

NATURE-BASED SOLUTIONS to disasters in the Indian Ocean region



AK ABDUL MOMEN

IN March last year, Cyclone Amphan, said to be the first super cyclone to form in the Bay of Bengal since 1999, devastated the state of West Bengal, killing more than a hundred people. At least 140,000 people died and two million people were displaced when Cyclone Nargis struck the Irrawaddy Delta in Burma (Myanmar) in May 2008. It seemed as if a bucket of water had been sloshed across an ink drawing; the carefully marked lines of the delta's waterways had been erased and the paper beneath was buckled and distorted.

The last super cyclone to hit India occurred in 1999 and caused nearly 10,000 deaths in Orissa (Odisha) state. In 2019, Cyclone Fani, which formed in the Bay of Bengal, hit Orissa, causing immense damage to life and property. "The north coast of the Bay of Bengal is more prone to catastrophic surges than anywhere else on Earth," Bob Henson, meteorologist and writer with Weather Underground had told the BBC. He said that the Bay of Bengal is a "textbook example" of the worst kind of places for storm-surges to develop—shallow, concave bays where water is pushed by the strong winds of a tropical cyclone. This gets concentrated as the storm moves up the bay. Meteorologists say that the worst places for storm-surges tend to be shallow, concave bays where water, pushed by the strong winds of a tropical cyclone, gets concentrated or funnelled as the storm moves up the bay.

What makes matters worse is the high sea surface temperatures in the Bay of Bengal, which can trigger extremely strong cyclones. "It is a very warm sea," says M Mohapatra, head of India's meteorological department. There are other coastlines around the world which are vulnerable to surging storms—the Gulf Coast of Louisiana, for example—but the "north coast of the Bay of Bengal is more prone to catastrophic surges than anywhere on Earth", says Henson. The highly populous coastline also exacerbates the threat: one in four people in the world live in a country that borders the bay. Meteorologists say that high sea temperatures in the "warm" Bay of Bengal are also a major reason for strong cyclones.

Our Indian Ocean Region, tagged as "World's Hazard Belt", is always at the forefront of vulnerability to natural disasters, including cyclones, floods, earthquakes, and tsunamis. The intensity of natural hazards have increased by about 470 percent since 1970.

I cannot agree more with the statement of Tadateru Konoé, President of the International Federation of Red Cross and Red Crescent Societies (IFRC), who said: "The devastating humanitarian and economic impact of natural disasters in the Indian Ocean countries will only worsen with time, unless we double down on investments in resilience and preparedness."

Only on May 25, 2021, I discussed these issue in a workshop organised by Australia, Bangladesh and IORA about how can we use nature-based solutions for reducing the impacts of disasters and climate impacts. These so-called "nature-based solutions" are important pieces in the puzzle in building the resilience of coastal areas, mangroves, seagrasses, tidal marshes, and communities to an ever-increasing number of disaster events around the world, especially in the Indian Ocean region. Nature-based solutions are relevant to everyone, and we can all benefit from seeing them applied.

It is important to learn how to apply nature-based solutions in enhancing resilience to disasters and climate change, whether you are a youth leader, practitioner, policymaker, engineer or business owner; how human activities are interlinked with ecological systems, main tools and approaches for applying nature-based solutions to reducing disaster and climate risks; how policymakers and practitioners are applying nature-based solutions for reducing risks of natural hazards

by investing in restoration and protection.

These extreme events and disasters such as floods, cyclones, Tsunamis, and tidal surges are known to be exacerbated by environmental changes including climate change, land-use changes, and natural resource degradation lead to substantial loss of life, livelihoods, and community assets, which not only threaten the pace of socio-economic development, but also undo hard-earned gains. Increasing climate variability and multi-dimensional vulnerabilities have severely affected the social, ecological, and economic capacities of the people in the coastal regions who economically have the least capacity to adapt. Climatic and other environmental hazards and anthropogenic risks, coupled with weak and wavering capacities, severely impact the ecosystems and Nature's Contributions to People (NCP) and, thereby, to human well-being. Long-term resilience building through disaster risk reduction and integrated adaptive climate planning, therefore, have become key priorities for scientists and policymakers alike. Nature-based solutions are cost-effective approaches that utilise ecosystem and biodiversity services for disaster risk reduction and climate change adaptation, while also providing a range of co-benefits like sustainable livelihoods and food, water and energy security.

