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For families living in the Bhabadah region, waterlogging has been a part of life for decades. Many have lost the comfort and security of their homes, while some have moved away permanently.

Will Bhabadah ever be free of waterlogging?

Despite decades of drainage projects and hundreds of crores spent, residents continue to lose their homes, farmland and livelihoods to persistent waterlogging

DIPANKAR ROY, *Khulna*

The water in Kapalia Beel, in Jashore's Manirampur upazila, rarely falls below waist level, even in the dry season. During the monsoon, it rises further, spilling onto roads and into homes, submerging courtyards and living rooms. At times, villagers have no choice but to abandon their homes and take shelter on roads.

For families living around the beel, in the Bhabadah region, waterlogging has been a part of life for decades. Many have lost the comfort and security of their homes, while some have moved away permanently.

The situation is much the same across Bhabadah, where prolonged waterlogging has devastated farmland, disrupted education and deprived thousands of families of their livelihoods since the installation of the 21-vent Bhabadah sluice gate.

The region covers parts of Abhaynagar, Manirampur and Keshabpur upazilas in Jashore, and Dumuria and Phultala upazilas in Khulna. It has at least 52 beels connected to rivers, including the Mukteshwari, Teka, Hari, Shree, Upper Bhadra and Buribhadra. Years of siltation have reduced the rivers' capacity and obstructed drainage, leaving vast areas inundated for months.

In Kalishakul village, less than 500 metres from the sluice gate, farmland has remained underwater through successive crop seasons. More than 250 families have been unable to cultivate their land, pushing them into years of hardship.

Pradip Mondal, a resident, said water from 27 nearby beels was supposed to drain through the sluice gate. Yet rainwater more than three feet deep had remained on his land for over five months, preventing him from growing Aman paddy last year.

> **I could not cultivate Aman paddy for 12-13 years due to waterlogging. If the water level falls enough, I manage to cultivate Boro paddy in some years. For past three years, even that opportunity did not come.**
> **Pradip Mondal**, a local

Hoping to recover some of his losses during the Boro season, he rented three kathas of land near Kapalia Beel to prepare paddy seedbeds. He planned to transplant the seedlings to his own land once the water receded. But it never did.

"I could not cultivate Aman paddy for 12-13 years due to waterlogging. If the water level falls enough, I manage to cultivate Boro paddy in some years. For past three years, even that opportunity did not come," Mondal said.

Unable to grow either crop, he has turned to fishing to make ends meet.

"If I cannot grow crop on my land for years after years, how am I going to feed my family and come out of poverty?" he asked.

Like Mondal, many families that once depended on their harvests now survive on fishing and whatever other work they can find.

The crisis extends across Kulutia and Haridas Kati unions in Manirampur, Payra union in Abhaynagar, and adjoining areas.

Its effects are not confined to agriculture. More than 200 educational institutions in the region remain submerged for around three months a year, sometimes longer, disrupting lessons and making it difficult for children to attend school.

> **The challenge, however, is not simply choosing between excavation and Tidal River Management. Bhabadah needs a coordinated approach based on hydrological research, reliable data on river levels and sediment accumulation, and a thorough understanding of how water moves across the basin.**

Ranjita Bairagi, from Hatgachha village in Manirampur, brought her son Chinmoy, an eighth-grader, to Hatgachha Secondary School, where classrooms were submerged. There were no benches for students, while tin-roofed rooms offered little comfort for lessons.

"Have you ever seen a school like this anywhere? How can children study without a decent environment?" she asked.

According to Ranjita, the school grounds remain underwater for nearly half the year, leaving children with nowhere to play. The adjacent road becomes their only open space, exposing them to passing vehicles.

Reaching school during the monsoon is another ordeal, while prolonged disruptions to classes add to the students' difficulties.

Livestock farming, another important source of rural income, has also suffered.



In Kalishakul village, less than 500 metres from a sluice gate, farmland has remained underwater through successive crop seasons. More than 250 families have been unable to cultivate their land, pushing them into years of hardship.

According to residents, the number of cattle, goats and other farm animals has fallen by more than half.

With grazing land submerged for months, grass has become scarce. Families must buy fodder at higher prices, an expense many can no longer afford. Some have abandoned livestock rearing altogether, while poultry farming has also declined.

The losses go beyond the income these animals generate. For rural households, cattle and goats are valuable assets that can be sold during financial emergencies. As livestock disappears from homesteads, families are losing an important safeguard against hardship.

Although residents trace the severe waterlogging to around 1986, the origins of the crisis lie in changes to the region's water management system decades earlier.

In the 1960s, the Coastal Embankment Project introduced polders, embankments and sluice gates to protect farmland from tidal flooding. In Bhabadah, embankments narrowed the Teka-Hari-Shree river system.

