

Why we must rethink our water management practices



Bangladesh withdraws about 32 cubic kilometres of groundwater annually, 90 per cent of which is used for irrigation.

FILE PHOTO: STAR

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In establishing the various uses of water, we categorise them into consumptive and non-consumptive uses. So far, I have discussed consumptive use, but we must also think about non-consumptive uses. Do fish drink water? No, but they need a watery environment for their growth as a basic condition of living. Wetlands demand a major ecological approach and natural resource management consideration.

We are drying up our wetlands to convert them into agricultural land and to expand our villages and urban areas. We convert wetlands into dry land, possibly based on a very wrong understanding that wetlands are wastelands. In our Constitution, Article 18A states that the protection of nature, forests, wetlands, and biodiversity is the responsibility of the state. Unfortunately, while this clause was being adopted, the term "river" was dropped by honourable members of Parliament. We need to re-

evaluate our understanding of the non-consumptive uses of water.

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Now, we turn to another very important non-consumptive use: navigation. Over the last 100 years, we have focused on the development of road networks and railways. Not an iota of consideration has been given to the development of navigation facilities. Our neighbours have been pushing the development of Ashuganj as a gateway for the northern states. On the other hand, we have ignored and allowed major navigation routes in parts of Chilmari, Balashighat, Aricha, Bhairab Bazar, and Narayanganj to fall into oblivion.

For the movement of bulk non-perishable goods, navigation offers the cheapest mode for the nation. The cost of transportation using navigational facilities is one sixth of that using roads in a riverine country with an existing intricate network of rivers across the country. However, the opportunity for navigation is limited by the seasonal

operational levels of river routes. In the southern part of Bangladesh, where rivers are tidal, opportunities still exist. The steamer service in Khulna is dead. I feel bad about it.

Only strong government incentives, including fiscal support and regulatory pressure on road transport, can shift bulk cargo towards inland navigation. Let me repeat that I am advocating for the movement of bulk quantities of non-perishable goods.

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I would now like to discuss the marine areas of Bangladesh. Broadly categorised, we have tidal and non-tidal rivers. Then, within the tidal area, the land and water zones can be divided into four categories. The first is the coastal belt; the second is the territorial waters extending 12 kilometres from the coastline; the third is the exclusive economic zone, extending 250 kilometres offshore; and the fourth is the open water beyond the economic zone.

Management of coastal and marine water—whichever ministry is responsible is irrelevant—should extend from the high mountains to the deep coastal belt. The global slogan is to link Integrated Water Resources Management (IWRM) with Integrated Coastal Zone Management (ICZM). We have ports, namely Mongla, Payra, Chittagong, Matarbari, and Cox's Bazar. Only Matarbari is a deep seaport. In the current global context, the capacity of the other ports is inadequate. We need to re-evaluate our current planning and development processes for ports.

I do not understand why Bangladesh spends huge funds on Mongla and Payra ports. Mongla is located in a shallow-water area; by relocating it just a few kilometres south, either to Banishanta or Harbaria, it could be transformed into a deep-water port. However, for Payra Port, I see no future. The Payra River naturally develops a shallow sand bed extending up to 50 kilometres into the bay at its mouth, and it will continue to deposit such sandbars even if we spend thousands of takas on dredging. The southern part will remain shallow despite repeated dredging. Payra Port

may function as an inland port.

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At this point, I would like to talk about our understanding of the rivers of our country. Let me boldly remind everyone that a river does not carry water alone. It also carries sediment. Water discharge must be balanced with the quantity of sediment it carries, and sediment is transported mostly as bedload. Sediment may consist of large boulders, small boulders, pebbles, small stones, coarse sand, medium sand, fine sand, silt, and clay particles. We need to develop a sound understanding of the nature of sediment at different locations along rivers, as well as the quantity of sediment involved. We do not collect data on sediment. This is a matter of national importance.

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Water has many users, and many government agencies are responsible for developing and managing it. We must shift our thinking from development to management. Disasters have a strong correlation with water related issues. Besides floods and droughts, we must also think about clogged sedimentation routes. At the same time, we need to consider river erosion and the destruction of valuable land. One of the major causes of landslides is heavy rainfall.

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Short-duration heavy rainfall is a major challenge for urban areas. This creates drainage congestion problems. Are cities and towns prepared for this? Is Dhaka ready for 300-400 mm of rainfall in a single day? My answer is no. I fear that we may face such a situation, as this is already happening in parts of the Middle East.

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At this stage, let me turn to the institutional aspects. Who manages water? My answer is nobody. No one is mandated to do so with appropriate authority. Flood management is carried out by the Bangladesh Water Development Board (BWDB). The Board focuses on development rather than management. The name of the organisation and its Terms of Reference

or mandate may need to be changed from water development to water management. The current BWDB provides support to the agriculture sector, but there is little appreciation for the good work it has done so far. This is largely due to poor management practices.

Who is responsible for drainage congestion—the municipalities and city corporations? Do they have appropriate technical mandates? Who is responsible for water quality-related issues—the Department of Environment (DoE)? Yet the DoE cannot cope with the unabated levels of water pollution. The Bangladesh Agricultural Development Corporation (BADC) provides support to irrigation projects, but farmers themselves are responsible for irrigation using shallow and deep tubewells. There is a conflict between groundwater use for drinking purposes and irrigation for agriculture. Inland water is supposed to be managed by the Inland Water Transport Authority (IWTA) and the Ministry of Shipping. However, I could not find any organisation that supports the management of water for nature.

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Another important consideration for water management in Bangladesh is transboundary water. In my view, more than 100 transboundary rivers flow from India into Bangladesh. Other than this, only two or three very small rivers flow in the opposite direction. Effective management requires action at the highest political level. It cannot be negotiated by Water Ministry officials alone. To me, the current institutional arrangement is ineffective and unproductive. By 2027, we will reach a stage when the issue of transboundary water must be handled by political leadership rather than by bureaucrats or technocrats.

Let me conclude by saying that it is high time we took a completely fresh look at overall water management practices in the country. Water development can be both a bane and a boon. The beneficial part is reaching saturation very soon; therefore, we must bring the future into our planning process and, if possible, fundamentally recast our institutions.



WEAVING THE PROGRESS OF BANGLADESH

Accounts for **81%** of total export earnings

Directly employs **4 million**

Supports the livelihoods of around **40 million** people indirectly

Contributes around **11%** to GDP

270 LEED certified Green factories

Exports garments to **167** countries

Made in Bangladesh exported worldwide