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RIVER POLLUTION IN BANGLADESH

Unabated atrocity on environment

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Bangladesh is a deltaic land created and flushed by numerous rivers. It had 1400 to 1500 rivers in the 11th century, which was reduced to 7 to 8 hundred due to various natural anthropogenic factors over time. Presently, no more than 400 rivers with numerous tributaries and distributaries are existent in the country, out of which 25 rivers are already dead or moribund. Dozens of others are drying up gradually. Only around 100 rivers have adequate navigable depths round the year at the moment. The total river route in the country in 1971 was 24,140 km, covering 8 percent of the country's area, which has now been reduced to 3800 km only during the lean flow period.

There are three principal river systems in the country: (a) Barak-Meghna; (b) Brahmaputra-Jamuna; and (c) Ganga-Padma. Teesta is an important water flow for the country because it is the terminal tributary for the Brahmaputra. These systems and all other rivers carry an annual water load of about 1074 billion cubic meters (bcm) from the upstream sources. Rainfall adds another 251 bcm of water volume. Around 150 bcm of water is required to be available in the riverbeds to maintain navigability.

Bangladesh is historically a country of riverine agro-economy. This small land is burdened with an increasing population. Over time agriculture is going to lose the position as highest contributor to the GDP. There has been a gradual shifting of its economy towards industrialisation and other drivers of economic prosperity. The country's population and eco-insensitive industrial development are now the major factors behind river degradations through grabbing/cordon structures as well as pollution of the

rivers.

River degradation through physical contaminants

Physical Degradations: These are manifested by reduced flow, siltation, erosion, cordon structures and encroachment. Any exotic entity in the river water is itself a pollutant.

Reduction of flows: Flow reduction becomes critical in 97 percent of the rivers in the dry season (November to March). Causes of flow reduction include: flow diversion and water withdrawal in the upstream region mainly by India in all 54 rivers, and partly by China and Myanmar, through damming or other obstructive or diversionary infrastructures. Indian River Linking Project (IRLP) and Tipaimukh Dam will be last nails in the coffin. Dried up water flows is provocative to more polluting interference in water contents.

Silt deposition: Prolonged silt deposition meanwhile killed 187 rivers (28 percent of the rivers). The rivers of Bangladesh carry about 3.8 billion tonnes of silt every year and 40-45 million tonnes get deposited on the river beds. Many rivers have lost their depths and about 77 percent of the river-mouths are silted. Silt deposit rate has increased in 574 rivers (i.e. 86 percent). Reduced water flows from upstream are a prominent causative factor in more siltation and consequent impacts like river bed elevation, reduced water holding capacity and more river bank erosion.

River Bank Erosion: 41 percent of rivers in Bangladesh suffer from erosion. During the rainy season, erosion increases in some rivers due to raised river beds and reduced water holding capacity and that causes further erosion during the next monsoon.

Cordon Structures: Around 500 flood control, drainage and irrigation

projects, undertaken around the last 60 years, have disconnected 35 million hectares of land from the rivers. Harmful structures like regulators or sluice gates and cross dams were built on many rivers causing immense negative impacts. Cross dams and short length bridges made in the name of development are now the main river-killers in the country. There is cause to worry that the recent governmental initiative "Bangladesh Delta Plan 2100" is going to be the replica of the same.

Encroachment: 158 rivers lost their

width from unauthorised encroachments and this process is quite unhindered due to strong socio-political links of a section of grabbers.

Instrumental and organic dumping: Different abandoned parts of marine vehicles like wooden boats, steamers, fishing nets, boundaries used in dry seasons for fishing traps, plastics and other non-degradable items, household materials, rejected foods-fruits-vegetables etc. are also causing further pollutions.

Untreated hospital wastes:

Hospital waste and highly poisonous and infective materials are getting mixed with water all over the country throughout the year, contributing to a severe biological pollution of rivers and wetlands.

Reduced quality of water, more sediments, narrowing, cordoning, diversions, dry ups, commercialisation, so called development projects, unplanned re-excavations, sluggish flows due to the reasons mentioned above accelerate pollution and induce deaths of rivers.

CONTINUED ON PAGE 29



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