

COASTAL WATER PROBLEMS

From siltation to toxic pollution



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The rivers and canals of Bangladesh are being made to die. Bangladesh is a country of water, where land and water are entwined and ever shifting. Monsoon rains (borsha) were once described by colonial administrators as the “blessing of fertility” of Bengal. Yet since the 1960s, the construction of permanent flood-protection embankments (beribad)—initiated during Ayub Khan’s rule with the technical assistance of Western development agencies—has fundamentally altered the hydro-ecology of the delta. These embankments have disrupted sediment flows, intensified siltation, and in many cases worsened flooding rather than preventing it. These transformations have been further exacerbated by transboundary interventions, including India’s unilateral construction of the Farakka Barrage.

Despite this history, donors and successive governments have continued to frame coastal water problems as technical deficiencies: too much silt, too much salinity, too much erosion, too little infrastructure. In this framing, the delta appears unruly and resistant to management. Yet my research on the Bengal delta shows that the problem

they often do the opposite. Poorly maintained and inconsistently funded embankments interrupt sediment flows, accelerate siltation in canals and rivers, and concentrate erosion pressure elsewhere. When embankments fail—as they repeatedly do—the damage is not only hydraulic but social: crops are destroyed, drinking water contaminated, and households pushed deeper into debt. The core problem is not that embankments exist, but that they are treated as one-off capital investments rather than living infrastructures requiring continuous care. Funding arrives for construction, but not for long-term maintenance. Riverbank erosion, shifting river courses, and heavy monsoon rains then predictably lead to collapse. Since the 1990s, brackish-water shrimp cultivation has further weakened embankments through the widespread installation of illegal pipes and sluices to draw in saline water during the dry season.

What is needed is a shift in fiscal and political imagination. Coastal embankment management must be recognised as a permanent public obligation, not an emergency expense nor a short-term donor-funded project. This requires multi-decade funding commitments, transparent

works employees. This is not charity. It is an investment in ecological resilience and rural economies.

In a country facing climatic uncertainty and increasingly extreme weather events, employment that simultaneously restores water systems is precisely the kind of work the state should be creating. Framing excavation as job creation rather than environmental clean-up shifts the political calculus. It places water governance squarely within questions of livelihoods, citizenship, and social

Environmentally Sound Recycling of Ships, as required under the 2018 Bangladesh Ship Recycling Act. In 2023, Bangladesh ratified the Convention, which entered into force in June 2025.

This entry into force shifts responsibility inward. Enforcement now rests squarely with national authorities. Without serious investment in regulatory capacity, the Convention risks becoming symbolic rather than transformative, undermining both serious operators

significantly strengthen Bangladesh’s ability to meet its international obligations.

Labour protections are central to environmental outcomes. Unsafe work practices and environmental contamination often stem from the same root: cost-cutting at the expense of human and ecological well-being. Economic development that depends on disposable workers is neither ethical nor sustainable. Bangladesh must ensure full compliance with core ILO conventions on freedom of association, collective bargaining, minimum wages, and occupational safety and health. Workers must be able to organise, earn living wages, and refuse unsafe work without fear of retaliation. These are not obstacles to productivity; they are conditions of long-term viability.

Corporate responsibility must also extend beyond token gestures. These are foreign-owned ships, from which global companies have extracted decades of profit. Bangladesh should insist that ship owners take responsibility for the end-of-life impacts of their vessels. As part of wider global discussions on climate responsibility, it should be non-negotiable that ship owners make meaningful investments in local healthcare, water infrastructure, and environmental remediation for affected communities in ship recycling sites. Communities (such as Zele fishermen) living alongside industrial sites are stakeholders, not collateral damage.

Reframing priorities for tomorrow
Coastal water problems, embankment failures, polluted shorelines, and unsafe industries are too often discussed in isolation. They should not be. They are linked through a political economy that undervalues maintenance, normalises environmental harm, and treats certain workers and environments as expendable.

Development without enforcement is not development—it is deferred crisis. Bangladesh’s credibility, both domestically and internationally, now depends on whether commitments to environmental protection, worker safety, and water governance are matched by budgets, institutions, and sustained political will.

