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Climate Tribune

Mongla Town: An escape for climate migrants?

Adnan Qader, Sumaiya Binte Anwar, and Nafis Fuad

A packed boat at the Pashur River, Mongla at the end of a workday. SUMAIYA BINTE ANWAR

Already grappling with migration in battered coastlines and urban slums, Bangladesh now faces the problem of a global pandemic. This is how regional towns like Mongla are coping with this newly added factor in an already vulnerable system.

Shaheen Mia is a labourer in Mongla town and wakes up every day to break bread with his family. Like him, there are many others who have come to this town to look for alternative livelihood.

Shaheen Mia does not understand climate change neither has he heard about global warming. What he knows for sure is "if the rivers hadn't taken our land we never had to move." Like Shaheen Mia there are millions of rural-to-urban migrants in Bangladesh who are embracing change in the face of climate change.

Bangladesh being one of the most vulnerable countries is likely to be amongst the worst hit by the impacts of climate change and is expected to have around 10 million climate-change refugees, mainly from the coastal regions due to the sea level rise over the next few decades.

This is adding to the already existing burden for growing megacities like capital Dhaka, which most rural-to-urban migrants choose as their destination and would have great difficulty absorbing so many climate change-induced migrants.

While Bangladesh needs to think about how to cope with the millions of climate migrants that it will inevitably have, there should be strategies to indeed turn the problem into a solution. "A secondary climate-resilient and migrant-friendly cities and towns can be a solution for millions of migrants," Saleemul Huq, director of ICCCAD states.

The International Centre for Climate Change and Development (ICCCAD) together with support from PROKAS- British Council, DFID, UK implemented the Climate-Induced Migration project and is trying to bolster education, health facilities, affordable housing, and employment in a few secondary towns around the country, including Mongla, where incomers can build a new life. It will relieve pressure on the capital and future climate-induced migrants can move with dignity rather than under duress.

Mongla, a growing port town on the country's South-west coastal region, is testing the theory of spreading the burden of the migrants from Dhaka to other parts of the country. The current population of Mongla is around 70,000 (KDA, CIM IBP-PROKAS, December 2019) and seasonally the area sees around 120,000 people (Bengal Institute, 2020) as seasonal migration.

In that light, Mongla Municipality is embarking on an urban overhaul that aims to turn it into a magnet for climate migrants. Earlier, the town used to be inundated with high tides on a regular basis. It is now one of several emerging class one Municipality Town models of climate-friendly urban planning where investments in the Marine drive road and other Climate Resilient adaptive infrastructure are being paired with factories and other blue-collar job opportunities, as well as public services like affordable housing, schools, and hospitals.

According to the mayor, Zulfikar Ali, people used to have to leave Mongla to find work. Now they're coming here due to increased business and employment

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opportunities at the Port, EPZ, various industries, etc, and staying here because of the good living conditions.

Mongla has the right ingredients, planners hope. It has a well-established deep-water port, surrounded by a sprawling industrial area across a river from the town center with cement factories, diesel fuel mass storage facilities, and two dozen factories with jobs for 4,300 workers producing everything from luggage and electronics to packaged snacks and mannequins.

Every morning and evening at rush hours the river is jammed up with ferries on which passengers and workers stand shoulder to shoulder heading towards the town center. Mongla Port Municipality, located in the southwest coastal region, is big enough to offer opportunities but small enough that there's room to grow.

And the town's reputation is spreading. Two-third of the total population of Mongla has migrated from different districts. In the next five years, the mayor insists, Mongla will be a regional economic hub, accommodating thousands of potential migrants drawn by rapid industrialization and pushed by the loss of agricultural land to the rising sea.

The mayor wants to be ready -with ambitious plans and ideas for his town's as expansion of southwest coastal region with industrial zones, residential developments to improve housing for slum communities.

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Mongla port **MD MANIK/ DHAKA TRIBUNE**

An impressive array of infrastructural works has transformed life there already. So far, local officials have invested in two flood-control gates; a freshwater treatment plant and distribution system from two 100 acres of large ponds has increased the number of houses with running water from one-third of the city's total to one-half.

That's not all. Eleven kilometres of pedestrian-friendly riverside marine drive was made alongside tree plantation to improve aesthetics along with adequate street lamps and two dozen closed-circuit security cameras to improve safety.

Mongla now has a loudspeaker system which was installed by the municipality to better communicate news, information and announce changes in weather to the community. Several new apartment towers are under construction, as well as a watchtower for tourists visiting the town. The Sundarbans mangroves forest is visible from these watch towers.

However, like any other growing cities, Mongla too has its set of problems. Mongla's health and water infrastructures are still a problem in living with up to the demands of its people. These infrastructures are being put to the test in the light of the Covid-19 pandemic, particularly critical service providers like the Upazila Health Complex, which does not have adequate health equipment.

Locals usually travel to Khulna city for medical assistance. Recently in March 2020, a satellite health clinic was opened by Friendship, a non-governmental organization (NGO), to support the rural people affected by climate change, who find it hard to reach proper healthcare facilities.

Locals said that there is lack of test and trace facilities for Covid-19, inadequate number of Personal Protective Equipment (PPE) in the Upazila Health Complex, and overall a lack of capacity of the Upazila Health Complex to withstand likely upcoming surge of Covid cases.

Mongla also has an age-old problem. Rising sea level coupled with salty water is putting immense pressure on the local water supply and housing structures. Availability of drinking water is also a problem.

The water supplies from private companies are not available due to the lockdown. On the other hand, the ponds have become dry for the seasonal weather condition that results in scarcity of water.

However, the people and the mayor of the Mongla Municipality are optimistic and resilient. During the ongoing pandemic, thousands of locals are going through a crisis of food and essential household goods. As part of their dutifulness, the mayor of Khulna City Corporation, Mongla Jubo League alongside other partners have distributed PPEs to the Upazila Health Complex alongside hand sanitizer, soap, and other sanitation materials for the local people.

The locals also came forward under the banners of Nobolok, JJS and Friendship to look after families in the area for the month of Ramadan. Water was supplied from the municipality in containers. Alongside the regular relief distribution, the mayor promoted health and hygiene awareness, particularly emphasizing handwashing and using masks on a regular basis.

Upazila Vice Chairman Noor E Alam gave out PPE and hand sanitizers to the locals. Bashundhara Group supported workers and labourers, helping 3,500 families during the crisis. Such community mobilization has had a positive effect on the people and especially migrants.

