and deteriorate water quality. The most problematic industries for the water sector are textiles, tanneries, pulp and paper mills, fertilizer, industrial chemical production and refineries. A complex mixture of hazardous chemicals, both organic and inorganic, is discharged into the water bodies from all these industries usually without treatment.

The highest numbers of industrial establishments in the country are located in the North Central (NC) WATER POLLUTION AND SCARCITY Inland Surface Water Pollution The overall inland surface water quality in the monsoon season is within tolerable limits, with few exceptions, including the rivers Brigands, Ball, Statistical, Grappling, and Rupees. However, concerns over surface water quality are gradually emerging due to the dispersed locations

of polluting industries, and the adverse effect on surrounding land and aquatic ecosystems, as well as subsequent impacts on the livelihood system of the local community.

The extreme examples of this type of effect are near Dacha at Cinnabar and Saver, where industrial effluents are discharged into nearby land and water bodies without any treatment. Among the polluted areas, the Worst problems are in the River Brigands situated to the south of Dacha, where the most significant source of pollution appears to be from tanneries in the Hazarding area. In the dry season, the dissolved oxygen level becomes very low or non-existent and the river becomes toxic (WARP, AAA). Water quality data at TV'0 stations of the river Brigands in 1 998, Hazarding and

Chad night, showed that DO and BODY exceeded the tolerable limits in the months of January, February, March and December, with the worst situation prevailing in the months of January and February The seasonal variation of water quality in the Brigands is linked with seasonal variation of water flow and the operation of tanneries. Source: Department of Environment, 2000) Groundwater pollution Groundwater has different uses, but the standard for its quality was set nationally. Groundwater was treated as the best source of safe drinking water, before arsenic contamination was reported.

However, 54 per cent of hand pumped tubeless were found to have fecal contamination, due to poor wellhead design, faulty construction and management, but the aquifers themselves were not polluted (Hogue, 1998).

Source: SWAM Arsenic High levels of arsenic in groundwater can cause serious human health problems if imbibed for a long time (from 5 to 15

years); including skin ailments, damage to internal organs, skin and lung cancers, and eventual death. The recent major studies carried out on arsenic reveal that among 30, 000 tubeless studied, 2, 000 of them exceeded the national standard Of . 5 MGM/l for drinking purposes (the WHO guideline is 0. 01 MGM/l). The problem is acute in tubeless abstracting groundwater from 10 m to 1 00 m depths in the Southeast, South Central (the northern part only), and Southwest regions. To a lesser extent, the eastern part of the Northeast region, and the very southern fringe of the North Central and Northwest along the river Ganges are affected. The most seriously affected districts are Chandler, and those around it. It was estimated that more than 20 million people drink water exceeding the national standard for arsenic levels.

The resent of arsenic is a naturally occurring phenomenon, but prolonged use of the water can be very harmful when the levels cross the standard limit. Contrary to earlier reports by the press, the available evidence strongly argues against the idea that arsenic contamination originates either from the use of synthetic chemicals, such as wood preservatives, or insecticides.

Arsenic contamination has considerably serious implications for groundwater abstraction in affected areas. This impinges on domestic water supply, since groundwater is the preferred source, because compared to surface water it is sees likely to be focally polluted.

Already thousands of cases of arsenic poisoning have been recorded among local people, and some deaths have been reported. Clinical studies are being carried Out by the Dacha Community Hospital. In agriculture, there are also serious implications from the possible transfer of arsenic into the food chain

through crops that are under irrigation with arsenic-contaminated water, and then consumed by humans. There is little evidence of arsenic contamination in rice grains through irrigation with arsenic contaminated water.

However, boiling rice in arsenic-affected water goes lead to its contamination, which causes serious problems. The crops most likely to absorb arsenic from irrigation are leafy vegetables, and possibly coconuts, and melons. These crops pass arsenic into the food chain. The effects of arsenic on pond-reared fishes are now under study. Livestock that drinks arsenic-contaminated water should also be under study, because humans consume these animals and their products. The infiltration Of arsenic-affected water in the soil also needs to be studied, along with possibility of infiltration into shallow aquifers.

Source: WARP, Bibb CONCLUSION Water resources need to be managed both qualitatively and quantitatively due to their importance for economic development, and the physical and social environments. Particularly in Bangladesh, where water is intricately linked with the lives of people and economy, its value has increased with competing demand. Therefore, economic efficiency of water use is a major policy consideration. Frequent floods and droughts in Bangladesh impose tremendous variability, and make it difficult to manage development based on prices and the market mechanism.

The Government of Bangladesh is acing a number Of growing problems, because it cannot address water sills_ Jess in a comprehensive manner. Separate ministries and departments are in charge of pollution control,

surface irrigation, groundwater irrigation, fisheries, public health, environment, municipal water supply, power and navigation, and each acting independently.