Nature-based solutions are both science and art—and can be applied to develop healthy and resilient ecosystems locally, nationally,

regionally and globally. We all should take serious note of nature-based solutions, applications and challenges, research trends and future insights that have wider regional and global relevance. The aspects covered are likely to include: landscape restoration, ecosystem-based adaptation, ecosystem-based disaster risk reduction, ecological restoration, and ecosystem-based protected areas management, nature-friendly infrastructure development in various ecosystem types, agro-climatic zones and watersheds. Experts should highlight to offer insights into understanding the sustainable development goals (SDGs) at the grass roots level and can help indigenous and local communities harness ecosystem services to help achieve them. It should offer a unique, essential resource for researchers, students, corporations, administrators, and policymakers working in the fields of the environment, geography, development, policy planning, the natural sciences, life sciences, agriculture, health, climate change and disaster studies.

Bangladesh has established coastal afforestation schemes since 1961 along the coastal areas of the country with a view to protecting the coastal people from cyclones and tidal surges, stabilise lands in the coast, conserve and support the fishery biodiversity, increase forest and tree cover, sequester carbon to reduce the climate change impacts at the global scale. Forest Reference Emission Level (FREL) report to the UNFCCC showed that about 61 percent of removals (-247,749t) of carbon dioxide is due to plantation/afforestation/reforestation activity in the coastal areas. Bangladesh has implemented many projects since then to establish green belt along the coast and now it is time to widen and intensify it.

Recently, about 19,395 ha of plantation have been completed under an on-going "Afforestation in Coastal Region including the Newly Accreted Chars of Bay of Bengal (2018-2022)" project in four coastal districts. About 9,720 ha of plantation was completed under the "Sustainable Forests and Livelihoods (2018-2023)" project in the coastal districts. Currently, a feasibility study project is under implementation to develop a "Climate Resilient Sustainable Coastal Forestry in Bangladesh" project with a view to reducing forest degradation and increase forest coverage through participatory planning/monitoring to contribute in building the long-term climate resilience of selected communities in coastal areas of Bangladesh with funds from the Green Climate Fund (GCF). The project will establish

about 25,000 ha plantation in newly accreted low-lying lands in the coastal areas.

Bangladesh is not only conducting the coastal afforestation but also establishing plantations in homesteads, embankments, polders through engaging the local community to improve the micro climate, biodiversity and livelihoods which will ultimately develop resilience of the community to climate change in the coastal region. Our government is playing an especially important structural role for sustainable development in coastal areas as well as sustainable use of coastal and marine resources. There are a number of national policies to support the blue economy concept in the context of mangrove forest conservation. Coastal Development Strategy sets a number of strategic priorities for the coastal zone of Bangladesh. Environmental conservation is one of the strategic priorities that ensure conservation of the coastal critical ecosystems including Environmentally Critical Areas (ECAs), heritage sites including the Sundarbans mangrove forest and marine reserves.

In pursuit of the reality of climate change, Prime Minister Sheikh Hasina has established the Climate Change Trust Fund for climate change adaptation, mitigation, and disaster risk reduction where the government has allocated nearly USD 443 million from its own resources. Bangladesh is spending USD 2 billion every year for climate change sensitive projects and USD 3 billion for adaptation measures. Moreover, Bangladesh is facing adverse climate impact because of 1.1 million forcefully displaced Rohingyas. Bangladesh is going to implement the "Mujib Climate Prosperity Plan" to achieve low carbon economic growth for prosperity and partnership. We are the host of the South Asian office of Global Centre on Adaptation and are promoting locally led adaptation in this region. The parliament of Bangladesh has adopted a "Planetary Emergency Resolution" to save the planet. Furthermore, nature-based solution for coastal risk reduction would be a sustainable approach to combat the uncertainties of climate change. Bangladesh's Climate Change Strategy and Action Plan seeks to build a medium- to long-term programme for enhancing resilience to climate shocks and facilitating low-carbon, sustainable growth, including blue growth as linked to coastal ecosystems such as mangrove conservation and coastal resilience. It also suggests expansion of the "greenbelt" coastal afforestation programme to include mangrove afforestation along the shoreline.

