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Knowledge gaps and operational challenges in managing COVID-19 in Bangladesh: postpandemic strategies in multi-disaster contexts

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1. Introduction

The world is witnessing the most devastating and unique kind of crisis induced from coronavirus in a time when the world systems has become globalized and strong connectivity plays vital roles for human sustainability and well-being. Even in many respects, it is not comparable to World Wars I and II. In wars, the enemies are identified, visible and battles are generally confined in certain locations, and civilians are not generally targeted. But the current global battle is different considering the issues mentioned above and the countries got relatively little time to apprehend the degree of risks resulting to remain less prepared to cope with the adversities. The observers (at global, regional, state levels) are profoundly examining the changing scenarios of the world happening around COVID-19 impacts and trying to devise strategies to manage the current situations and at the same time sketch out post-COVID revival, rebuilding, and recovery actions. In line with that, this chapter reflects on the corona pandemic-bound realities of Bangladesh aiming to capture the lessons learned from the past one and half years of situations. At the beginning, a discussion is given on how COVID-19 has shaken the known pattern and process of the world and then discussions given on how Bangladesh should proceed into the post-corona conditions.
2. COVID-19 crisis in Bangladesh: characterization and learning to date

Lack of data for realizing situation is a commonplace phenomenon in Bangladesh but that was not the case for COVID-19, at least, data on the number and percentage of “daily infections,” “deaths of people,” “cured of the disease,” etc., have been produced and largely made available. Data of these kinds were also generated from global sources such as the World Health Organization (WHO) (https://www.who.int/), John Hopkins University & Medicine (https://coronavirus.jhu.edu/), and local sources like Institute of Epidemiology, Disease Control and Research in Bangladesh (i.e., https://iedcr.gov.bd/) and made available to the people through numerous information gateways and dissemination channels. In addition, the actions needed to address the pandemic-induced everyday challenges including the humanitarian crisis management are well documented and recommended by WHO and the United Nations (GHRP, Global humanitarian Response Plan 2020). Even the factors that are responsible for the pandemic to cause and spread of this disease are well illustrated (please see the report of the workshop on biodiversity and pandemics, published by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, IPBES, 2020). This suggests that information that are needed to update people regularly in Bangladesh have been available (by amassing international and local data) since the onset of the pandemic and that is why portraying the situation using these facts have been avoided here. Despite the wide availability of these basic information, we are still in dearth of information that are necessary to develop deeper understanding of the problem and to make informed decisions, short, medium, and long terms. If that is the case for COVID-19 in Bangladesh, then the central question is how to characterize the impacts of pandemic in the country that is only worsening and progressing in a rolling fashion like waves for the last about one and half years since March 2020. In this backdrop, the characterization COVID-19 in Bangladesh was done based on the lessons learned during the long pandemic periods. Sections below highlight 10 major COVID-19 learnings of Bangladesh.

(i) Puzzling situation: It remained unclear for the government whether Bangladesh is still at the beginning of the pandemic or in the middle or at the end of the situation. The situation has created a puzzling situation for the government and created huge confusions for a number of sectors to decide whether to keep systems running or shut down, to imposing partial or full lockdown, etc.

(ii) Weak trace and track of infections: It becomes challenging to trace and track the people (also identification of infected community clusters) infected by the coronavirus and also to develop health and economic protocol for COVID-19 affected households.

(iii) Reliance on the Government: Government systems have appeared as the trusted service provider to the people through a number of means such as social safety net programs, distribution of food and cash to the pandemic victims. The NGOs in Bangladesh have long-standing reputation to stand by people but this time majority of these agencies did come forward to help out communities-in-problem. It is important to note that good progress was not happened to make government service sectors efficient compared to the progress made in private sectors (especially in health sector). During the pandemic times it was observed that the government services,
especially the health systems (the infrastructure, resources, and the trained staffs), had to endure with maximum load than the private health facilities.