With such problems on the horizon, it shows how migrants in Mongla are getting exposed to long term problems associated with development. However, the silver lining regarding this would be that it is identifying what is required in Mongla and how experts alongside the local Mayor are currently trying their best to increase efforts.

Moving forward, interventions that need to be addressed in the town are better health facilities with modern treatment and diagnostic facilities, improved housing for slum dwellers, adequate water supply and cyclone shelters equipped in handling the dual crisis of climatic induced disaster and emerging pandemic situation.

With these improvements, Mongla could become a migrant-friendly town for both migrants moving into the town and also for the locals.

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Remote learning a remote possibility

Impact of the Covid pandemic on education in the time of pandemic: A story from Mongla

Sumaiya Binte Anwar and Nafis Fuad


PIXABAY

Like the rest of Bangladesh, the 48 schools and colleges of Mongla Port Municipality have been closed since March 17, the day the government declared the closure of all educational institutions due to the Covid-19 pandemic, putting a halt to the learning process of thousands of children residing in the municipality and the adjacent rural areas and Upazila of Mongla. Recently, the authorities advised that the education institutes might remain closed even up to September if the situation does not improve till then.

The private educational institutions in cities like Dhaka and Chittagong are taking classes through online platforms like Zoom, Google Classroom, etc. NGOs and other organizations are introducing Tele-Counseling, Tele-learning, distant learning and so on to keep the communication with their students in progress.

> Unlike developed countries, most children in Bangladesh do not have access to the internet

But unlike developed countries, most children in Bangladesh do not have access to the internet. Platforms used by online learning are often hampered due to weak network problems. Moreover, relying on mobile data makes learning comparatively expensive.

This is why, as television sets are more widely available in households, the initial education response by the Bangladesh government focused on delivering classes on TV, by broadcasting classes for the primary and secondary level school children through the national television.

Shaheen Mia, a van puller, is aware of the government initiative of introducing classes on TV, but he cannot access them as his family cannot afford a TV. He is in anxiety and stress about the future of his family for his income loss and his son's education.

Shahid Hawladar, a government officer at the Mongla Upazila office, and a stakeholder in the Climate-Induced Migration project (conducted by the International Centre for Climate Change and Development (ICCCAD) under the support from PROKAS-British council) admitted challenges with TV and online education.

He explained that even for dedicated students, remote learning is often a challenge for the short duration of transmission and lack of social interaction on television. When asked about the prospect of online classes in Mongla, Hawladar added that the students and their parents there are not habituated with homeschooling.

Since the students and guardians are not tech-literate, there will likely be substantial disparities between families in the extent to which they could help their children's learning.

Even under normal conditions, the primary school dropout rate in Bangladesh is high. Recurring natural hazards like cyclones and floods contribute to the disruption of education caused by lengthy and unscheduled school closure.

The panic, uncertainty and the socio-psychological impact due to the ongoing global pandemic in present times will be acting as a catalyst to increase the chances of inequality in the learning process. People are facing financial uncertainties and social pressure which will also act as a blockage for an ideal learning environment.

The overall learning and assessment process is also highly disrupted by the crisis. Students preparing to take the JSC (Junior School Certificate) exams after grade eight this year are most troubled. Most of them are continuing their preparation at home during this lockdown, some with the help from home tutors.

The results of the public examination like SSC has been declared. With the workplaces open, schools and colleges have started the official work and online procedure of admission with a skeleton staff. There are concerns among the HSC students about their future. who were to sit for their board examination from April 1.

Meanwhile, things have turned out even worse for some private and kindergarten schools like Fatema Child Kindergarten, which teaches up to grade five. The teachers are concerned over their monthly salaries and the absence of private tuition that they had been practising off the working hours.

The effect of this long-term closure will have a negative toll on the future of the children and youth. Mongla already faces dropout of young boys and girls for seasonal fishing activities, and availability of work in EPZ. The longer marginalized children will be out of school, the less likely they are to return.

Considering the present scenario, the risk of long-time closure of educational institutions versus the emergency of lockdown has become a big dilemma. The CIM project aims for a long-term strategy to deal with the predicted rural-to-urban migrations due to climate change through education as a key adaptation strategy.

By both educating the youth in rural areas, as well as creating new job opportunities in provincial towns, the project aims to stimulate a 'transformative adaptation' for the future climate migrants.

Keeping the present Covid-19 pandemic situation and the future climate change crisis in mind, the top priority should be identifying a systematic exit plan by limiting the interruption to give school-aged children a sense of normalcy back as quickly as possible and continuing the formal education, in regional towns like Mongla through alternative learning pathways.

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'When you don't have food or water you cannot think about health'

Impact of Covid-19 is not much dissimilar to impact of the climate crisis

Adnan Qader and Nafis Fuad

The first official death related to Covid-19 in Bangladesh was recorded on March 8, 2020. Just like many other countries, Bangladesh initiated an official lockdown from March 26 in order to contain and reduce the spread of the virus within the community.

Many organizations within the service sector have opted for work-from-home, but the portion of the country's population currently employed in the informal sector is struggling. 85% of this group have had their livelihoods hindered due to the lockdown. These people are some of the most vulnerable during this national economic shock due to the lack of proper employment benefits and compensation structures.