Dr AK Abdul Momen is the Foreign Minister of Bangladesh.

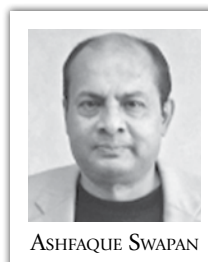


PHOTO: GMB AKASH

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Sobering lessons 100 years after the massacre of African Americans

Struggle for truth and justice remains an uphill battle



ASHFAQUE SWAPAN

RACISM is America's original sin. Its manifestations are myriad, and notwithstanding occasional spurts of progress, the struggle for justice continues to be an uphill battle.

First, there is the vicious history of the unspeakable depredations against African Americans. Then there is something which is almost equally risible—a continuous history of denial and obfuscation of America's dark past.

Take the massacre in Tulsa, Oklahoma in 1921.

On May 31, 1921, white citizens, aided by local law enforcement officials and National Guard troops, destroyed the segregated African American affluent Greenwood community, known as the "Black Wall Street" and home to an estimated 10,000 African American residents. The trigger was a false rumour of an assault of a white girl by a young African American man. White goons looted and set more than 1,250 homes ablaze, according to an official government

report commissioned almost 80 years later. An estimated 300 residents were killed.

A subsequent cover-up and denial meant history books are silent about the massacre.

"For the better part of a century, Tulsa did little to remember the victims of the massacre. There was no memorial, no yearly commemoration, and even many Tulsa residents knew little about it. Residents began marking the day with modest ceremonies in 1996," the *New York Times* reports.

Tulsa is by no means alone. Many other massacres are not taught in schools. Here's a select list from *The Washington Post*:

In Colfax, Louisiana, in 1873, an estimated 62 to 81 African Americans were killed in an attack on newly enfranchised African Americans during Reconstruction. Whites contested the result of the 1872 election (sound familiar?). African American men gathered around the county courthouse to protect the local government. A white mob surrounded them, set the courthouse on fire and shot everyone who came out.

In Wilmington, North Carolina in 1898, white supremacists overthrew the result of a local election and killed dozens of African Americans, burning down Wilmington's prosperous African American neighbourhood. Among dozens of racist attacks and

massacres across the United States in the "Red Summer" in 1919, one of the worst was in Elaine, Arkansas. At least 200 African American farmers and their families were slaughtered after they had unionised and planned to bypass sharecropping.

It is in this context that US President Joe Biden's trip to Tulsa to commemorate the 100th anniversary of the massacre is so heartening.

"For much too long, the history of what took place here was told in silence," Biden said. "While darkness can hide much, it erases nothing."

"My fellow Americans, this was not a riot," he said, as people in the crowd rose to their feet. "This was a massacre."

Biden's visit suggests that the police murder of George Floyd, an African American just over a year ago, triggering a global mass movement against racism, has brought a change in the public mood.

It also underscores the fact that elections have consequences. It cannot be coincidental that Biden's robust defence of civil rights follows his presidential campaign essentially brought back from the death by African American Democratic Party primary voters.

Biden is the first US president to visit the site, and that in itself is a mainstream public

acknowledgement that is significant.

But beyond the symbolism, substantive measures that address this injustice remain elusive.

Three known survivors of the 1921 Tulsa massacres, all centenarians, recently appeared before a congressional subcommittee.

Viola Ford Fletcher, 107; Hughes Van Ellis, her 100-year-old younger brother; and Lessie Benningfield Randle, 106 (who joined remotely) argued that justice was overdue.