Investing in coastal waters is not a niche environmental concern. It is an investment in employment, public health, food security, and long-term economic stability. Treating these issues as marginal risks repeating the same mistakes under new slogans. Treating them as priorities offers a chance to read the delta on its own terms—and to build a future that is not only productive, but liveable.



Unregulated shipbreaking
leaves lasting harm—
injuring workers,
polluting coastal waters,
and degrading local
ecosystems.

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is not an unpredictable environment, but a persistent misreading of how water, land, labour, and governance are entangled. The delta is not failing; the political and economic priorities shaping interventions within it are.

As Bangladesh enters a new political cycle, coastal water governance must be treated not as a marginal environmental issue but as a central question of national development, employment, and justice. Eroding embankments, silted canals, polluted waters, and precarious coastal livelihoods are not separate problems. They are the outcomes of a development model that privileges short-term projects, underfunds maintenance, and externalises environmental and social costs onto rural and coastal communities.

Embankments and the work of keeping water alive

Embankments have long been positioned as symbols of protection and progress. They promise stability in a dynamic landscape. In practice,

maintenance budgets, and accountability mechanisms that do not disappear once a project ribbon is cut.

One of the most effective yet undervalued responses to coastal water problems is also one of the oldest: excavating canals, ponds, and water bodies. Regular excavation reduces siltation, improves drainage, replenishes freshwater storage, and mitigates salinity intrusion. It also creates employment at scale. Yet excavation continues to be treated as ad hoc relief work rather than as core infrastructure maintenance.

This is a mistake. Canal and pond excavation should be institutionalised within annual, centrally funded rural employment schemes, rather than tied to disaster declarations or donor cycles. Crucially, this must be recognised as dignified work, not expendable labour. Workers engaged in excavation should receive healthcare insurance, pensions, and protections equivalent to other public

protection—where it belongs.

Industrial growth, polluted waters, and the limits of enforcement

Nowhere is the entanglement of economic growth, water pollution, and expendable labour more visible than in Bangladesh’s ship recycling industry. My research on shipbreaking demonstrates how development pursued without robust regulation and enforcement produces slow and cumulative forms of harm—damaging workers’ bodies, contaminating coastal waters, and degrading local ecologies.

Ship recycling, like the ready-made garments sector, is often defended as a national economic success story. It is true that the industry contributes steel, employment, and foreign exchange. But growth alone is not an adequate measure of success. The costs—industrial pollution, hazardous waste, and serious injury and death—have been systematically displaced onto workers, surrounding communities, and coastal environments.

Pollution from shipbreaking does not remain confined within yard boundaries. It moves through tidal waters, sediments, and food chains, affecting fishers, farmers, and coastal ecologies already under strain. These harms are not accidental. They are the predictable outcome of regulatory gaps, weak enforcement, and a political tolerance for environmental sacrifice zones.

During my early fieldwork in 2019–20, workers often described government inspections as natok—theatre—a box-ticking exercise rather than meaningful oversight. Since then, many ship recycling yards have invested in upgrading facilities in order to comply with the Hong Kong International Convention for the Safe and

and Bangladesh’s international reputation. Effective enforcement requires money, expertise, and political will.

First, Bangladesh must establish a fully operational Treatment, Storage, and Disposal Facility (TSDF) for industrial hazardous waste. Without this infrastructure, compliance is structurally impossible. Hazardous materials cannot be managed safely if there is nowhere for them to go. Continued delays effectively subsidise pollution by allowing toxic waste to be absorbed by land and water.

Second, the state should fund independent third-party maritime experts to evaluate ship recycling facilities on a regular basis. These assessments must be transparent, technically rigorous, and insulated from industry pressure. Facilities that fail to meet standards should not be permitted to take in new ships. This is not anti-industry; it is pro-credibility. Allowing substandard yards to continue operating undermines compliant facilities and entrenches a race to the bottom.

Third, enforcement agencies themselves require urgent attention. Many face chronic understaffing and limited technical capacity. Ship recycling involves highly complex material assemblages that require specialised inspection expertise. Boosting enforcement budgets and training is not optional if standards are to be meaningful. Inspectors cannot enforce what they are not equipped to assess. At present, even basic asbestos sampling cannot be conducted domestically. Establishing accredited laboratory facilities
w o u l d



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