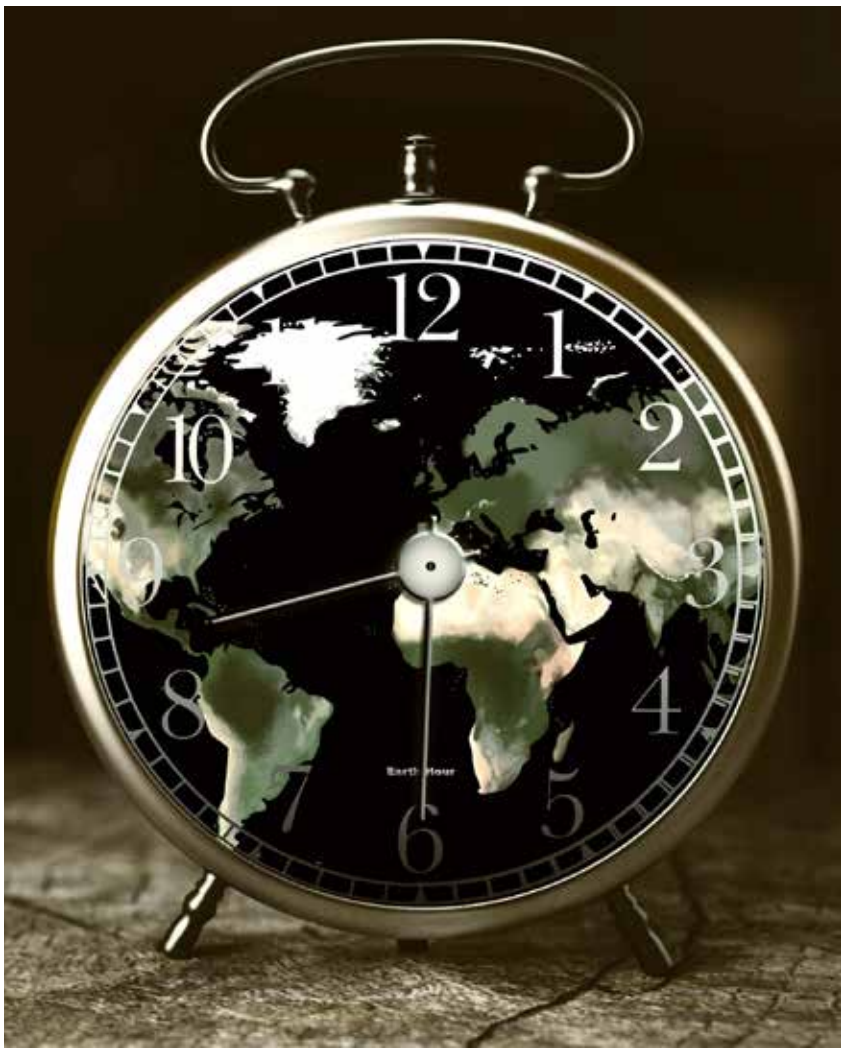
Alam Mia, one of ICCCAD's stakeholder is a van puller and his average daily income is Tk500 ($6) in the Mongla Municipality where he currently resides. When asked about his current situation Alam told us that with the shortage of income the food situation has become unbearable for people like him and his family.

Consequently, a lack of income is causing him and his family to be deprived of basic rights such as health care and access to clean water. The ominous and looming large food insecurity that has started with the nutritional decline will be intensified by the end-April.

The majority of these workers like Alam Mia belong to the low income and lower-middle-income brackets and most of them make just enough to cover their living expenses while residing in the developing peri-urban areas.

These people living in the coastal belts are exposed to climate vulnerabilities and often live in economic uncertainty. Cyclones like Amphan are more intense and more frequent due to climate change in recent times. With additions of the pandemic like situations, scenarios for them become direr.

Hence, a loss in employment or income would directly impact the livelihood of these non-essential workings exposing them to the injurious effects of this economy both in the short and long term with the possibility of no recovery.



PIXABAY

> Many in the area are now using up their hard-earned savings just to survive

A recent perception survey to identify new poor households by Power and Participation Research Centre (PPRC) and BRAC Institute of Governance and Development (BIGD) suggested that around Tk6,000 crores will be needed to support these emerging new poor due to the Covid crisis.

Furthermore, the report suggested that these new vulnerable groups were above the poverty line before the crisis started.

In Mongla Port there are gatherings of seasonal populations that are normally in the category of the up and above the poverty line but the new situation created by the Covid-19 and cyclone Amphan left them vulnerable to this new statistic.

At this uncertain situation, these groups cannot come out for help or do not have Vulnerable Group Feeding (VGF) cards and their plight is beyond description.

Rumi Akter, another worker at the EPZ (Export Processing Zone), lived under uncertainty during the lockdown period. Rumi Akter, like other industry workers in Bangladesh, earns the minimum wage in Mongla, which is around Tk7000 ($100) per month.

When talking to her she mentioned in despair that Covid-19 was least of her worries. "When you don't have food or water you cannot think about health," she said. Like Rumi Akther many in the area are now using up their hard-earned savings just to survive.

Situations like these as a researcher makes us wonder about the current environmental disparity that exists in the Global South communities. In light of the current protests that have been gripping the United States of America, one can ponder about the environmental racism and injustice that often goes unanswered from countries like Bangladesh.

Negotiators in the poorest countries - which bear the least responsibility for causing climate change - are struggling between economic growth and getting people out of poverty while facing a climate emergency.

Prof Saleemul Huq, director of ICCCAD mentioned recently we are currently fighting at three fronts; Covid 19, more frequent disasters and economic crisis. Moving forward one can wonder what we as a nation might face, especially for people like Alam and Rumi, who are bearing the full brunt of the pandemic.

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A paradigm shift in knowledge transfer on adaptation

The traditional North-South paradigm of technology transfer ignores the increasing importance of developing countries as sources of appropriate climate-friendly technologies

PIXABAY

Mizan R Khan, Saleemul Huq and Mimansha Joshi

The expressions of `knowledge' or `technology transfer' has traditionally evoked in us a unidirectional trajectory – from advanced, developed to developing countries, which are popularly called the `Global North' and `Global South.'

This pathway has been drawn since the colonial era began a few centuries back. The colonial powers then transferred huge amounts of wealth and resources from their colonies and invested in developing their economies and societies.

As a result, underdevelopment was further reproduced in the colonized countries. Whatever developments in science and technology happened were associated with the western world. The UN Framework Convention on Climate Change (UNFCCC) embodies this notion of North-South transfer of technology under its Article 4.5.

There is no denying the fact that the western world is far advanced in basic research in most of the cases. However, since decolonization during the last few decades, many of the newly-emergent countries are progressing on a fast track and achieving significant advances in science and technology as well.

Late J Nyarere, the former President of Tanzania, was a pioneer of promoting South-South cooperation, and under his leadership, the South Centre was established in Geneva, to promote South-South cooperation, which challenges the dependency on the North, by finding ways and means of supporting each other.

The central assumption was that the best practices of social and economic development in the Southern countries are more suitable for replication in other lower-income countries, because of the more similarities in conditions and their shared lived experiences of life. The South-South cooperation agenda also served as an ideological front to challenge the domination by the North in the global order.

