

## Leave our forests alone!

Cancel the plan to build a road through Ramu forest

At a time when we should be making serious efforts to increase our forest coverage, which is critically important for our environment and collective well-being, we seem to be doing the opposite. While one would assume that it is private citizens and organisations who are trying to grab our forests, in reality, this is only part of the truth. We have seen over the last few years that it is mostly government agencies trying to implement big projects in our fast-depleting forests. The latest example is the LGED department's plan to construct a road through the Ramu reserve forest, which would connect Ramu upazila with Cox's Bazar City at the Marine Drive along the sea beach. The proposed road, if constructed, will cause irreparable damage to wildlife habitats and elephant corridors, not to mention the thousands of trees that will have to be felled for it. The question is, why then has the LGED department undertaken this project?

Reportedly, the LGED's Cox's Bazar office prepared the draft proposal to build the 5km road involving Tk 22 crore at the direction of the Cox's Bazar DC office. The road will facilitate communication between a proposed international football training centre in Ramu and Cox's Bazar City. The government has already handed over 20 acres of the Ramu reserve forest to the Bangladesh Football Federation (BFF) for building this residential training facility.

We would like to point out to the government that construction of both projects (road and training centre) is a breach of our environment conservation laws and Forest Act. Parts of the Ramu reserve forest were declared an Ecologically Critical Area in 1999 under the Bangladesh Environment Conservation Act 1995. Building these structures also goes against the government's Conference of the Parties (COP) commitment to end deforestation by 2030.

We think the government should immediately abandon these projects considering their potentially far-reaching detrimental effects on the environment. It should also remain careful about any projects that could decrease our forest coverage. The Ramu forest has special significance because it is home to various species of rare plants, birds and wild animals. It is used as a corridor and habitat for the endangered Asian Elephant in Cox's Bazar. The proposed road and other illegal settlements in this forest would only shrink the elephant corridor.

Cox's Bazar's forestland has always been a victim of grabbing by various public and private entities. A joint study conducted last year by the Bangladesh Environmental Lawyers' Association (BELA) and Youth Environment Society found that 45,990 acres of the 260,046 acre forestland in Cox's Bazar have been illegally occupied by 43,568 people and 696 public and private organisations over the last decade. We urge the authorities to take action against these identified grabbers, and make sure that no more of our forestland is lost to human greed.

## What makes an election fair?

Certainly not statements forced out of presiding officers, as it happened in Gaibandha

In perhaps the first known instance of what could potentially be a new trend in Bangladesh elections, a number of presiding officers of the suspended Gaibandha 5 by-poll have alleged that they were forced to give out statements saying it was "free and fair", in some cases with the figures of total votes cast mentioned. According to several newspapers, this happened after the Election Commission declared the election suspended, following widespread irregularities and a mass boycott by all but one of the candidates. Although such statements have no legal basis, those could be used to discredit the EC's decision or force it to adopt a lenient approach in subsequent actions.

This is but the latest proof that serious irregularities did occur in this election – something denied, against evidence, by the local and central Awami League leaderships, and even the local superintendent of police, who should have known better. Justifying its decision on Wednesday, the EC described the irregularities it observed, including illegal presence of men in polling booths, vote rigging, removal of CCTV cameras, etc. In many cases, polling agencies of opposition candidates were forced out of the centres. Now, at least four out of the 16 presiding officers contacted by this newspaper have claimed that they were forced by Awami League men and polling agents to write statements on white papers.

Some of them described seeing illegal infiltration of men in secret polling booths. Others described how, after the suspension decision was announced, they were barred from leaving polling centres until they declared the results. They were totally unprotected. In one instance, a UNO asked a presiding officer to write the statement. Clearly, the danger was from both within and outside. What worries us particularly is the coordinated manner in which the statements – over 50, allegedly – were collected, or the polling booths were infiltrated by outsiders, called "robbers" by the CEC. Clearly, someone was pulling the strings behind such well-orchestrated moves. Someone was bringing people from outside the constituency to make identification and possible legal action difficult.