"I have lived through the massacre every day," Fletcher said. "Our country may forget this history, but I cannot," Fletcher said. She was 7 at that time.

Ellis said the survivors had been made to feel that they were "unworthy of justice, that we were less valued than whites."

"We aren't just black-and-white pictures on a screen," he said. "We are flesh and blood. I was there when it happened. I'm still here."

"People in positions of power, many just like you, have told us to wait," Randle said. "Others have told us it's too late. It seems that justice in America is always so slow, or not possible for Black people. And we are made to feel crazy just for asking for things to be made right."

All of the House Judiciary subcommittee members—Democrats and Republicans—rose

for standing ovations after the survivors spoke.

Survivors accused the city of turning what remains of Greenwood, now just half a block, into a tourist destination, and using their stories to enrich others but not the victims themselves. In 2005, the Supreme Court declined to hear a case brought by the massacre survivors.

Hollywood film star Tom Hanks has joined a growing call on schools to acknowledge and teach about America's dark past.

"Should our schools now teach the truth about Tulsa? Yes, and they should also stop the battle to whitewash curriculums to avoid discomfort for students. America's history is messy but knowing that makes us a wiser and stronger people. 1921 is the truth, a portal to our shared, paradoxical history. An American African American Wall Street was not allowed to exist, was burned to ashes; more than 20 years later, World War II was won despite institutionalised racial segregation; more than 20 years after that, the Apollo missions put 12 men on the moon while others were struggling to vote," Hanks wrote in a guest essay in the *New York Times*.

Ashfaque Swapan, an Atlanta-based writer and editor, is contributing editor for Silliconeer, an online South Asian publication.

QUOTABLE Quote

SAADI SHIRAZI
Persian poet (1210—1283)

Whatever makes an impression on the heart seems lovely in the eye.

CROSSWORD BY THOMAS JOSEPH

ACROSS

- 1 Third letter
- 6 Forest growth
- 10 Some messages
- 11 Custom
- 12 Jessica of "Tootsie"
- 13 Unaided
- 14 Totals
- 15 Turkey neighbor
- 16 Brewed beverage
- 17 Fuming
- 18 Fall mo.
- 19 Has more stamina than
- 22 Spotted
- 23 Gorillas and gibbons
- 26 Pariahs
- 29 Dry_bone
- 32 Arctic diver

DOWN

- 1 Frozen dessert
- 2 Best Picture of 1984
- 3 Court order
- 4 Soviet fliers
- 5 Brewpub order
- 6 Like bulls
- 7 Some woodwinds
- 8 Following
- 9 Like cliffs
- 11 Saltless biscuit
- 15 Empty talk
- 17 By hand
- 20 Zodiac cat
- 21 Mud bath site
- 24 Gets away
- 25 Gets away
- 25 Endurance
- 27 Chiding sound
- 28 Inclines
- 29 Treat badly
- 30 Blitzen's boss
- 31 Silent film star
- Mary
- 35 Melodies
- 36 Chess turn
- 38 Skirt part

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YESTERDAY'S ANSWERS

AMONG GALE S
LABOR ALONE
PRESENTABLE
HEY EEE BARE
ASSENTS IRE
SUPER RIDES
ONES WON
ADS TROT TED
PET REF ALE
PREVENTABLE
AGREE OGLE D
DOSES PEENS

BETLE BAILEY

WHY'S THE CHOPPER HERE?
THEY'RE DROPPING IN EXTRA SUPPLIES.
MARSHMALLOWS?
MORE S'MORES!
CHOCO

BY MORT WALKER

MARSHMALLOWS?
MORE S'MORES!
CHOCO

BABY BLUES

DID YOU GET THE TOILET FIXED?
TOO EARLY TO TELL.
THAT SOUNDS LIKE A 'NO'.
NOT NECESSARILY...
SOMETIMES THESE THINGS HEAL THEMSELVES.
THAT'S YOUR PLAN? HOPEING FOR A TOILET MIRACLE?

BY KIRKMAN & SCOTT

DID YOU GET THE TOILET FIXED?
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