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FOUNDER EDITOR: **LATE S. M. ALI**

Can police just kill people on the streets?

Accountability and immediate reforms are vital to stop this

ON the same day that the home minister told journalists that law enforcement agencies would not restrict BNP if they hold peaceful programmes, one BNP activist was killed allegedly by police fire while scores were injured after a procession was blocked by police in Bhola. According to local BNP activists, who were protesting the rise in fuel prices and load shedding in the country, they had taken verbal permission to organise a rally and a procession. However, the police contest that the party did not take permission for the procession specifically, and that BNP supporters hurled brick chips and glass bottles at them when they intercepted it.

Let us assume that the police version of events is the correct one. Let us put aside the fact that in an ideal society, you would not need to request permission to exercise your right to protest. Let us also accept that it was the BNP protesters who became violent first. Even in these circumstances, is it fair for the police to use live bullets to bring a situation "under control"? Can the police become judge, jury and executioner and end the life of a man for hurling brick chips? Are there no methods of maintaining law and order other than using such excessive force? Equally importantly, what message does it send to the opposition political camp, especially when BNP is refusing to participate in the upcoming national election fearing undue interferences from the ruling party?

BNP activist Abdur Rahim is not the first person in the past week to have been killed after police interventions. On July 27, seven-month-old Sumaiya was shot in her mother's lap during election violence in Thakurgaon. On that evening too, the police were attacked by supporters of a defeated contestant, and apparently they opened fire in self-defence. The fact that an infant ended up being killed demonstrates just how reckless this firing must have been. Despite there being a provision in the police code for firing into the ground to frighten rioters, or at knee height to cause injury, we continue to see deaths as a result of lethal force from the police.

Every public institution run with taxpayers' money must be accountable to the people. This is all the more crucial for law enforcement agencies who are the only force legally empowered to detain, question, threaten, and sometimes even take the life of a citizen. A force with such power must adhere to the highest ethical standards, and follow procedure to the letter. Yet, what we continue to witness in Bangladesh can only be described as an abuse of power and a miscarriage of justice. Without accountability and immediate reforms, we fear more citizens will continue to die or suffer at the hands of law enforcement agencies.

Sustained efforts key to effective mosquito control

Authorities should take a fresh look at the dengue situation

MOSQUITOES are not any modern-day phenomenon. They are to be found even in ancient books on the biblical era, where it is narrated that emperor Nimrod, the builder of the Tower of Babel, suffered at the hands of a mosquito when it entered his brain through his nostrils and buzzed for twenty-four hours, making his life a veritable hell. So, he started to bang his head against stonewalls and died in the process. It will not be an exaggeration to say that humans have been fighting mosquitos since the dawn of history. In cities like Dhaka, that fight is often one-sided with the tiny creatures, in their millions, causing all sorts of troubles for the residents.

The two city corporations of Dhaka have tried many methods of mosquito control, often without success, despite claims by top officials that Bangladesh is faring better than many other Asian countries in preventing dengue and other mosquito-borne diseases. The methods applied so far include chemicals sprayed on bushes and drains, releasing a small fish variety called guppy in city drains as well as tilapia fish and ducks in ponds and lakes, flying drones for detection of larvae spots, etc. We are told that the Dhaka South City Corporation also released more than 15,000 frogs in various lakes, ponds and other water bodies in the hope that those would eat mosquito larvae and reduce the risk of dengue infection.

But the move, which entomologists called "unthinkable", proved to be ineffective, as is evident from the fact that city-dwellers in many areas remain hostage to mosquitos, while large numbers of dengue patients continue to be hospitalised. Given the gravity of the situation, the Dhaka North City Corporation recently opened a control room to provide free dengue tests and advice regarding the disease. It also deployed a large number of drones to search for mosquito breeding grounds on building rooftops.

