

**Review Article****Health and Environment***

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ABSTRACT

Bangladesh is passing through the dividend phase of demographic transition, with 45 million (over a quarter of the total population) in the age group of 15-29 years and 52.8 million (about a third) in the 15-36 age group. Young scientists belong to the upper segments of the later age group (some may be somewhat older than 36), who will in the fullness of time, take up leadership positions in their respective fields. Whatever be the field of human endeavour, the capability of the protagonists, is certainly a pivotal key to success. Indeed, human capability depends on education, skill training and health services. The better the availability of these services, the better is expected to be the ability acquired by the people concerned. One of these key services, health, is included in the theme of this conference. This paper has proposed that a universal health coverage (UHC) system be developed in Bangladesh so that people from all walks of life can access at least primary health services. The UHC can be developed centering around the 14,000 or so Community Clinics in place all around rural Bangladesh. Bangladesh is pursuing the goal of sustainable development within the UN adopted 2030 Agenda for Sustainable Development framework. This agenda is anchored on three pillars-economic, social and environmental. Sustainable development can be succinctly defined as socially acceptable, environmentally sound economic growth. Also, a basic tenet characterising sustainable development is that nobody can be left behind, i.e., everybody has to be included. The theme of this conference consist of the environmental pillar of sustainable development. In fact, the environment is the ultimate resource base of all development. Climate change, a major sub-set of environmental issues, is fast deteriorating and becoming an existential threat to humanity. This paper has discussed what has been happening in relation to climate change and what is being done to combat the menace globally and in Bangladesh. The efforts of Bangladesh in policy, programming, funding, and action in the context of responding to the increasingly adverse impacts on the country caused by the worsening climate change have been reviewed. Also, since this problem is global and cannot be adequately combatted by any one country, much less by a resource-poor country like Bangladesh, what role the international community is playing in this regard has been examined. The final section relates the lessons from the above discussions and reviews the future roles that young scientists need to play.

Introduction

Bangladesh has been making major strides over the past decade or so in terms of economic growth (GDP growth and per capita income), ICT penetration, major infrastructural development (e.g., Padma Bridge, soon to be operational Karnafuli Tunnel, soon to be operational Dhaka Metro-rail, road networks) as well as in relation to certain key social indicators such as infant, child and maternal mortality, women's empowerment, poverty reduction and spread of education. These achievements are widely recognized internationally. Bangladesh is also one of the few countries in the world which have managed covid-19 pandemic fairly well, both health-wise and in addressing the economic upheavals it caused. A potential food crisis was averted and, after initial

fumbling, vaccination, testing for corona, hospitalization and treatment services improved fast and significantly. The pandemic has been almost completely overcome as all who, including children of 6 years, should be vaccinated have received at least one dose and mostly two doses. Also, a notable proportion has received a third (booster) dose.

Post-covid-19 economic recovery started strongly, with the GDP growth rate reaching 7.25 percent in fiscal 2022 and the rural economy (agriculture and non-agriculture) starting to rejuvenate. A dampening impact of the global economic turmoil caused by the Ukraine War occurring on the heels of the covid-19 pandemic is faced by Bangladesh and other countries

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worldwide. Policy and action programmes are afoot in the country to address the issues faced at both micro and macro levels, designed with a view to responding to the realities unfolding. An example is the various steps taken to boost foreign exchange receipts, such as boosting exports and inward remittances on the one hand and appropriately reducing foreign exchange use through cutting down unnecessary or less important imports, the incidence of foreign travel that can be avoided, controlling over-invoicing and under-invoicing practices by certain importers and exporters. Also, there are policy and financial support being provided to encourage increased food production.

Our development goals include achieving sustainable development, particularly the 39+1 targets prioritized by the government by 2030 and reaching higher-middle income status by 2031 and a developed country status by 2041. It may be noted here that sustainable development is socially acceptable, environmentally sound economic growth. A basic tenet of the process is that everybody has to be included.

These goals can be achieved if we can effectively address the problems now faced, some of which have been indicated above, and others that may exist or arise as we go forward. And one of the key elements for the trajectories underpinned by the goals envisaged to be successfully pursued is the availability of adequately qualified, trained, and motivated work forces for various sectors. That is, human capabilities of various levels for each sector need to be developed based on needs assessment in each sector as of now and projected for future years as we move forward.