A 21-vent sluice gate, the largest among 282 installed in the southwestern region, was built at Bhabadah, alongside another with six vents. The system was intended to drain water from the Teka-Mukteshwari, Hari, Upper Bhadra and Buribhadra basins.

But the infrastructure altered the natural movement of water and sediment.

Before the embankments were built, tidal water carried sediment into the beels, gradually raising their beds. Once tidal flows were restricted, sediment increasingly accumulated in the rivers instead, raising their beds and obstructing the drainage of water from surrounding low-lying areas.

The infrastructure meant to protect farmland thus contributed to the very conditions that have kept it submerged for decades. Monsoon rainfall, deteriorating sluice gates and man-made barriers in canals and rivers have made matters worse.

Successive governments have spent hundreds of crores of taka trying to restore drainage, but lasting relief has remained elusive.

According to the Bangladesh Water Development Board (BWDB), 21 government-funded projects have been undertaken to improve drainage in the region.

Among them were the Tk 229-crore Khulna-Jashore Drainage Rehabilitation Project in 1996, a Tk 252-crore drainage project in 2002, and a Tk 69-crore Tidal River Management (TRM) project in Beel Khukshia in 2006.

Another TRM project, proposed for Beel Kapalia, received an allocation of Tk 71 crore in 2011 but was never implemented because of disputes over compensation.

The current programme includes a Tk 140-crore project to re-excavate an 81.5-km stretch of the Hari, Teligati, Upper Bhadra, Teka and Shree rivers under the supervision of the Bangladesh Army.

It also includes Tk 33 crore for excavating 24 canals, Tk 45.41 crore for expanding drainage and irrigation facilities, and Tk 49 crore for rehabilitating the Amdanga canal. A further Tk 280-crore proposal for sediment management is awaiting approval, according to BWDB officials.

Yet, despite the repeated interventions and substantial expenditure, the same question persists: why has Bhabadah remained waterlogged?

One major concern is the absence of a lasting strategy to manage sediment after excavation. Dredging may temporarily restore a river's depth, but without measures to maintain water flow and control sediment accumulation, the riverbed can rise again.

Residents say waterlogging has returned soon after waterways were excavated, dashing their hopes of relief. Reports in 2026 also found that several areas remained waterlogged despite the Tk 140-crore excavation programme.

"Rivers need a sustained flow. They cannot be saved by excavation alone. They can be saved only by ensuring their flow," said Iqbal Kabir Zahid, chief adviser of the Bhabadah Water Drainage Movement Committee.

He warned that without TRM, rivers could soon fill with silt again, turning repeated excavation into an expensive cycle with little lasting benefit.

TRM seeks to restore the natural movement of water and sediment by allowing tidal water to enter a selected beel through a controlled route.

As the tide recedes, water flows back towards the river while sediment settles in the beel, gradually raising its bed. At the same time, the movement of tidal water can help restore the river's drainage capacity.

But TRM comes with its own challenges. Allowing tidal water into a designated beel can disrupt farming and livelihoods by keeping land flooded for prolonged periods. Its implementation therefore requires careful planning, hydrological studies, consultation with affected communities and fair compensation for landowners.

Residents and experts argue that successive interventions have placed greater emphasis on excavation than on implementing TRM on the scale they consider necessary.

While excavation can be measured in kilometres of waterways cleared, tidal management demands long-term planning, agreements over land use and sustained monitoring.

Without these, they argue, projects risk addressing the immediate effects of waterlogging rather than the conditions that cause it.

BWDB officials, however, maintain that the ongoing excavation and drainage works will improve the situation. They also said there were plans to install pumps for emergency drainage.

Residents question whether pumping could provide meaningful relief across such an extensive low-lying region. While pumps might help drain smaller areas temporarily, they believe restoring the natural drainage system is essential to resolving the wider crisis.

The challenge, however, is not simply choosing between excavation and TRM. Bhabadah needs a coordinated approach based on hydrological research, reliable data on river levels and sediment accumulation, and a thorough understanding of how water moves across the basin.

River excavation, canal restoration, sluice-gate maintenance and TRM may each have a role, but their effectiveness depends on how they work together.

For four decades, the consequences of fragmented interventions have been borne by people whose farmland remains submerged, whose children struggle to attend school and whose livelihoods have steadily diminished.

The true cost cannot be measured solely in the crores spent on excavation contracts. It also lies in harvests lost year after year, livestock sold or abandoned, interrupted education and families forced to leave their homes.

For residents of Kapalia Beel and the surrounding villages, another project will mean little unless it brings lasting change.



PHOTOS: **HABIBUR RAHMAN**

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