Experts, however, say that such methods and strategies are usually adopted at short notice, without taking their effectiveness or long-term consequences into consideration. They pointed out that the authorities have a tendency to control both Aedes and Culex mosquitoes by following the same methods, but in reality, the two need different approaches. Therefore, there is no alternative to getting our mosquito control policy right, as well as undertaking sustained efforts including prevention, surveillance and follow-up actions. The city corporations must work in collaboration with the experts to adopt the best policy and prevent the onslaught of mosquitos.

The mythical backbone of the Election Commission

Mohammad Al-Masum Molla
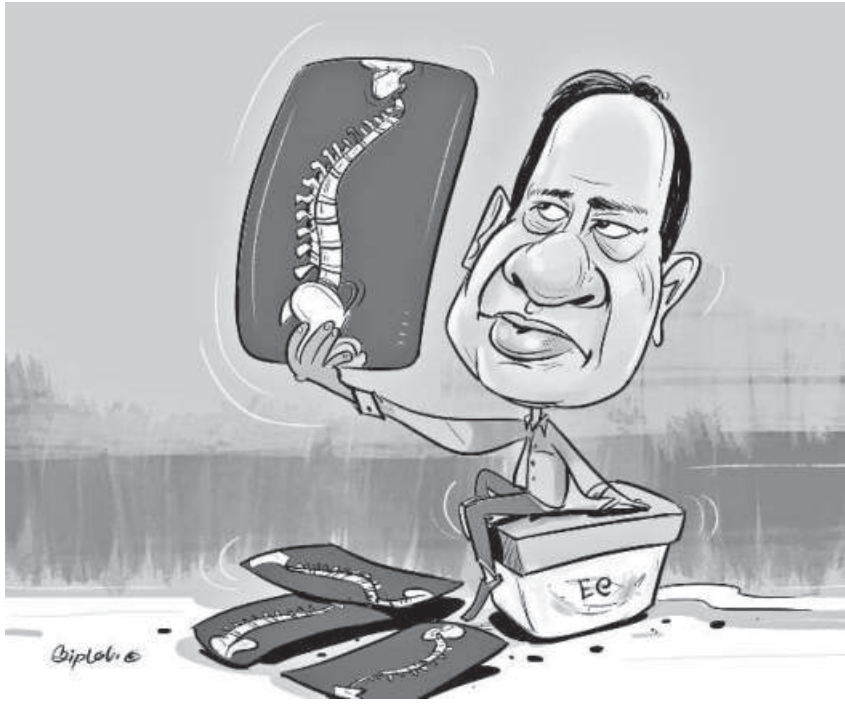*is deputy chief reporter at The Daily Star.*

MOHAMMAD AL-MASUM MOLLA

FOR a democratic system to function properly, all elections must be free and fair so that the people's choices are reflected in how the country is run. That is the main essence of democracy, and the Election Commission has the single most important role to play in making sure that the polls held under its supervision are all impartial. During the period of an election, regardless of who is in power, the state mechanism should ensure the space the commission needs to function independently. At the same time, the commission should also be able to challenge any questionable action by the incumbent offices. Interestingly, apart from a few exceptions, such as the election commissions that staged the 1991 and 2008 parliamentary elections – two of the least debated elections in the history of Bangladesh – this ability or intention or courage (or however you may want to describe it) to challenge the incumbent authority has almost always been missing.

In 2013, BNP Chairperson Khaleda Zia was addressing a rally in the northern divisional headquarters of Rajshahi. I was present there to cover the event. Speaking at the rally, the BNP chief said the then Election Commission (headed by Kazi Rakibuddin Ahmed) lacked an "upright spine."

What she meant by that was that the commission did not have the "guts" to challenge the ruling Awami League who, she alleged, was preventing a free and fair national election from happening.

But what followed that comment – the rebuttal from the then Election Commissioner Brig Gen (retd) Md

Zabed Ali – created quite a buzz in the country's political arena.

Speaking to journalists at his Election Commission office, Zabed Ali said they (the commission) were fine and their spines were straight as they were working to ensure the same scope for all the candidates during the polls.

"See, I am 63 years old and I am fine. As per medical reports, my backbone is still straight," Zabed told journalists, standing up from his seat.