The statement collection starts to make sense when we consider that Awami League activists organised protests soon after, demanding declaration of results from centres where voting was not halted before suspension. This – and the potential complicity of the Awami League candidate and field-level administrators responsible for law enforcement – must be taken into consideration now that the EC is investigating irregularities. If presiding officers can be threatened or forced to act unlawfully, in their own centres no less, one shudders to think what else unscrupulous political elements can do using their influence.

Presiding officers in Gaibandha have created a unique challenge for the EC. They seem to have been both enablers and victims of coercive tactics. At a press conference on Thursday, the EC held them as well as the local administration responsible for the widespread irregularities. It now must ensure proper investigations to get to the bottom of the matter, and punish those responsible.

# EDITORIAL

## Is the EC fighting an unwinnable war?

OF MAGIC & MADNESS

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In an extraordinary move on October 12, the Election Commission suspended the Gaibandha 5 by-poll, organised to choose a successor to a late MP who died on July 23. "Unprecedented" was the word used by some to characterise the decision in what was this EC's first brush with parliamentary elections. More optimistic observers saw it as a change of direction for an EC that, until that point, appeared to be cut from the same cloth as the last two commissions, as pliant and excuse-prone if not as blatant.

There is no question about the justification for the suspension of the election. Serious irregularities did occur, including illegal presence of men in polling booths, vote rigging, forcing polling agents out of centres, removal of CCTV cameras, etc. But similar irregularities occurred frequently over the last decade or so, even during this EC's tenure. If every such instance was met with a matching response, we would have a very different political history. It's vital, therefore, to understand the motive – not why, but really why.

Given the circumstances under which the Gaibandha drama played out, there are at least three possible explanations for why the EC chose to exercise the maximum authority it has at its disposal.

### A concession to disgruntled opposition parties?

Yes, opposition parties, not just candidates, of whom all but one (Awami League's, of course) boycotted the by-poll midway through it. The election ensued against the wider backdrop of deep, unmitigated distrust of the EC and its neutrality. A suspension decision – an insult to the ruling party – could improve the EC's standing among opposition parties and restore some of its credibility.

But this is unlikely to work. The opposition camp, including the BNP, which didn't participate in the by-poll, is unlikely to be persuaded by a token

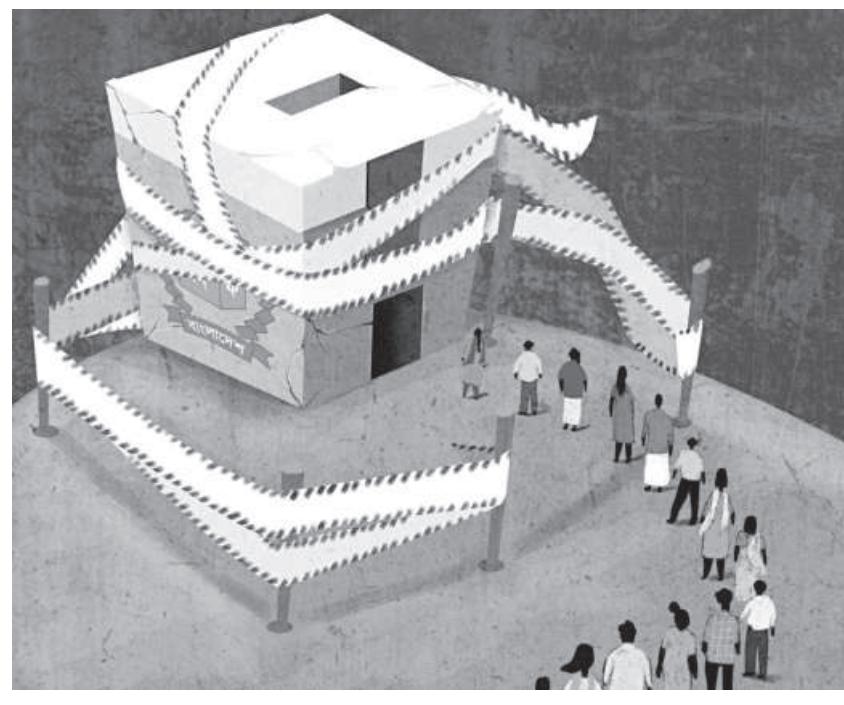


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concession. If anything, this gives them further proof of the EC's inability to hold fair elections. The BNP secretary general has said as much: "The EC could not conduct a fair election even after exercising all its power. This just validates our position that holding a fair election is not possible under a partisan government."