(iv) **Challenges in enforcing COVID-19 guidelines:** It has been uncertain how to enforce COVID-19 guidelines such as maintaining social distancing, hand-washing, mask-wearing, etc., in different sectors, places, and to simplify the release of individuals/families from self-isolation once the isolation period is over. The government had to make a balance between the income generation of poor people and enforcing the measures to curb the infections. The lockdown measures had always been relaxed for making the balance and as a result enforcement hardly yields expected outcomes during last one and half years.

(v) **Uncertainty in opening up strategy of economic sectors:** The pandemic has negatively influenced slowdown of economic functions and production processes (both agriculture and industrial productions) and hence income loss happened to millions of people employed in these sectors. The question here is: What are the determinants that may guide the decision-making of the government about opening up of the economic sectors and how to offset the loss that have already been incurred?

(vi) **Uncertainty in immunization of people:** It appeared to be a big problem how vaccination of a large percentage of people in Bangladesh will be ensured in the global contexts of confusions developed as results of vaccine unavailability and nationalization.

(vii) **Uncertainty in developing protocols for migrant workers:** Serious questions were raised how to develop appropriate protocols for migrant employees (on returns and expatriation). It also becomes a pertinent question how to reintegrate and absorb the returnees who lost overseas jobs.

(viii) **Absence of post-COVID-19 (recovery) strategy:** It is still unclear how to develop post-COVID strategy to revive the sectors (such as economy, education, tourism, health, food, and nutrition). Will the approach be based on *build-back-better* concept or needs to adopt *build-back-new* strategy; fostering business as usual approach or adopting leap-frog development planning by taking lessons from good practices from other parts of the world?

(ix) **Weak application of ICT:** Bangladesh has developed a strong foothold in ICT (Information and Communication Technology) in recent years. Translation of political vision “Digital Bangladesh” into reality, putting own satellite in the space for improved communication provisions, and high penetration of mobile phone subscriptions (currently 171 million subscriptions against 160 million people) are some of the evidences of the strengths of Bangladesh in this regard. But use of these facilities and bringing available innovations together did not happen as per the need to ensure more effective COVID-19 management in the country. The use of ICT in managing COVID-19 challenges and convergence of innovation may help a great deal in this regard.

(x) **Long-standing social inequalities took the toll:** Despite having progress in a number of macroeconomic indicators, inequalities of various types still persist in Bangladesh. These inequalities have created huge pressure on different social class and economic groups as their income generation became jeopardized as results of COVID-19 related lockdown and closure of economic functions. The COVID-19 has
attacked on the very basic principles and premises based on which the economy of a country is built (e.g., production processes, mass involvement in formal and informal sector) and this caused to shrink the opportunities of people to improve their conditions vis-à-vis reduce vulnerabilities (Fig. 30.1).

3. The social contexts and economic impacts of COVID-19 in Bangladesh

The COVID-19 pandemic has become pervasive among the people of Bangladesh irrespective of their conditions either living in urban or rural areas whether they are male or female or adult or children. As indicated earlier that the specialized institute of the government IEDCR has been gathering data on different aspects of the pandemic and disseminating that thru different channels. But comprehensive (census based or large sample based) data on the degree of spread of the virus among the people are absent and therefore the state of the situation largely remained unknown. Only few sample-based studies give impressions about the ground realities. It is imperative to mention here that there is a popular belief among the common people in Bangladesh that middle class and rich societies, not the poor sections of the society, get infected by coronavirus and also, they die from this. Two factors contributed in developing this prevalent understanding: firstly, the lack of local research and thus less data hindered the detailed understanding of the situations, and secondly, people believe
that poor people’s physical engagement in jobs and hard labor contributed in developing herd immunity among them and that contributed in protecting them from infections. In this context ICDDR,B (2020) commissioned a study titled “Driving Factors of COVID-19 in Slums and Non-Slum Areas of Dhaka and Chittagong” undertaken from October 2020 to February 2021 by taking a sample of 3220 people from urban slum (2128 persons) and non-slum (1092) areas in Dhaka and Chittagong cities. The findings of the research do not comply with the common current belief that poor people living in urban slum areas do not get infected like economically affluent people. The research found that COVID-19 antibodies developed in 71% of slum dwellers in Dhaka and 55% slum dwellers in Chittagong. The results showed that 70% of the adults and 65.5% of the children developed COVID-19 antibodies in their bodies. The findings also showed that only 35.5% of the participants had one or more COVID-19 symptoms which means almost half of the virus carriers were asymptomatic. These asymptomatic conditions gave an understanding to the common mass, mainly the poor sections of the society, that they do not get infected by coronavirus.