But the world was getting more interconnected globally, both for opportunities and challenges out of globalization particularly since the 1990s. The Report 'The Rise of the South: Human Progress in a Diverse World' of the United Nations Development Program's Human Development, pointed out several years ago that: "The South needs the North, and increasingly the North needs the South ... The world is getting more connected, not less" (United Nations Development Program, 2013).

The traditional North-South paradigm of technology transfer ignores the increasing importance of developing countries as sources of appropriate climate-friendly technologies and therefore ignores South-North and South-South transfers.

These transfers may include both soft and hardwares. David Lewis of the London School of Economics argues that models of participatory monitoring and evaluation of projects in developing countries have much to learn by the rich countries via NGO and public sector innovators (2017).

Quite a number examples, such as the development of oral rehydration, microfinance, recycling for waste management, rich social capital existing among the Southern communities, disaster management, community-based adaptation and nature-based solutions are few examples where experiential learning-based knowledge can be transferred from the Southern to Northern countries.

Along this line, the present piece presents some successful practices related to the nexus between climate change and poverty in the South which can be transferred to the developed North. In fact, some of these practices are already transferred.

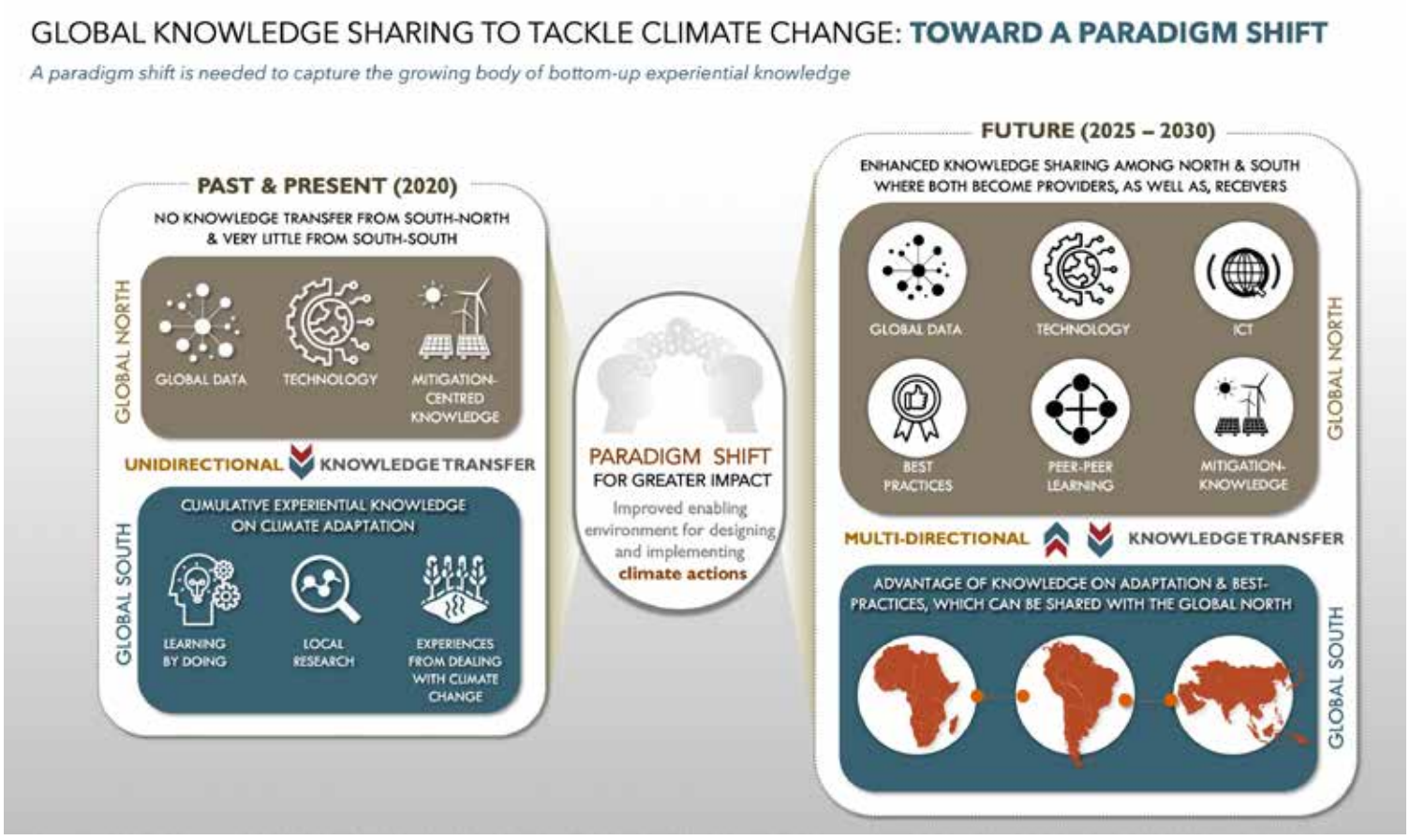
IPCC reports repeatedly warn us that the poor communities and countries of the world are the most impacted from the effects of climate change, who have the least capacity to adapt. The impacts are likely to push an additional 100 million people into extreme poverty by 2030. In such a scenario, the use of microfinance as a tool to keep the poor out of extreme poverty is an innovation that decades back in Bangladesh.

Though the origin of microfinance emanated from the conventional practice of rotating/revolving fund historically practised in the Bengal areas of the Indian Sub-Continent, it was re-christened in its modern version by Dr Muhammad Yunus, the founder of the Grameen Bank in the early 1980s.

The Grameen Bank's successful example of women-focused micro-credits to the poor and for promoting small entrepreneurship is already replicated in more than a dozen countries including in the UK and the US and in some other countries of the Global North. Such activities have been undertaken by organizations such as Acción USA, Grameen America, and Grameen Foundation Partner Project Enterprise in the United States.

In like manner, BRAC, the largest NGO in the world is another innovation of working with the poor in Bangladesh, which contributed a lot in poverty reduction and is now being replicated also in more than a dozen countries around the world. These are examples of innovative social engineering which are actively contributing to enhancing adaptive capacity of the poor.

Few other examples show the knowledge transfer and experiential learning from the South to the North. The experience of disaster management and adaptation is another area in Bangladesh which is regarded as successful practices for a country often pounded by frequent natural adversities.



COURTESY

As a geographically disadvantaged area, Bangladesh has been living with climate disasters for ages and obviously, has learnt to live with them, gradually minimizing the casualties of life and property.