### A warning to field-level administrators?

There has been a lot of talk about the EC's influence (or lack thereof) over field-level administrators who help it hold elections. Last week, in a meeting with deputy commissioners (DCs) and superintendents of police (SPs), an election commissioner alleged that many officials harbour partisan bias that influences their work. To that, some officials responded with "rude disobedience". Not long ago, the EC faced similar embarrassment after the public prayer of Chattogram DC,

a returning officer, for the success of a ruling party nominee.

Although the EC sought to handle these affairs quietly, its reaction after Gaibandha shows that all is not forgotten or forgiven. It held the local administration and presiding officers responsible for electoral irregularities, in a move that will certainly turn up the heat on them. Although some

terribly replied: "The EC can suspend an election from anywhere, if it seems to us that it is not being held fairly," regardless of whether the EC is in Dhaka, or Cumilla, or Chattogram, or on a ship.

This comes off as fairly iconoclastic given that, on a previous occasion, he appeared to be apologetic after being chastised by a ruling party leader far below the rank of secretary general for objecting to his violation of a code of conduct.

Whatever the motive may be, however, it is clear that the suspension decision is going to be a reference point in the future – but for what exactly? This will be determined by how the EC acts going forward. The first sign to watch out for is, of course, how well it follows up on its claims of irregularities. It has formed a three-member probe committee to identify how the irregularities took place and who were behind them. But anything less than swift justice for all involved would only discredit it further.

Who were these people? In the past, they have been called variously as "ghosts", outsiders, vote robbers, etc. The CEC added two more titles: crooks and criminals. Their collective identity is not unknown, however. That we are still occupied with the semantics is partly because of the unlikelihood of anything serious happening to them or their political masters or collaborators in the local administration, who allegedly gave them a free pass in at least 51 out of the 145 polling stations in Gaibandha 5.

The question is, if the EC cannot hold a fair election in a single parliamentary seat, how can it do so in 300 seats? Don't bother answering. The Gaibandha saga has, in a way, overshadowed the EC's failure and lack of preparation to deal with known criminals and their even better-known tactics. The BNP, for once, wasn't speaking in hyperbole when it said that Gaibandha shows how powerless the EC actually is. Can it deal with outsiders without the cooperation of insiders – election and law enforcement officials – who are supposed to be its eyes, ears and hands on the ground?

The EC faces a many-sided war, and there are legitimate questions about whether it really wants to win it. But an even bigger question is: Is the war, with its existing rules of engagement, at all winnable?

## A hidden natural resource has transformed Bangladesh into a food-secure nation



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The year-round availability of groundwater resources has played a vital role over the past few decades in providing water for drinking and irrigation in Bangladesh. This hidden natural resource has transformed a once famine-prone land into a prosperous and food-secure nation. We take groundwater for granted due to its general presence at relatively shallow depths. However, it is still under-appreciated, with limited representation in national water policies. As we move into uncharted territory as a consequence of climate change, it is crucial that groundwater responses to changes, not only in the magnitude, duration, and variability of monsoon rainfall but also our use of land and water, are better understood.

As a geologist with a specialisation in groundwater science, I would like to point the reader's attention towards a Bangladeshi research paper titled "The Bengal Water Machine: Quantified freshwater capture in Bangladesh," which was published in the prestigious *Science* journal in September this year. The article – written by myself and my colleagues – describes how 16 million smallholder farmers in Bangladesh have collectively created a water machine beneath the Earth's surface by incrementally increasing pumping of shallow groundwater during the dry season to irrigate rice paddies over the last three decades. We call this the Bengal Water Machine. The main concept came from an earlier paper published in *Science* in 1975, known as The Ganges Water

Machine, where the authors suggested that pumping more groundwater using deliberately positioned wells beside the River Ganges could enhance groundwater recharge over time and reduce flood disaster. However, there was no targeted implementation of the Ganges Water Machine by any government or private organisations, and no field observations have yet been presented to demonstrate its operation.

