

WORLD WETLANDS DAY

Failed governance is killing our wetlands. We must act fast



Muhammad Muktedirul Islam Khan is principal researcher and head of consultants at the Sustainability Action Learning Lab. He can be reached at muktadir@sustainabilitybd.org.

MUHAMMAD MUKTADIRUL ISLAM KHAN

Across centuries, people of the haor region lived by the cycle of water for generations, rather than by the calendar. Ways of life were shaped by when water arrived, how long it lingered, and how gently it retreated. The dominant livelihood activities—farming and fishing—followed the same rhythms of the water cycle, guided by a collective understanding that land is never permanent and therefore would have to be used cautiously, and for a limited time span. Seasonal paths, temporary homes, and agricultural practices reflected an acceptance of limits, informed by memories of past water cycles and anticipation of the next.

Today, that shared understanding no longer guides how the haor is used. Structures are built as if water will not return. Shared stewardship has eroded and regulatory oversight has weakened, enabling intensified extraction. Haors are increasingly treated as fixed assets rather than shared inheritances. In this shift, the haor represents a troubling national story of Bangladesh's wetlands and poses a direct challenge to its policy discourse. The question is, can the country re-learn how to govern its wetlands by recognising its vulnerability, impermanence, restraint, and ecological limits?

Wetlands in Bangladesh are estimated to cover 70-80 lakh hectares, roughly 50 percent of the country's total land surface. These encompass rivers and streams, haors, freshwater lakes, baors, beels, water storage reservoirs, fish ponds, flooded cultivated fields, and estuarine systems with extensive mangrove swamps. Wetlands function as the country's core natural infrastructure, supporting the environment, economy and biodiversity. They also act as buffers against floods and stormwater by absorbing monsoon flows. However, the benefits of having wetlands are not adequately valued within the governance processes, resulting in gaps in operational decisions, budget priorities, and enforcement practices. As a result, wetlands have become increasingly vulnerable, the scale and nature of which are now starkly visible across urban wetlands, haors, and coastal ecosystems.

Urban wetlands are deteriorating faster and more visibly than any other types of wetland in the country. Between 1999 and 2019, the total area of wetlands in Dhaka declined from 19.09 sq km to just 5.87 sq km, with about 22 percent disappearing in a single decade between 2010 and 2019. From a longer-term perspective, the city has lost around 60 percent of its wetlands



Urban wetlands are deteriorating faster and more visibly than any other types of wetland in Bangladesh. This photo was taken near the Dhaleshwari River in Keraniganj, Dhaka.

FILE PHOTO: ANISUR RAHMAN

between 1980 and 2024. A similar trend is evident in Chattogram, where wetlands covered about 23.15 percent of the total land surface in 1990 but declined to 16.46 percent by 2018. The problem extends beyond the loss of wetland area to worsening pollution. The number of pollution sources around Dhaka's rivers have increased from 608 to 1,024 over the last five years. Dissolved oxygen levels in the Buriganga and Shitalakhya rivers have fallen below one mg per litre—an extremely critical

condition incompatible with the survival of most aquatic life forms.

Like urban wetlands, haors—another nature-based ecosystem covering around 20 lakh hectares in northeastern Bangladesh and home to approximately 1.94 crore people—are also increasingly vulnerable to ecological degradation driven by climate variability and human intervention. In the Hakaluki Haor, one of the largest wetlands in the region, the loss of waterbody area increased from 10 percent to 75 percent between 1980 and 2012. Tanguar Haor, an internationally important wetland under the Ramsar Convention (1971), is also under severe pressure, with long-term climatic stress significantly affecting local hydrology and weather patterns. Between 1980 and 2008, annual rainfall declined by about 582 mm, while the average temperature increased by 1.4 degrees Celsius, a critical

intense pressure due to sea-level rise, salinity intrusion, and climate change. Sea levels are rising at a rate of 4.0-7.8 mm per year, and projections indicate that if this trend continues, around 18 percent of the country's coastal area could be permanently submerged by the end of the century. Coastal wetlands are highly susceptible to salinity intrusion driven by cyclonic storm surges, sea-level rise, and coastal flooding. Several scientific models project that the proportion of river areas containing freshwater could decline by about 50 percent by 2050, severely affecting drinking water availability, land productivity, and biodiversity. The coastal region is also experiencing increased land erosion, flooding, waterlogging, and loss of agricultural productivity, further undermining wetland services and local livelihoods.

Paradoxically, the growing vulnerability

Bangladesh is also a signatory to the Ramsar Convention, reflecting its international commitment to the "wise use" of wetlands and the maintenance of their ecological character through sustainable management. Several other policies and planning instruments—including the National Environment Policy, 2018, Jolmohal Management Policy, 2009, Delta Plan 2100, and sectoral policies such as the National Water Policy, 1999, Protection and Conservation of Fish (Amendment) Ordinance, 2025, and Coastal Zone Policy, 2005—also provide a strong legal and planning basis for wetland protection.

However, this policy environment has not translated into effective protection on the ground and has failed to produce tangible outcomes. Wetland governance remains fragmented in Bangladesh, with responsibilities spread across multiple ministries and institutions, including land, water, fisheries, environment, urban development, and local government. This complex institutional arrangement struggles with clear ownership, enforceable protection, and cross-sector accountability. In practice, wetland management often suffers from inadequate staffing, limited resources, weak monitoring systems, and poor enforcement capacity, allowing degradation and pollution to continue. As a result, wetlands continue to be treated primarily as land assets to be leased, converted or reclaimed.