Human capabilities are dependent on education, skill training and health services. Therefore, access to quality education, skill training and appropriate health services must be ensured for all concerned, particularly the youth, to ensure the supplies of the capabilities required in various sectors as we move forward.

Demographic Dividend

Demographic dividend in terms of economic growth potential is obtainable when the share of the working-

age population is larger than the share of the non-working-age population. It is particularly potent when youth preponderates in the population's age structure. This is still the reality in Bangladesh, although the proportion of the youth will start declining soon and will, by 2050, be lower than that of the elderly population (aged 60 and above).

The working-age population (15-64 years of age) currently constitutes about 66% of the total population. About 24 percent of the total population (about 45 million) in Bangladesh is aged between 15 and 29 years and about a third is aged between 15 and 36 (about 52.8 million) (BBS, 2022).

Today in this conference, we are focusing on youth scientists who belong to the age group which is the highest potential segment of the population in terms of demographic dividend.

The young scientists are likely to be aged 24 to 36, and some may be a little older than 36. There are, millions more belonging to this age group who are either poorly and scantily educated or illiterate or have received education and have skills that do not correspond to the human capabilities required in different sectors of the economy and society. Hence, there is widespread youth unemployment and underemployment in the country, including educated youth. For the economy to benefit from the dividend phase of the demographic transition till it lasts, it is crucial that the youths are properly trained and facilitated to find worthwhile jobs to contribute to their own and national development. The government has several programmes in this context. There are also some private sector undertakings. But, these are altogether grossly inadequate for the task at hand. Much more attention in terms of facilitating and enabling the youth is needed to make the best possible use of the high potential that exists. Let me turn to the issue of health services, which is included in theme of this conference.

Health Services in Bangladesh: A Brief Review and a Proposal

A remarkable improvement in private health services has occurred in the country, particularly in urban

areas, over the past two decades. But, not infrequently, these services are of uncertain quality. Being very expensive, these services are usually beyond the reach of ordinary people.

Public health services have also expanded in the country regarding diagnostic and hospital facilities in urban and rural areas, for example, Upazila Health Complexes and Community Clinics. But, still, public health services in the country are grossly inadequate and fragmented. A study has found that, even in Dhaka city, of those who sought healthcare services, 39 percent sought it from pharmacies, 34 percent from private providers, only 13.6 percent from public healthcare facilities, and others went to traditional or different non-registered sources (Sarker et al., 2022). In fact, the majority of health service expenses are borne by the people (patients), often referred to as out-of-pocket or OOP expenses. The OOP expenses account for 67 percent of total medical expenses in Bangladesh as of 2015. Poor and low-income households cannot meet such expenses. They cannot, therefore, avail of essential health services or manage the required expenses by borrowing from others, using family savings, donations from relatives and others, or taking bank loans when possible. An estimated five million people face dire consequences on account of not being able to avail of essential medical services or doing so by incurring heavy debts. (Sarker et al., 2022)

To strengthen and universalize the country's healthcare system, the Government of Bangladesh prepared a proposal in 2012 for expanding social protection for health towards universal coverage by 2032 (MoH&FW, 2012)

To meet the challenges and increase financial protection for the entire population and reduce OOP, the following three strategies were proposed:

- a) Generate more resources for effective health services;
- b) Improve equity and increase healthcare access, especially for the poor and vulnerable; and
- c) Enhance efficiency in resource allocation and nationalization.

The proposal was to start with the poor and the formal sector and then expand the coverage to informal sectors leading to universal coverage by 2032. It may be recalled here that Prime Minister Sheikh Hasina reiterated her commitment to establish Universal Health Coverage (UHC) in Bangladesh at a High Level UN meeting on UHC in New York in 2019.

But, the 2012 proposal clearly has not been acted upon. Also, the Prime Minister's commitment is yet to be put on stream. In reality, an annual budgetary allocation to the health sector has remained well below one percent of the GDP. Moreover, the management capacity of the government has remained so limited that even this meager allocation could not usually be spent over the past years. Then there is also often a question mark regarding the quality of spending.

The covid-19 pandemic has brought home sharply the gross inadequacy of public health services, particularly primary healthcare services, in the country, reinforcing the need for UHC. I strongly suggest that the UHC process be started on an urgent basis. There is already an infrastructural basis in terms of the 14,000 or so Community Clinics in rural areas across the country. Also, there are Upazila Health Complexes to be taped.