As humorous as this back and forth was, it also created controversy as to how an issue of such import was discussed so light-heartedly. And then we saw what happened in the parliamentary election that followed

on January 5, 2014: a total of 153 candidates declared elected without contest.

There is another instance where the head of yet another controversial Election Commission was admitted to the hospital with "spine" problems in 2006. It later turned out that the then chief election commissioner (CEC), Justice MA Aziz, was literally hiding in the hospital to avoid finding replacements for his two deputies with whom he clearly had a difference of opinion regarding the "should-haves" before the parliamentary election scheduled that year. Eventually, the Aziz commission had to quit before carrying out the task they had been assigned.

With so many controversies, especially on the presence and alleged "absence" of a spine that has now reached mythical proportions, a comment about having an upright backbone by the current CEC, Kazi Habibul Awal, whose team is in charge of arranging and ensuring a free and

fair parliamentary election, which is due in about a year and half from now, only dug up old memories about the past election commissions and their fabled spines. When your chief election officer has to say it out loud that his office has its backbone in the right shape, you know that something is not right there. Also, hearing such a comment, one can hardly be blamed for immediately starting to doubt the Election Commission's ability to carry out the primary task it has been assigned: shake off all fears and political intimidations and do what it needs to in order for the most popular and competent candidates to get elected in a fair manner.

Irrespective of what the CEC might be saying, the reputation of the EC's spine took a nosedive when it failed to rein in a ruling party lawmaker during the Cumilla city polls held in June. In what transpired as a blatant display of disrespect, Awami League lawmaker AKM Bahauddin openly refused to abide by the EC's orders to stay out of the city before and during the polls, and the commission could do nothing to enforce its own rule.

Incidents like this are what puts the current commission's "spine" under serious doubt, because in the ideal scenario, the Election Commission should be able to exercise a certain degree of authority over the law enforcement agencies to take care of anyone who may disrupt an election or stop it from being fair.

Our Father of the Nation Bangabandhu Sheikh Mujibur Rahman will be remembered forever for his political heroics. But he may also be remembered for having the straightest spine a human being could possibly have – a spine that displayed uncompromising fearlessness and conviction for his ideals and beliefs, which enabled him to put everything at stake to drive his dreams home. If you want to know what an "upright spine" looks like, all you need to do is look into Bangabandhu's life. Once you do that, you will know how far the current Election Commission is from having an "upright spine."

A *digital solution to Dhaka's waste problem*

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SAINUL ABID and **SYED SAAD ANDALEEB**

IN a densely populated city like Dhaka, waste collection, transportation, recycling, and disposal requires an efficient waste management system. Improper waste disposal and poorly managed landfills pollute the ground, water and air, causing many health and environmental problems. The city must, therefore, use modern approaches to ensure the health and safety of its inhabitants by creating a cleaner and greener environment while saving money and other resources.

Currently, the waste generated in Dhaka city is collected without segregation, dumped at various locations across the city, and finally transported to landfills in an apparently unstructured manner. The problem is exacerbated due to the lack of awareness, motivation, and poor attitudes of the city's inhabitants to practise proper waste management. But people's motivations and attitudes can be changed by adopting a creative incentive policy, whereby desired behaviours could be reinforced and new behaviours encouraged.

In this context, we propose an innovative model of waste management that is low-cost, robust, technology-based, reliable, and sustainable. The Internet of Things (IoT) technology, in fact, can be used creatively to improve Dhaka's current waste management system without introducing major alterations to the core structure. IoT refers to physical objects that are equipped with sensors, processing power, software, and other technologies that can communicate with other devices and systems over the internet or other communication networks. Mobile applications, modified primary vehicles, smart secondary transfer stations, and monitoring centres make up the system. A powerful message

queuing telemetry transport (MQTT) cloud-based platform, such as the Amazon Web Services (AWS), may be used to coordinate technologies, manage data, and perform the needed computations. In other words, real-time data can be tracked from each piece of hardware linked to the IoT server independently, and their values combined or correlated to draw statistical and logical conclusions and solutions to produce data-driven economic value, as well as making predictions of future waste generation and its efficient handling.