Another study was carried out where 1080 households were taken as sample from different disaster hot-spots of the country to know about preexisting health conditions (comorbidity) of the households, their perceptions about COVID-19 guidelines, impacts of the pandemic, etc. The households mentioned that comorbidity is a major challenge that makes them fearful if things go wrong as results of infection. The major health conditions of the members of the families were reported as hypertension or blood pressure, heart conditions, and diabetes. Some of the households indicated about kidney disease, cancer, and breathing difficulties (Table 30.1) which family members are suffering from. Table 30.1 shows that about 14% of the main family members like husband or wife of the household are suffering from chronic hypertension, and more than 9% mentioned about their mother (staying with them) suffering from the same conditions. A majority of the people with having these chronic health complications, i.e., 85% and 72% in rural areas, mentioned that they visit traditional doctors and visit local pharmacies, respectively, to get medication (Fig. 30.2).

The people who were interviewed also mentioned that lockdown situations are not expected as it hampers their earning opportunities for living (Fig. 30.3). More than 40% people

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1 https://www.dhakatribune.com/bangladesh/2021/06/22/icddr-b-study-covid-19-infection-rate-higher-in-slum-areas.
It is a serious communicable disease
Strong immune system may help to get cured quickly
Washing hands for 20 seconds with soap could help to get protected

FIGURE 30.2 People’s perception on COVID-19 in Bangladesh.

FIGURE 30.3 Reduction of income of people as results of coronavirus pandemic.

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reported that they lost 50% of their income compared to pre-COVID times; 30.5% reported more income loss (50%–75%). A large number of people reported that they are scared about their future, some had to borrow money from relatives, others and some of them reported that their preexisting bad conditions worsened further. More than 80% people (Table 30.2) in both urban and rural areas mentioned that they had to generate income and that is why it was challenging for them to follow COVID-19 guidelines; more people (51%) in rural areas indicated that they go outside for socializing in lockdown conditions while in urban areas this percentage stands at 24% (Table 30.3).

It is imperative to note that Bangladesh Government (i.e., the Ministry of Disaster Management and Relief, MoDMR) has developed “COVID-19 Humanitarian Assistance Implementation Guidelines 2020” under the auspices of two policy documents such as Standing Order on Disaster 2019 (SOD 2019) and “Guidelines for Implementing Social Safety Net Programs (SSNP) 2012–2013.” The SSNP components such as GR (Gratuitous Relief) was used for food and cash distribution and distribution of baby food among the COVID-19 affected people in all geographical areas of the country. Two major groups of people were included in the list of beneficiaries — (i) the extreme vulnerable people and the ultra-poor communities and (ii) people who belong to low-income category and lost their job due to COVID-19 pandemic. The MoDMR of the government included 11-point specific guidelines for successful implementation of this humanitarian support program. Bangladesh Government has been

### TABLE 30.2 Other impacts of COVID-19.

| Types of impacts                                      | Urban | Rural |
|-------------------------------------------------------|-------|-------|
| Earning member of the family lost job                 | 15.8% | 5.5%  |
| Overseas wage earner had to return because of COVID-19 and thus earning dropped | 16.0% | 6.8%  |
| I had to borrow money/food to cope with current situation | 60.6% | 78.2% |
| I was already in trouble; this situation has created more serious problems | 52.7% | 54.2% |
| I had to mortgage/sell assets (jewelry, livestock, land, etc.) | 10.9% | 27.8% |
| I had to sell labor in advance                        | 12.5% | 13.1% |
| I am scared about the future                          | 42.4% | 52.1% |