Still more than a percent of its GDP is devastated from these disasters on average a year, Bangladesh's success in managing disasters and enhancing adaptive capacities of coastal communities are practices emulated already in many developing and developed countries.

> As a geographically disadvantaged area, Bangladesh has been living with climate disasters for ages and obviously, has learnt to live with them

The key to such success lies in elaborate institutional setups from national to lowest tiers of the local government including massive community mobilization prior, during and after the disaster events.

For the right reasons, Bangladesh is regarded as a `Teacher' in adaptation, to learn from, by the former UN Secretary-General Ban Ki Moon. The Prime Minister of Bangladesh regards her country as the `adaptation capital' of the world, and invites others to visit and see our experiences first hand. There are many examples of such experiential learning for coping with climate impacts, which are being shared and transferred to the Global North.

Let's have a look at South Africa. Because of increased air pollution in the cities, the residents, including children, are suffering from asthma in increasing numbers. However, one innovation - the asthma inhaler spacers, which Dr Zahr, a physician from South Africa, has pioneered through research a simple device, effectively replacing the more expensive and less available commercial products.

These bottle spacers are now being produced by people working for community health centers in the United States and elsewhere. An asthma spacer is used with an asthma inhaler to make the medicine more effective by slowing down the spray and allowing the patient to coordinate their breath with the medication delivery. It can improve the efficiency of an inhaler by 70%.

Another concept -- Eco-village was propagated with much fanfare in the Global North and development agencies about two decades ago, as a cardinal solution to restoring environmental sustainability in developing countries. This concept of eco-village was actually a re-christened version of the age-old lifestyle in the villages of developing countries.

We being from South Asia know very well, based on lived experiences of our communities. Still, rural areas in most of South Asia are representative of eco-village concept in practice, which integrates homesteads, space for gardening and cattle breeding, a patch of fruit trees, a pond, etc.

In like manner, now another shibboleth of solution for climate change and green growth is being presented as nature-based solutions (NbS). Again, the birth place and sustainability of NbS are the developing countries, from where the Global North can learn a lot about.

Another example of appropriate technology from countries like Bangladesh, India, China and many other developing countries is the decentralized solar power in remote off-grid areas. Bangladesh has already installed over five million solar home systems in remote rural areas and islands, which is the highest in the world.

Other Southern countries and the Global North, particularly the large, sprawling, sparsely-populated countries, can certainly apply this technology, which is cleaner and a lot cheaper, than installing costly central power distribution and transmission systems.

Through this short piece, we wanted to convey the message that there are lots of successful practices of disaster management, adaptation and renewable energy technologies that countries from the Global North can learn from. It's a happy news that the centre we work in - the International Centre for Climate Change and Development (ICCCAD) in Dhaka is privileged to host a number of researchers and students from the Global North each year, who come here to learn about how Bangladesh, being a disaster-prone country, successfully adapts to the increasing impacts of climate change.

We have learnt to live with nature and disasters, harnessing the opportunities from these challenges. With the purpose of sharing knowledge and transfer of experiential learning for adaptation from the LDCs for South-South-North collaboration, ICCCAD is leading the LDC University Consortium of Climate Change (LUCCC).

LUCCC is an official programme of the 47 LDC governments representing about one billion people in Asia and Africa. LUCCC is in the process of collating the best practices of disaster management and community-based adaptation and resilience.

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All that glitters is not gold

How to air out Dhaka and reduce pollution post Covid-19

MEHEDI HASAN _DHAKA TRIBUNE

Shababa Haque

When the honking of cars hushed down in Bangladesh we observed a rather unfamiliar moment of silence. Dhaka, after a long time, heard the sounds of forgotten birds and saw the glimpse of a city that is no longer muffled by the usual roaring pollution.

As Covid-19 started spreading across Bangladesh, the entire country was put under immediate lockdown, starting from March 25. This meant pausing all but essential services. As a result, the numerous factories set across the urban and peri-urban areas of Dhaka were all put to a halt.

Considering that the emissions coming from the variety of brick kilns, construction sites and industrial chimneys are some of the major sources of air pollution, a forced shutdown of these activities undoubtedly contributed towards the observed improvement in the city's air pollution levels.

An immediate result was a drop in the Air Quality Index (AQI) numbers. Within the first 5 days, the AQI numbers for Dhaka dropped from the usual range of 260-319 to 91. In fact, a recent article stated that Bangladesh's carbon emissions have reduced by 24% during the recent countrywide shutdown. These numbers, in addition to the visual and anecdotal evidences presented by the city dwellers, show a clear reduction of air pollution levels all across the city.

But are these specks of positive environmental changes here to stay? No, certainly not. As the lockdown is lifted the city will once again resume its daily routine, and with that, the pollution levels will also go back to its usual state.

A lockdown mandated to control the spread of Covid-19, a deadly disease, cannot solely lead to the necessary changes for solving the pervasive problem of air pollution in Dhaka.

However, the situation did present us with a brief glance at a city that is much less smoky and in some ways more breathable. This fleeting vision of an alternate reality can now stir the realizations needed for reducing the air pollution levels within the city, in a manner that is more effective and sustainable for all.

Laying the foundation for change

While the environmental costs of industries are undeniable, there are many green growth opportunities worth exploring within these sectors.

For example, while the brick kilns set across the country employ more than a million people, there are significant environmental costs associated with their activities. Traditional bricks produced from these kilns are composed using the topsoil, which contains most of the nutrients, and affects the overall fertility of the soil for plant growth and food production.

In addition to this, there is a significant amount of emissions from heating clay blocks in traditional coal-fired kilns. Due to the use of inefficient, traditional firing technology, brick production in Bangladesh is a major emitter of carbon dioxide and PM 2.5.

In order to reduce these emissions, some of the solutions suggested include investing in energy-efficient kilns. The two types of modern kilns with the most potential in Bangladesh are Hybrid Hoffman and Tunnel kilns.

While both these kilns require the use of coal, they still end up using much less coal than the traditional kilns, and when designed and operated by skilled technicians, they release considerably less CO2 and PM 2.5.

In addition, this system also reduces the usage of agricultural topsoil and can produce bricks using renewable raw materials, such as sand, river dredge, and riverbank soil. Another option that bodes well for the environment is the use of non-fired bricks.