Primary vehicle modifications

Not segregating rubbish at any stage is a shortcoming in the traditional garbage collection mechanism. The best way is to segregate waste at the source (i.e. household level). The primary vehicles of household waste collectors can be modified by compartmentalisation of the waste bins (or colour-coded garbage bags) to separate garbage such as biowaste, plastics, and scheduled waste. Scheduled waste means items such as glass collected on Monday, electronic items on Tuesdays, metals on Thursday, etc. Each container would possess one load cell sensor connected to the microcontroller in an embedded system. We can demonstrate this system using Nodemcu, a microcontroller which converts the weights of classified waste into QR codes with security codes that change regularly like OTPs (one-time passwords) that can be verified by the QR scanner in the app. We can connect to the system using the internet through its inbuilt Wi-Fi module. The internet can be accessed via a hotspot on the garbage collector's mobile phone. The routes of the primary vehicles can be accessed by the control centre via GPS tracking.

'NO waste!' mobile app

Lack of awareness and motivation seems to be the root cause of Dhaka city's waste management problem. From our perspective, the generated waste products are the raw materials for making new products. For this, we introduce our "NO waste!" app with the following functionality:

æ Users can scan the QR code generated in the primary collection vehicle.

æ The application will convert to values by verifying the OTP associated with the QR code with the cloud, which deploys the app and primary vehicle circuit.

æ Points will be generated in the user domain with respect to the type of waste and also to calculate community (e.g. a predefined zone) ranking. These reward points may be used to make purchases at supermarkets, pay for university fees, and so on by individual households. Community points may be used to prioritise community projects (building or repairing schools, providing priority healthcare, enabling greater security, etc). The money for these rewards would come from selling the separated rubbish to recycling plants or from new products generated from the rubbish by start-ups with high-value addition. For example, the segregated biowastes can be used as the raw materials for bio-methane production. The slurry can be utilised as agricultural compost. This circular process indeed has the potential to increase the country's GDP and job prospects.

Smart secondary transfer station

The overflowing secondary transfer stations (STS) (the large waste bins) is another important issue. Garbage may accumulate in the large bins by the roadside, emitting foul odours and posing a health risk to the city residents. It also looks awful. We propose a Smart STS with an ultrasonic distance sensor on top of the bins to monitor the tank's state and a load cell at the bottom to measure the weight. The STS status

will be sent to the controlling and monitoring centre when a trigger point is reached so that trucks can be deployed to clear the bins. Also, the system will facilitate the cross verification of STS weight with the weight the waste collectors claim to have collected to prevent malpractice.

Controlling and monitoring centre

The weight and type of waste data may facilitate real-time monitoring of segregated waste and its flow through the system, solving problems of coordination, calculating the economy of collection, comparison of market price of virgin raw materials with that of recycled materials, total revenue generated from the recycling, and prediction of waste quantity in the future by trend analytics. The public and private stakeholders may get this data on their laptops, tablets, PCs, and mobile phones for transparency. The efficacy of the system can be demonstrated using simulated data. Data visualisation can also be availed using business intelligence tools like Tableau, Power BI, etc.

The innovative solution that we propose, combined with a point-based incentive system, may fuel the economy of Dhaka and reward its residents in a variety of ways. We also believe the system can create new and decent jobs, help establish training centres to facilitate the technical training for hardware technicians, create new recycling start-up companies, and enable the greening of Dhaka city, beautifying it, and curbing the health risks that the present system poses. A team of effort with multidisciplinary perspectives is now imperative to tackle Dhaka's growing waste menace.

This op-ed, the final instalment in a four-part series, resulted from the authors' participation in the 23rd ASEF Summer University (ASEFSU'23) interdisciplinary hackathon on "Livable Cities for a Sustainable Future" envisioned by Asian and European young professionals and students.