### TABLE 30.3 Challenges faced by the communities to follow COVID-19 Guidelines of the Government.

| Factors that influence people to defy                              | Urban | Rural |
|-------------------------------------------------------------------|-------|-------|
| I need to go outside for generating income                        | 90.9% | 81.4% |
| Need to visit grocery shops for household needs                   | 70.3% | 67.5% |
| Purchase mobile balance                                           | 45.5% | 57.8% |
| I cannot stay home long time without socializing with friends     | 22.6% | 38.8% |
| Me or members of my family need to go outside to collect safety net benefits | 30.7% | 17.9% |
| Need to visit health-care centers for me/members of my family     | 43.4% | 30.5% |

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implementing a range of SSNP (more than 200 programs) to support vulnerable people in Bangladesh and thus developed different instruments for effective implementation of the programs. This experience of the government to support vulnerable and disaster affected people hugely helped government agencies to quickly plan, design, and implement support programs for COVID-19 affected communities.

4. Bangladesh in post-corona era

The international agencies and communities have been relentlessly working to understand the characteristics of coronavirus, including its variations, mutation processes, and related infection threats and impacts. High degree of contemporary progress in science and technology, such as new innovations, data gathering instruments, and machines that make scientific investigations easy, enhanced computational capacities to handle large amount of data, internet-based knowledge sharing mechanism to access to knowledge developed anywhere in the world – all in a combined fashion helped to know about the multidimensional properties of coronavirus. The development of this quick knowledge has been instrumental to invent COVID-19 vaccine within a record short-time period (1 year) which was unprecedented and should be treated as the big success in the human history. But the yields of this success, i.e., the vaccine, up to now, have been grasped by a handful number of powerful countries of the world. These few states hold the vaccines more than they need and the poorer nations are hardly getting necessary vaccine, although some global efforts have emerged to address some of the challenges like the initiatives of COVAX. However, discussion about this initiative is out of the scope of this chapter and discussed elsewhere in detail. In Bangladesh, Government’s early actions helped to receive vaccines from global sources and up to now about 10 million people out of 160 million have received at least one dose of vaccine and another 10 million will be completed in next 2 months. This suggests that Bangladesh has to take a long journey to ensure that all the people are vaccinated, necessary to resume regular functions and open up different sectors. Financial challenge is not a big challenge for Bangladesh in contemporary times due to strong economic base but the vaccine nationalism, supply challenges may cause troubles in ensuring majority of the people vaccinated (Fig. 30.4).

The long-term recovery plan is yet to develop in Bangladesh and as a result the stakeholders of different sectors are in dark on aspects how to develop their respective strategies and actions to cope with new, post-COVID realities. It is important to mention here that many countries of the world have mentioned (e.g., Singapore) that they will not go back to pre-COVID situations. This pre-COVID to post-COVID transformations and related transitional actions at international arena may leave big implications for Bangladesh since countries and people are strongly connected in the current globalized conditions. Systems-change in one part of the world will require changes in the systems in other connected parts of the globe. Bangladesh needs to understand these new realities and develop prudential strategies in this connection. Bangladesh’s recent initiatives (BER 2019) like digitalization, commissioning own communication satellite in the space, strong economic base (GED 2018), development of communication infrastructure, education, and health infrastructure throughout the country may help the country to cope well and quick with new global and national realities. It needs to be remembered that the assumptions based on which those developments took place in Bangladesh did not include pandemic situation that a
microscopic virus may cause. For instance, building of safe, protection shelters for cyclone or flood victims where hundreds of people can gather during emergencies might not be suitable now in COVID pandemic situations because social distancing cannot be maintained in gatherings of people. Therefore, development planning has to be aligned with the current realities.