Examples of such varieties include compressed concrete blocks and aerated autoclaved concrete blocks. At present these options are not as widely used, but with more investments in production and a greater market potential, there could be an increase in the usage of these alternatives.

The government of Bangladesh acknowledges the need to reduce environmental pollution from brick kilns and has already taken some remarkable

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steps to advance the cause. The Parliament passed the 'Brick Manufacturing and Brick Kiln Establishment (Control) (Amendment) Bill, 2019, which aims to make the existing law on brick manufacturing a more time-befitting one.

The new bill requires an environmental clearance before setting a brick kiln, encourages the usage of alternative (non-fired) brick options and ensures a reduction of harmful gas emissions from the process.

This is definitely a good start. Acknowledging the environmental costs of an economically beneficial industry and investing in innovative measures to reduce these adversities lays the foundation for a sustainable development.

However, to see actual results from the newly developed policies, it is essential to ensure proper implementation and uptake. In doing so, we can pave the path towards lasting environmental benefits.

Building a 'better' normal

As we make development plans for addressing some of the impacts of Covid-19 in Bangladesh we should also acknowledge the prevalent threats from climate change. The impacts of climate change on Bangladesh is inevitable.

It is important that we integrate the solutions for both of these pressing issues and develop a holistic plan of action that can ultimately lead to a climate-resilient recovery. Therefore, investments in low-carbon solutions to reduce industrial pollution can both ensure environmental sustainability and also further Bangladesh's green growth agenda.

To foster such development agendas there is a great need to work towards transformational changes. This will require shifts in existing institutional arrangements and the development of environmentally conscious plans and policies, mobilizing the civil society to ensure good governance and effective implementation of policy measures, and on a societal level instil environmental awareness for advocating sustainable practices.

We must understand that creating a new normal should not just be bandaging over the damages suffered by the existing system, it should entail fundamental changes that go beyond temporary relief measures and commit to ensuring greater environmental sustainability and climate resilience. Echoing the predominant sentiment for recovery, we really do need to build back better. ●

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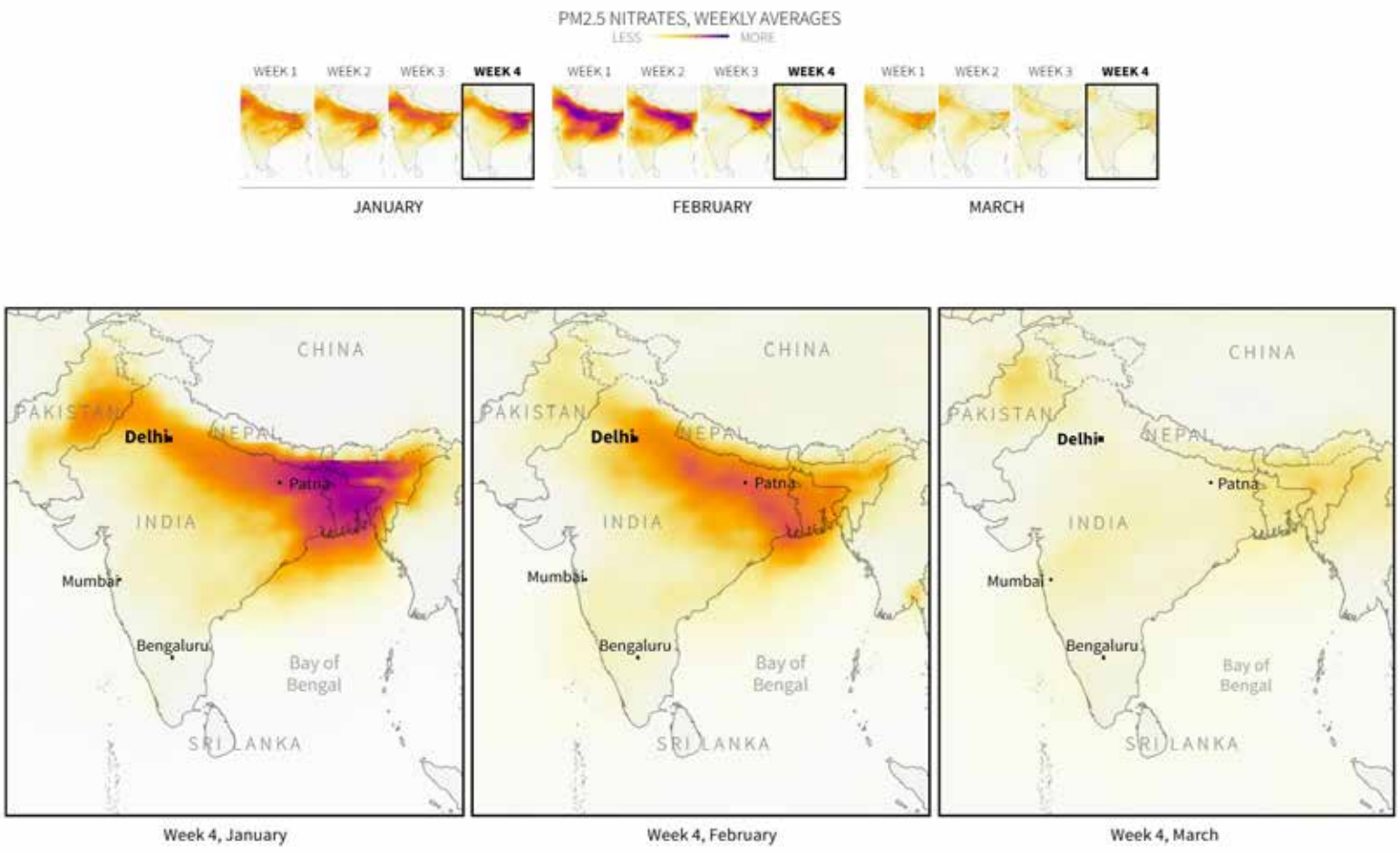

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Agriculture and climate change: A dangerous synergy

The underlying interesting question for each field is to understand the common point of interaction between climate and agriculture commodities production to develop a coherent regulation in both fields.

Anne-Laure Pilat

PHOTOS: PIXABAY

Agriculture is one of those hybrid activities that suffer greatly from the impacts of climate change but also contributes to greenhouse gas emissions through its various practices and crop production. However, it's a vital sector for our food security and presents also many mitigation opportunities with the advancement of crop production technologies.