For a UHC process to be perused, mobilization of financial resources and strengthening of government health sector management capacity as well as the availability of an adequate number of medical doctors, nurses, technicians, and other health workers will be essential. Moreover, it will need to be ensured through appropriate incentives and administrative steps that doctors and other health services providers work in urban and rural areas, as required. However, above all, it is crucial that there is a political will to follow through on the commitment of the Prime Minister to UHC and that the process is initiated without further delay of time.

It will be more efficient and politically prudent to cover the total population simultaneously rather than starting with the poor and formal sector people and

then extend to the informal sector as proposed in the strategy proposed in 2012.

At the present level of GDP in Bangladesh, the establishment of UHC is affordable. Available estimates show that an additional annual budgetary allocation of one percent of the GDP will suffice to pursue the establishment of UHC in the country (Chowdhury and Yates, 2022).

Now let us briefly discuss aspects of the environment which are also included in the conference's theme.

Environment and Climate Change

The environment is one of the three pillars of the UN-adopted 2030 Agenda for Sustainable Development – the other two being economical and social development.

The broad areas of concern here are environmental degradation (deterioration in the integrity of the environment as a result of concentrations of various pollutants and other activities and processes such as deforestation, improper land use, and natural disasters), bio-diversity loss (losses in the number, genetic variety, variety of species, biological communities in given access-on land and in water bodies and oceans) and climate change (long term, at least 30 years) shifts in temperatures and weather patterns, which may be natural such as through variations in the solar cycle but also, as a result of human activities, such as the burning of fossil fuels, emitting greenhouse gases (GHGs), which constitute the main driver of the ongoing climate change.

These are now burning and further worsening natural phenomena causing upheavals in human lives and living and economic prospects around the world. In particular, climate change has assumed the proportion of existential threat to humanity and even to the planet earth.

As a consequence of the increasing concentration of GHGs in the atmosphere, the earth has been warming (global warming) causing increasing (both in terms of frequency and devastation) natural disasters such as floods, cyclones, sea level rise, and storm surges, heat waves, droughts and so on. These are happening

worldwide in both developed and developing countries. But certain countries are particularly vulnerable due to their geographical location and poor ability to respond. Bangladesh is at the forefront of the countries in this category. But, Bangladesh is not at all responsible for global climate change as it emits an insignificant amount GHGs in the global context. Yet, it's one of the worst sufferers due to natural disasters attributable to climate change.

Since climate change is a global issue, it can be effectively addressed by an effective corporate regime globally based on the principle of common but differentiated responsibilities and respective capabilities. Otherwise, the downward slide will continue to intensify, imperiling humanity.

A country like Bangladesh with limited climate adaptive capacity (financial and technological) needs support from the international community to address the climate change impacts. But very little financial support is available not only for Bangladesh but for developing countries in general. The international community promised to provide climate finance of US\$ 100 billion annually with effect from 2020. But even now, an Oxfam study shows, only about US\$ 20 billion is now provided annually, although EU sources claim it to be US\$ 80 billion.

Moreover, the emission of GHGs, particularly by the developed countries and certain large and industrializing developing countries, has kept increasing. Intergovernmental Panel on Climate Change (IPCC) 6th Assessment WG-2 Report indicates that the GHG concentration in the atmosphere is now the highest in two million years and rising. As a result, climate change is fast intensifying. A country like Bangladesh cannot go on adapting if it faces climate change impacts of ever-increasing proportions. Hence, it is urgently required that the main emitting countries reduce their emissions quickly and in large quantities. There is a small window of opportunity, up to 2030, to act accordingly. Otherwise, the situation may be catastrophic for not only the climate-vulnerable countries but for the world as a whole.

Yet, despite negotiations every year at world climate conferences (Conference of the Parties or COP under the United Nations Convention on Climate Change-UNFCCC). The 27th, the latest, COP held in Egypt concluded a few days ago with precious little to slow achievements in relation to the reduction of GHGs as required to keep global warming at 1.5°C or well below 2°C by the end of the century, the global goal set in the Paris Agreement (at COP21), compared to pre-1st industrial revolution levels. Available estimates suggest the world is on course for at least a warming of 2.8°C if all the commitments (conditional and unconditional) made by all countries through their nationally determined contributions (NDCs) are delivered. But, past experiences relating to meeting commitments concerning climate change management suggest, and also due to the unlikely availability of financial support as required to developing countries to help them fulfill their conditional commitments, it appears that global warming will be much more than 2.8°C.