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A number of guidelines for taking actions have emerged from globally reputed agencies so that government including Bangladesh Government can take measures to contain the emergence and spread of coronavirus. For instance, the reports such as (i) GHRP (2020) suggested appropriate measures for humanitarian supports in COVID-19 crisis, (ii) IPBES (2020) called for actions to lower the spread of coronavirus and to reduce the chance of creating other threats maybe caused from other zoonoses. Table 30.4 highlights the current resources, strengths of Bangladesh, put against the calls made by GHRP and IPBES so that it can align her tasks with these global directives by enhancing, converging the resources if/when necessary.

**TABLE 30.4** Actions of Bangladesh against the global calls to protect communities from pandemics caused from zoonoses.

| Strategies to address COVID-19 crisis from humanitarian perspectives | Suggestions to contain the emergence and spread of COVID-19 and other upcoming zoonoses | Current undertakings of Bangladesh to mitigate COVID-19 related challenges |
|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| **Strategic priority 1: Contain the spread of the COVID-19 pandemic and decrease morbidity and mortality** | Human ecological disruption and unsustainable consumption drive pandemic risk | COVID-19 tests are undertaken mainly by government laboratories, few private sector labs are also contributing. These facilities are largely available in urban areas (mainly large cities). Issues like unsustainable consumption patterns remained business as usual. |
| *Specific objective 1.1 - Prepare and be ready; Specific objective 1.2 - Detect and test all suspect cases; Specific objective 1.3 - Prevent, suppress, and interrupt transmission; Specific objective 1.4 - Provide safe and effective clinical care; Specific objective 1.5 - Learn, innovate, and improve; Specific objective 1.6 - Ensure essential health services and systems* | Reducing anthropogenic global environmental change may reduce pandemic risk | Contact tracing is largely absent, COVID-19 guideline measures are ineffectively implemented. Advantages of ICT used but inadequate. |
| **Strategic priority 2: Decrease the deterioration of human assets and rights, social cohesion, food security, and livelihoods** | Land-use change, agricultural expansion, and urbanization cause more than 30% of emerging disease events | Livelihoods of people, education, regular health services (other than COVID), production processes, informal economy hugely disrupted. Only safety net programs are used to support people but long-term recovery plan is still absent. Improvement in the food safety measures (in the production and supply chain) is weak, less regulated. Unplanned urbanization leading to unhealthy living of people is continuing, land use change still remained as it was. |
The COVID-19 pandemic in current global reality

We have already come to know how a biological hazard (i.e., COVID-19) could leave the world at a halt and put the countries at risks and frustrations. This happens in a time when scientific innovations have reached to an amazing level of excellence that allowed us to travel beyond the solar system (e.g., cruising of Voyager 1 and Voyager 2 outside the solar system); scientists seamlessly landed four motorized rover vehicles in our neighboring red planet Mars; nanotechnology takes us to the unknown world; and many such examples of excellence could be given. These innovations primarily happened as results of the race took place among the rivalry states of the world aiming to secure power by achieving success in certain areas.

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TABLE 30.4 Actions of Bangladesh against the global calls to protect communities from pandemics caused from zoonoses.—cont’d

| Strategies to address COVID-19 crisis from humanitarian perspectives | Suggestions to contain the emergence and spread of COVID-19 and other upcoming zoonoses | Current undertakings of Bangladesh to mitigate COVID-19 related challenges |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| **Specific objective 2.1 - Preserve the ability for adequate food consumption and meet other basic needs**; Specific objective 2.2 - Ensure the continuity and safety from risks of infection of services like health, water and sanitation, food supply, nutrition, protection, and education; Specific objective 2.3 - Secure the continuity of the supply chain for essential commodities and services | The trade and consumption of wildlife is a globally important risk for future pandemics | Trade of wildlife (especially in domestic markets) happens in illegal and quasi-legal forms. Economic and social inequalities remained as a major challenge in the society; the bottom of the poor (i.e., the ultra-poor) struggle to improve their conditions and any challenge cause them to fall down to earlier states. Basic needs of these sections of people largely remained inadequately fulfilled. |
| Strategic priority 3: Protect, assist, and advocate for refugees, IDPs, migrants, and host communities particularly vulnerable to the pandemic | Current pandemic preparedness strategies aim to control diseases after they emerge. These strategies often rely on, and can affect, biodiversity | Internal displacement is a big challenge in Bangladesh due to disaster (especially from river bank erosion) and climate change impacts. The displaced people generally live in urban slums and squatters in unhealthy environment. Even their informal presence and engagements in urban contexts bar them to receive many basic rights and services from the government. |