There is no doubt that science is playing a major role in monitoring and combating climate change, however other instruments are equally important to successful climate change impact management such as law, control instruments or market-based tools, the latest being often used in agriculture.

Likewise, climate change law is still in its formative years, agricultural law is a relatively new legal field of development that appeared in recent years with concern overproduction, food

security and consumer well being. As such it's a law that governs the whole food supply chain, which means issues affecting farming such as use and regulation of fertilizer, pesticides, land use, patents for new seeds but also marketing and sales of the products.

However, the focus remains the agricultural production which can be defined as the best use of available resources to grow crops in the most efficient ways. Thus, focus on growing plants and raising livestock, it is bound to meet the question of climate change impact and climate change law, from both adaptation and mitigation approaches.

Therefore, the underlying interesting question for each field is to understand the common point of interaction between climate and agriculture commodities production to develop a coherent regulation in both fields.

> More than ever, food security is bound to the future risk that climate change poses and an appropriate legal response will be necessary, alongside technology development, to ensure food for today and tomorrow

It is indeed essential to understand how climate impacts; changing rainfall patterns, weather patterns, emerging patterns for pest behaviour, weather borne diseases, droughts effect on soil quality and the capacity of growing crops to adapt to those drastic new environmental conditions.

More than ever, food security is bound to the future risk that climate change poses and an appropriate legal response will be necessary, alongside technology development, to ensure food for today and tomorrow.

Indeed, food security relies on four pillars: the first three one considers the availability of food, access to available food (from an economic point of view) and third one access to nutritious food (quality of consumed food for the overall health of a person).

The overarching pillar allowing those three other pillars of food security to exist and develop is linked to sustainability: in other words, our capacity to still produce agriculture commodities and the pressing question of knowing how much food we will need and understanding if we will be able to respond to this need within the new planetary conditions.

Thus, climate impacts threaten the sustainability of the foundation of our food security system by affecting our ability to continue agricultural activities. The decline in global and local food supplies will affect the livelihood of many and put the most vulnerable again at greater risk of malnutrition.

Understanding and being able to manage the risk that we see today and predict the future risk that climate change will bring to our food system and consumption patterns should be at the heart of current science and legal agricultural research and development. Indeed, reducing the uncertainty that climate change poses to crop production by improving access to climate services, information, innovation and understanding farmers decision-making when it comes to their crop care will be important for a successful adaptation and mitigation in the near foreseeable future.

Anne-Laure Pilat has a background in public and European environmental law and is currently working in Bangladesh on issues related to climate and agriculture.

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Covid 19 and the future of climate policy

This crisis is the perfect opportunity to begin taking climate science seriously

Md Mahatab Uddin

PIXABAY

In 1968, Garrett Hardin, a biology professor at the University of California wrote an essay where he introduced the idea of 'tragedy of the commons'-- a metaphor for the problems of excessive use and degradation of natural resources.

Like many other discourses, the term has also received wide attention from the discourse of international environmental law. Its practical meaning can be explained by an example. For instance, although no state has individual control over the high sea, all states have right on fisheries resources of the high sea. Logically, all states should also have responsibilities to take care of them.

But sadly, like most human beings, most states of the world are more prone to enjoying rights than acting on the responsibilities. As a result, fisheries resources of the high seas are facing serious threats that can be compared with the notion of the 'tragedy of the commons'.

> In this period of emergency, countries should think about planting more and more trees

Similarly, 'tragedy of the commons' happens when all countries are busy with degrading natural resources without thinking about the Earth's climate - which is widely acknowledged as a 'common concern of humankind.'

In a different sense, the world recently experienced another kind of 'tragedy of the commons' in terms of the quick spread of Covid-19 across the world. This is true for both macro and micro level scenarios. At the micro-level, when the world came to know about the existence of the novel coronavirus in Wuhan of China, all states should have taken joint effort to stop the spreading of the disease to other countries (at least for the sake of their own safety). This is because once a pandemic happens, it becomes a 'common threat' to all states and preventing or dealing with this 'common threat' is only possible through united or joint efforts of all countries.

In case of Covid-19, necessity of united efforts was needed more than anytime before, since the world stands at the peak of globalisation and any contagious disease can spread all over the world even faster than our imagination.

Unfortunately, at macro level, all states of the world combinedly missed this opportunity. Almost all countries (except for a few handful) could not isolate themselves at the right time, as such could not prevent mass level contagion.

At the micro level, within states, it was a duty of the citizens and residents to isolate themselves and follow health rules in a manner that prevented them from catching Covid 19. Likewise, the states, citizens of the states also failed to isolate themselves in time and follow appropriate health rules.

In many cases, the public even broke government-imposed lockdowns. Hence, most states and their citizens led themselves towards a kind of 'tragedy of the commons'. It is understandable that those who earn their livelihoods by day labour or those who do not have enough savings to make ends meet during the lockdown period have enough reasons for not following health rules.

But it has also been observed that in many countries people broke lockdown just for the sake of observing social or religious festivals. People all over the world even did not mind going to sea beaches while they were supposed to stay at home.

However, even during people's disobedience to health rules and states' failure to prevent the pandemic by taking the due steps in due time, one silver lining is that most states and policymakers eventually started acting according to guidelines given by the scientists and concerned experts.

This is what we can consider as a positive outcome of this pandemic. It seems like the relation between science and policy has reached a crossroad, as German Federal Environment Minister recently (during the Petersburg Climate Dialogue XI in April) stated that "We are learning to listen to the scientists."

In view of the above circumstances, scientists and researchers all over the world expect that at the time of sketching post Covid-19 world scenarios, policymakers will also take climate experts' recommendations into account.

This is because it is the most suitable time to fully initiate a climate-friendly world. For instance, during this period of lockdown or emergencies, countries can focus on setting up an improved internet network, based on which post Covid 19 world will allow more people to work from home.

If many people stay at home and do not need to go outside for work, it will eventually result in a decrease of carbon footprint of many populations. In this regard, to promote the work from home concept on a wider scale, countries should also make proper plans about how to promote virtual meetings.

Further, it is time for countries to raise fossil-fuel taxes and decrease taxes for renewable energy. Countries can also think of introducing electric vehicles and installing electric vehicle charging networks on a wide scale.