Note that the IPCC 6th Assessment WG-2 Report describes the devastations caused by climate change-induced natural disasters now faced by countries around the world that are threatening the lives and livelihoods of millions upon millions of people while the world is now only 1°C warmer. It can easily be gauged that if the warming is 3°C or more, humanity and the earth could face disastrous consequences. In this context, the UN Secretary-General Antonio Guterres said at COP27: “We need all hands on deck for faster, bolder climate action. A window of opportunity remains open, but only a narrow shelf of light remains. We are getting dangerously close to the point of no return. The global climate fight will be won or lost in this crucial decade on our watch. One thing is certain: those that give up are sure to lose. So, let us fight together-and let’s win.” He also crisply said: ‘the world is on a highway to climate hell’ and ‘Humanity has a choice: cooperate or perish.’ Apparently, the world, particularly the developed world is not about to listen. Thus, COP27 has, by and large, ended with a whimper.

The Government of Bangladesh, led by Prime Minister Sheikh Hasina, has been very active in international negotiations and domestic climate actions. Internationally, in COPs and others for dealing with climate change, for example, Bangladesh has been strongly demanding individually or collectively along with other developing countries through G77 and LDC groupings and Climate Vulnerable Forum drastic and fast reduction of GHGs consistent with the Paris Agreement goal of 1.5°C warming by the end of this century and adequate climate financing by developed countries for adaptation needs of the developing countries, especially the LDCs and climate vulnerable countries. But, so far, the outcome is grossly disappointing. Any significant improvement, particularly in actions, does not look like being on the cards at present.

But, as noted earlier, Bangladesh is one of the worst sufferers of climate change impacts while not being at all responsible for this intensifying menace. However, bereft of any meaningful support from the international community, Bangladesh is trying its best to combat climate change. The impacts suffered by the country include economic and infrastructural damages and losses due to result of more frequent and generally more devastating floods, cyclones, storm surges, salinity ingress, drought, river erosion, and so on. The food security of the affected people is often compromised due to production and income losses. Also, large numbers of people are being displaced every year, particularly due to river erosion.

Bangladesh has been implementing policy and climate action responses mainly using its own financial and other resources. In 2009, the government adopted Bangladesh Climate Change Strategy and Action Plan (BCCSAP), which has recently been updated. Bangladesh Climate Change Trust was set up in 2010, to which budgetary allocations are made annually for specific climate actions, mostly for adaptation. Five-Year Development Plans and Annual Development Programmes include climate change responses. In fiscal 2020, the government spent a total of US\$ 5 billion from its own resources for climate actions through various government ministries. Prime Minister Sheikh Hasina is leading from the front in combatting climate change domestically and in helping shape appropriate international climate policies and action programmes.

But, given limited resources, Bangladesh cannot make much headway in combatting climate change impacts through adaptive actions. More can be achieved if the available resources are used more purposefully by prioritizing climate actions and avoiding wastage and corruption. This must be done. However, even so, not a great deal could be achieved in relation to the needs.

As noted earlier, overall, the future of Bangladesh and the world at large remains on course for disastrous consequences, given persisting intransigence on the part of the world leaders, particularly of developed countries and industrializing large developing countries, leading to their failure to undertake drastic and cooperative climate actions as called for by science.

Young Scientists for Health and Environment

I have tried to give, in broad outlines, the health service status in Bangladesh and proposed the setting up of UHC in Bangladesh to be initiated without further loss of time as well as global and Bangladesh-specific environment and climate change issues and the way these are being addressed or not addressed. It has been indicated that humanity is likely heading to a climate catastrophe unless science-dictated actions on mitigation and adaptation are taken while time remains.

The two issues-health and environment and climate change-are of crucial importance in the context of sustainable development. Young scientists can find it worthwhile and rewarding from their professional point of view as well as because of the potential contributions they can make to human progress by either working on health issues or on environmental and climate change issues. I have outlined the state of

play with regard to both fields. Some challenges and the urgency of addressing them effectively have been highlighted. Young scientists may be interested in taking up one or the other field, given their background and interest, as the major area of their work-research, dialogue, innovation, and management. Make their best possible contributions to ensuring at least adequate primary healthcare services for all or, if their choice is environment and climate change, towards environmentally sound development.

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