Nearly half a century later, we show that such a water machine operates in Bangladesh but is more diverse, and is operated, unintentionally and unknowingly, by millions of smallholder farmers.

The discovery of the Bengal Water Machine has only been possible because of our country's long-term dedication to monitoring groundwater levels. Bangladesh has a vast network of 1,250 groundwater-level monitoring stations that is managed by the Bangladesh Water Development Board (BWDB). Our analysis of 465 long-term records revealed that about 35 percent of the observation boreholes that measure groundwater levels reflect the operation of the Bengal Water Machine. Approximately 25 percent show depletion of groundwater levels of varying magnitudes, and the remaining 40 percent of boreholes show relatively stable trends with seasonal oscillations.

Let me explain what the Bengal Water Machine is and how significant its operation has been for Bangladesh.

Intensive dry season (November to April) groundwater irrigation to produce Boro rice lowers groundwater

levels, increasing the space available underground to store water in shallow sandy sediments known as aquifers. Under favourable hydrological conditions, the space created by pumping fills up during the monsoon season from the infiltration of rainfall and leakage of floodwaters, not only in major rivers but also smaller seasonal rivers, canals, ponds, and lakes (beels). Over time, the available storage space in aquifers has incrementally increased and enhanced the seasonal capture of freshwater during monsoon in Bangladesh.

Our calculations suggest that between 1988 and 2018, this freshwater capture in Bangladesh, which is in excess to natural, predevelopment groundwater recharge, amounts to between 75 and 90 cubic kilometres.

This colossal amount of freshwater is more than twice the reservoir capacity of the Three Gorges Dam in China, and 12 times more than the volume of water in Kaptai Lake of Bangladesh.

This capture of monsoon freshwater flown by aquifers has, where conditions are favourable for the operation of the Bengal Water Machine, sustained increased use of groundwater for irrigation by farmers in the dry season. The Bengal Water Machine has ultimately helped Bangladesh become self-sufficient in food grain production, despite substantial variations in annual rainfall and a slight overall decline in basin rainfall. Further, we contend, but have yet to confirm, that this gradual increase in freshwater capture has served to reduce the magnitude of flood discharges in places where the Bengal Water Machine operates. Future research will also seek to understand better why over short distances of a few kilometres or less we observe a variety of groundwater responses, including those reflecting the Bengal Water Machine and those showing groundwater depletion.

Our study argues that what we call the Bengal Water Machine may operate

and could potentially be replicated in alluvial plains beyond Bangladesh, including other Asian mega-deltas such as the Ganges floodplains in India, and the Mekong and Red River Deltas in Vietnam, which are similarly vulnerable to the adverse impacts of climate change. As such, the machine could help to enhance global food security and the resilience of water and food supplies to climate extremes. How the Bengal Water Machine will respond to changes in monsoon rainfall intensity and duration remain unclear, but further research on the matter can help in supporting climate adaptation policy and practice.

The outcomes of our study highlight the importance and value of long-term hydrological monitoring data to assess the status and trends of a country's groundwater resources, which will become ever more important under the amplification of climate extremes caused by climate change.

Our research also highlights limitations to the operation of the Bengal Water Machine in areas of the country where leakage of water during the monsoon season is insufficient to fully replenish the groundwater withdrawn during dry seasons. In those areas, pumping depletes groundwater resources, making these inaccessible to households reliant on shallow wells for drinking water.

Further research is also needed to assess the suitability of locations for the operation of the Bengal Water Machine to maximise benefits to farmers and minimise the risks of groundwater depletion. Pilot projects will be needed to test the viability of operation of the Bengal Water Machine in suitable areas in other parts of Bangladesh.

I hope that the article in *Science* will serve to increase public awareness of the importance of continuously monitoring groundwater levels and quality in order to safeguard this precious natural resource for future generations.