Such efforts of building a climate-friendly world can be further complemented by countries' efforts of expanding cleaner public transport, meaning expanding renewable energy run public vehicles like bus, train, steamer, etc. Besides, it is time for countries to plan for building climate-resilient infrastructures. It means countries should adopt 'green architecture' policy for its future infrastructures.

Finally, in this period of emergency, countries should think about planting more and more trees. Especially coastal countries should think about planting more trees in the coastal zone and building strong 'green belts,' which will protect them from tidal surge and catastrophic cyclones.

Policymakers of Bangladesh may also think about implementing the above recommendations, where needed. This is because, like the impact of Covid-19, adverse effects of climate change have already been evident and policymakers can save the future Earth from any form of 'tragedy of the commons' only through paying due attention towards what scientists and researchers recommend. ●

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Necessity of a compact strategy for a common crisis

A comprehensive policy should address the lessons from emergencies like Covid-19 and Cyclone Amphan

Sakib Rahman Siddique Shuvo and Adiba Bintey Kamal

First Covid-19 then Cyclone Amphan

Every year people of South Asia face one or two cyclones - especially in the Bay of Bengal, and these are becoming more and more intense and powerful day by day. In the last five years, seven cyclones struck the coast of Bangladesh and West Bengal, and three in Odisha. Tamilnadu faced four storms in 2016 with a total of six storms till today. The coast of Maharashtra seemed relatively less vulnerable, and Cyclone Nisharg proved they also needed some backstops.

The novel coronavirus also impacted the areas which are vulnerable to tropical cyclones. The socio-economic consequences of this pandemic are worsening the situation. The coastal region has a significant number of infected people, lockdown and other coping strategies are already implemented there, which can be interrupted by disaster coping strategies.

Losses inflicted from Amphan and Nisharg

This year in mid May the coastal zone of Bay of Bengal was first ravaged by Cyclone Amphan. It was a forceful hit, after the Cyclone Sidr in 2007, and the first super cyclonic storm after the 1999 Odisha Cyclone. It has been estimated that Cyclone Amphan cost almost thirteen billion dollars, surpassing the record of cyclone Nargis of 2008 it has become the costliest cyclone recorded ever in the North Indian Ocean.

The Indian Subcontinent faced the major brunt of the cyclone with damage in Eastern India and coastal regions of Bangladesh in some districts of Khulna and Barishal. Heavy rainfall produced in Sri Lanka and Southern India. With total fatalities of 128 people in this region, 26 people died in Bangladesh, 4 in Sri Lanka, and 98 in India.

Three different cyclonic activities of Amphan created massive destruction. Firstly, heavy rainfall which mainly occurred in Sri Lanka, Kerala, and Odisha, caused flooding and landslides. Secondly, storm surges inundated the coastal regions of West Bengal and Bangladesh, and finally the heavy winds caused infrastructural damages around the cyclone's path.

In Sri Lanka, 500 homes were damaged by Amphan. Around four hundred houses were destroyed in the southern part of India as Deccan Herald states. Eastern region, which faced the cruelest face of Amphan - according to Hindustan Times, West Bengal has to count a cost of 13.2 billion dollars in damage with millions of houses destroyed, and 70 percent of the state population affected directly.

An article on the New Indian Express reports that Odisha faced a significant amount of infrastructural costs - 4.4 million people were directly affected, and 3.8 million people were left without power. Coastal regions of Bangladesh also counted 130 million estimated damage tolls, 500,000 people became

File photo of flooding caused by Cyclone Amphan KAZI FAZLA RABBI

Trees uprooted following the havoc of severe cyclonic storm Amphan in Satkhira district DHAKA TRIBUNE

homeless, embankment breaching caused saltwater intrusion, waterlogging, and flooding.

The people of most of these places had the experience of facing disaster. For the people of Mumbai, it was the first storm to hit home since the last one in 1891. Not only Amphan, within 2 weeks of Amphan, Nisarga made landfall in Mumbai, killing three people. Landfalls and heavy rain caused infrastructural damages around the state of Maharashtra. The damages from the two cyclones resulted in unprecedented losses for the people.

Preparing for natural hazards in face of a pandemic

As a global health crisis of the 21st century, Covid-19, requires people to maintain social distance, and practice proper personal hygiene to prevent the spread, and further contraction of the virus. While both India and Bangladesh are currently carrying out full and partial lockdowns to prevent contraction of the disease, it wasn't so when Cyclone Amphan or Nishorgh hit. The incidents of the cyclones had only increased the chances of exposure to the virus, Three different aspects can be pointed out, where Covid-19 and storms created a nexus of vulnerabilities.

> Disasters present significant challenges in poverty reduction, development, and economic growth of the country and to the lives, livelihood, and health of its people

Firstly, cyclones created serious interruptions in terms of social distancing. Cyclone shelters are too small and compact, so it is hard to maintain social distancing there. Again, embankment breaching caused inundations, and homeless people to take shelters in relatively high places together. If the infections started to spread there, it would have spread quickly and faster.

Secondly, infrastructural damages can cause interruptions in relief management by adding more people to the vulnerable zone. Amphan added more people in the queue for relief that is needed for the Covid impacted.

Finally, all the consequences of these lead to an economic crisis. Countries are already facing severe problems in terms of the national economy. In coastal regions, regular economic activities have been seriously damaged. People became jobless, which usually leads to internal migration, but it is not happening this time, because the whole country is facing a job crisis. In the RMG sector, almost one million workers are already being laid off.

Managing natural disaster and health hazard together

Bangladesh does take precautionary measures for natural disasters. But this year when the cyclones coincided with Covid-19, they made the situation worse for Both Bangladesh and India. Disasters present significant challenges in poverty reduction, development, and economic growth of the country and to the lives, livelihood, and health of its people.

So to face the next crisis, in whatever combination, we have to make some adjustments. To cope with disasters, both climate change induced such as cyclones, and the current public health crisis such as the pandemic, we need to have a robust disaster management policy that also addresses the health hazards beyond just natural hazards.

Impact of disasters is the worst on the impoverished, most marginalized and vulnerable communities. But in the case of Covid-19, it has had an effect on both the poor and the affluent. Therefore, the only option left is to strengthen our systems.

A comprehensive policy should address the lessons from emergencies like Covid-19 and Cyclone Amphan. If we have learned anything from the pandemic, then necessary measures and initiatives about climate change should be taken immediately. ●

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