Specific objective 3.1 - Ensure that the fundamental rights of refugees, migrants, IDPs, people of concern, and host population groups; Specific objective 3.2 - Prevent and address risks of violence, discrimination, marginalization, and xenophobia
Control over political processes at global and regional fora, attainment of economic supremacy to gain firm control over resources were also the driving factors that helped to gain such successes in innovations and technological advancements. The benefits that the human being is currently receiving such as various forms of services from earth orbiting satellites including internet facilities, industrial advancements, etc., in most of the cases, are the offshoot-outcomes of the exercises and scientific advancements made by the advanced countries toward securing their power. This suggests that the philosophical basis of the current developments that we are experiencing remained, mostly, out of human welfare objectives. As a result, sheer number of world population living in economic poverty, food insecurity, and poor health conditions coexist with the marvel of scientific innovations. Even the countries in the western world that are monetarily and technologically rich including the United Nations appeared to be unprepared to cope with a global crisis emerged from a contagious disease. This happened primarily for three factors like (i) the failure of assessing potential risks that may pose threats to human health, (ii) inability to apprehend the scale of impact beforehand, and (iii) the nation states including the UN did little to eliminate inequalities of different forms. The dearth of protective gears for the health-care professionals (seen the conditions acute at the onset of pandemic), lack of specialized hospitals for taking care of patients, inadequate ventilation facilities for large number of patients when necessary are few of the examples that expose the realities at global levels and also in Bangladesh. The COVID-19 crisis also revealed the fact that the nation states are, in real terms, individualistic, less willing to cooperate each other to tackle a global threat when it was utmost necessary. As a result, some countries stored COVID-19 vaccines more than they need while many countries have been suffering from the severe shortage of supplies. This individualistic attitude in a globalized context poses a serious question to the rationale, values, and fundamental principles based on which regional, international cooperative associations (like UN) were developed. As of now, the UN even did not able hold an apex meeting on how short-, medium-, and long-term action plans could be devised to overcome this pandemic situation. The emergence of the COVID-19 pandemic puts us against some realities that might determine the future mode of international cooperation, economic functions, and processes at global level and local actions will respond accordingly. Deep observation of the crude realities at this point of juncture is extremely important to make necessary adjustments into the plans and strategies at organizational and state levels as to adapt with the post-corona world.

6. Conclusions

It is widely discussed and broad consensus received that the corona pandemic has brought the world to a crossroad and in post-corona conditions it will take the world to a new global order where global attention on thematic sectors will be different from current focus. Expected external support for a country like Bangladesh will be more competitive (LDC Graduation will make it more difficult; see GED 2020), complex, and difficult; the mode of human migration might be modified/restricted; markets for export—import functions might be reoriented; safe food production and related supply chain will receive more attention; frontiers of current uncertainties and potential threats such as climate change will receive more attention.
In this time of one and half year time-lapse of COVID-19, these are some initial (because we do not know the time of termination of the pandemic) observations about the likely future changes that might happen in the postpandemic periods, although more critical examinations are needed to develop deep insights about the future and projected scenarios. It is also important to note that the COVID-19 is just added as a new element of risks into the existing set of challenges and the coupling effects may contribute in altering the characteristics and the forms of preexisting challenges. The new realities have to be dealt with new approaches and tools. However, sector specific assessments will be necessary for Bangladesh to identify the domestic and external challenges and to develop strategies appropriate to cope with new realities. The most important issue to consider here is that the current corona management, assessing necessary reflexive-adjustment needs, all need to go concurrently, at least, this decisive moment advocates to take that course for Bangladesh.

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