The question is how Bangladesh can move from recognising wetlands to actually protecting them. To do that, wetland governance must shift beyond fragmented responsibilities towards clear institutional mandates, measurable performance indicators, and consistent financing. Protection efforts also need to move from reactive responses to preventive enforcement. Urban wetlands should be safeguarded as essential drainage and flood-retention systems, while haor and coastal wetlands require management approaches that reflect their seasonal dynamics and resilience to growing climatic risks. Strengthening co-management with local communities, whose traditional knowledge once ensured restraint and balance, will also be critical.

Unless wetland protection moves beyond isolated projects to permanent systems with clear mandates, budgets and public oversight, degradation will continue. Ultimately, the future of Bangladesh's wetlands will depend on whether policies move beyond recognition to enforcement, and whether fragmented actions give way to accountable, long-term governance.

Safeguarding voters' minds against AI



Shoukot Ali is working with the BC Ministry of Children and Family Development in Canada.

SHOUKOT ALI

The people of Bangladesh are expecting a free and fair election after a long time. However, voters are currently facing not only traditional deep-rooted political issues but also the manipulation of information online. And AI has been the go-to tool for spreading manipulated information during this election season.

Bangladesh's population is remarkably youthful, with a median age of 26 at the end of 2025. Around 47 percent of the population is also connected to the internet, while 36.3 percent are social media users. These factors can bring both opportunities and threats. With the nationwide spread of high-speed internet connectivity, any news can reach people within moments. During elections, this means that even a single deepfake going viral could potentially distort public perception and fuel unrest.

Globally, there is precedence for elections being influenced by AI. During India's 2024 elections, deepfakes were employed both

creatively by campaigns to reach more voters and offensively to discredit opponents. For instance, two widely circulated deepfake videos showed Bollywood actors Aamir Khan and Ranveer Singh attacking Prime Minister Narendra Modi and supporting the opposition parties. The celebrities denied their involvement in these videos. On a positive note, one political party used AI to dub their leaders speaking in the languages/dialects of various regions. AI chatbots were also used to clone politicians' voices to make personalised calls to voters. Additionally, some parties "revived" deceased leaders using AI and recreated speeches in their voices to encourage youth support. During Pakistan's February 2024 elections, deepfakes were used for and against opposition leader and former Prime Minister Imran Khan, who was in prison at the time. His supporters used his image and voice to create a deepfake of

him, motivating people to vote for his party. There were also deepfake videos created to undermine Khan's campaign on Facebook and TikTok. In one video, he was shown calling for an election boycott, creating confusion amongst his supporters.

In the US, AI-generated deepfakes were used for voter suppression during the 2024 presidential election. One such instance was a robocall in January that recreated Joe Biden's voice to urge New Hampshire primary voters to abstain from voting. This led to the Federal Communications Commission (FCC) imposing fines and indictments. Meanwhile, Romania's Constitutional Court annulled the country's 2024 presidential election because of AI-enhanced misinformation and disinformation created by Russian interference. The foreign actors ran campaigns on TikTok and Telegram, flooding the platforms with content featuring fake endorsements of far-right and pro-Russia candidate Calin Georgescu.

It is crucial for the Bangladesh government to develop workable, multi-layered defences that combine technology, communities, and policy for quick impact against AI-generated disinformation during this election season. The interim government could consider establishing a high-powered task force to take down deepfake content in collaboration with the Election Commission (EC), Bangladesh Telecommunication Regulatory Commission

(BTRC), Meta, and Google. It could also develop a rapid response fact checking unit and help political parties to employ their own fact checkers. The government could also require commitment from political parties to avoid making or promoting deepfake content and label AI-generated campaign materials accordingly.

In the long run, Bangladesh should integrate AI literacy into its national curriculum and

reports on information transparency. Passing a comprehensive AI policy and relevant laws with technical assistance from government partners is also necessary. The government could also join an international election integrity forum by collaborating with the UN to exchange intelligence on deepfakes and other AI-generated information, and build a firewall against foreign meddling in the country.

The deeper question haunting democracy is not whether the EC, government authorities or internet platforms can move fast enough to stop deepfakes, but whether societies can build the resilience needed to withstand such manipulated information. A multi-layered, comprehensive response package—rapid deepfake detection, transparent AI labelling, strong platform accountability, better AI literacy, and international cooperation—can significantly reduce the impact of AI-driven manipulation.

Evidence from Romania, the US, India, and Pakistan show that when safeguards exist, AI's influence on election results remains limited. Bangladesh's upcoming election could become the first one where the country proves that it can protect voters' minds from artificial deception. The true cost of failure is not just a contested result or post-election unrest, but the slow collapse of public trust in what they see and hear—without which democracy becomes conceptually meaningless.

Bangladesh should integrate AI literacy into its national curriculum and work with universities and NGOs to conduct workshops for the same. To ensure platform accountability, Bangladesh should require Meta and Google to employ Bangla-fluent fact checkers and produce post-election reports on information transparency.

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BY THOMAS JOSEPH

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15 Train unit
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18 Dressing part
19 Catch in the act
20 Rent out
21 Carolina bird
23 Happy colleague
25 Spot
27 Agreeable answer
28 Sir's counterpart
30 Nick and Nora's dog
33 Fuming
34 Tear
36 Corn core
37 Book extras
39 Wheel part
40 Soda flavor
41 Grayish brown
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44 Wastes time
45 Useful skill
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6 "Extra!" shouter
7 Suit to —
8 Linus's creator
9 Jimmy Stewart film
10 Start
17 Naughty
22 Homer's neighbour
24 Casserole bit
26 Heartfelt
28 Coarse-spun cotton
29 Central
31 Pate cover
32 Convent head
33 — Carta
35 Cookout spot
38 Fencing sword
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YESTERDAY'S ANSWERS

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