



Policy Brief

Climate Change and Health Promotion Unit



February 2022

Policy Brief 1: Mainstreaming Climate Change and Health Adaptation across the Health Sector

Climate Resilient Health System for Vulnerable Women and Children of Bangladesh

Key Message:

- Health is a cross-cutting issue in the context of climate change, and there is a need to mainstream health in mitigation and adaptation strategies in all sectors. The Health component of National Adaptation Plan needs to be developed for integrating climate change adaptation into relevant national health plans and policies.
- Recognition of the linkages between climate change and health systems such as shifts in vector borne diseases and decreased access to services, is growing but developing countries like Bangladesh are still struggling both to mainstream, or integrate climate adaptation in to their health plans and to implement activities on the ground.

Introduction:

The impacts of climate change on human health is one of the major increasing global concern now a days. Climate change not only has direct impacts on human health (e.g. through injuries and illness from extreme weather events), but also threatens the capacity of health systems to manage and protect population health (e.g. through the vulnerability and reliability of infrastructure or critical services). Health systems should therefore be increasingly strengthened so that they continue to be efficient and responsive to improve population health in an unstable and changing climate.

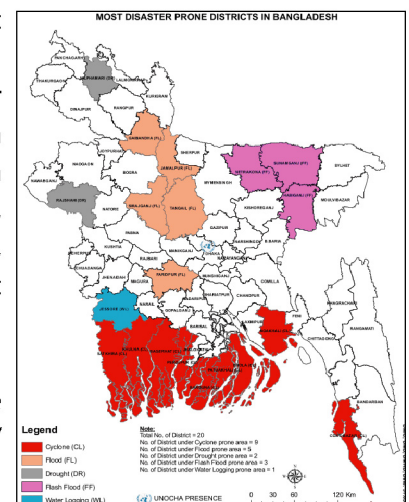
Climate change related hazards, such as drought, flooding, waterlogging, tidal inundation, cyclones, storm surges, erratic rainfall and rising temperatures, are common events in Bangladesh. They have direct and indirect adverse impacts on water resources, agriculture, livelihoods and ecosystems all of which ultimately affects human health.

Bangladesh is considered the most vulnerable to tropical cyclones, the third most vulnerable to sea level rise in terms of the number of people affected, and the sixth most vulnerable to floods in the world (Francis and Maguire 2016). Scientists have proved that the erratic nature of rainfall and temperature is gradually

increasing in Bangladesh. Precipitation is becoming less predictable and the monsoon is now characterized by higher amounts of rainfall within shorter periods of time (Islam et al. 2014).

Temperatures are becoming more extreme, with regional variations and an overall annual rise. Tropical cyclones are also expected to increase in intensity. As a low-lying country, Bangladesh is highly vulnerable to these climatic changes and increased extreme weather events.

Climatic variability and changed weather patterns play a significant role in freshwater availability, accessibility, agriculture, economic growth and performance, and livelihoods of people (NAP Process 2009/2021).



Natural hazards that come from increased rainfall, rising sea levels, and tropical cyclones are expected to increase as the climate changes, each seriously affecting agriculture, water and food security and shelter resulting adverse effect on human health and animal health as well. Sea levels in Bangladesh are predicted to rise by up to 0.30 metres by 2050, resulting in the displacement of 0.9 million people, and by up to 0.74 metres by 2100, resulting in the displacement of 2.1 million people.

Bangladesh has experienced an average rise in temperature of 0.5°C between 1976 and 2019. The increase in maximum temperatures during this period has been shown to be consistent on a month-to-month basis, with the months from February to November getting warmer. The rise in maximum temperature across the country has not been uniform. For instance, between 1976 and 2019, compared to a 0.5°C rise in central parts covering Dhaka and neighboring districts, maximum temperatures rose by 0.9°C in the eastern parts (Chattogram and Sylhet divisions). In general, summers are becoming longer, and winters are getting warmer and monsoon becoming unpredictable beyond the norm.



Local Level Consultation on Climate Sensitive Disease Indicators

Being situated on the edge of the tropical region, Bangladesh experiences some of the wettest monsoons in the world. During peak monsoon, from June to August, the average monthly mean rainfall has declined by 60 millimeters. On the other hand, mean monthly rainfall for September and October has increased by 43 millimeters, which indicates that the monsoon period is gradually becoming longer, extending now from March to October. Rising temperature during the winter months coupled with erratic rainfall patterns have eroded the distinct seasonality in Bangladesh.

To address the changing parameters of climate in Bangladesh, the Bangladesh Delta Plan 2100 was launched in 2018. The government of Bangladesh is working on a range of specific climate change adaptation strategies. Climate Change adaptation plays a crucial role in fostering the country's development.

Climate Change and Health

Being a low-lying river delta with a long coastline and floodplains that occupy 80 percent of the country, climate change in Bangladesh is not just about cyclones and floods. Changing and erratic weather pattern have already affected our physical and mental health. The climate change in Bangladesh have started to impact health with an increase in respiratory diseases, vector-borne diseases, along with psychosocial stress deteriorating mental health conditions.

Adverse Effect on Health

According to the baseline survey of CCHPU and a recent World Bank survey climatic variability has adverse effect on physical and mental health.

- Respiratory illnesses are likely to increase with rising temperature and humidity. A 1°C increase in temperature rises the likelihood of contracting a respiratory infection by 5.7 percentage points, whereas a 1 percent increase in humidity rises the chances of catching a respiratory infection by 1.5 percentage points.
- Waterborne diseases like cholera are likely to decrease with rising humidity and temperature. A 1 percent increase in relative humidity reduces the probability on contracting waterborne illnesses by 1.6 percentage points, whereas a 1°C increase in mean temperature reduces the likelihood of respiratory infections by 4.2 percentage points.
- Dengue is likely to increase for Dhaka as the climatic conditions become more suitable. Humidity in the range of 60 to 80 percent, maximum temperature between 25°C and 35°C, and rainfall between 200-800 mm create ideal conditions for mosquitoes. Weather data between 1976 and 2019 indicate Dhaka is experiencing falling humidity levels, rising temperatures, and heavier summer rainfall. These together with factors like urbanization are increasing the risk of the spread of vector-borne diseases such as dengue/ chikungunia in Dhaka city.

Mental Health

- Changes in weather can cause mood swings. But, seasonality have a slightly different impact on anxiety than depression.
- The level of anxiety disorders increases with temperature and humidity. Increase in mean humidity and mean temperature increases the probability of having anxiety by 0.3 percent and 0.8 percent, respectively.
- More people suffer from depression during winter. Increase in temperature lowers the probability of depression by 1.6 percent.
- Further, women are at higher risk than men for depression, while men are more susceptible to anxiety.

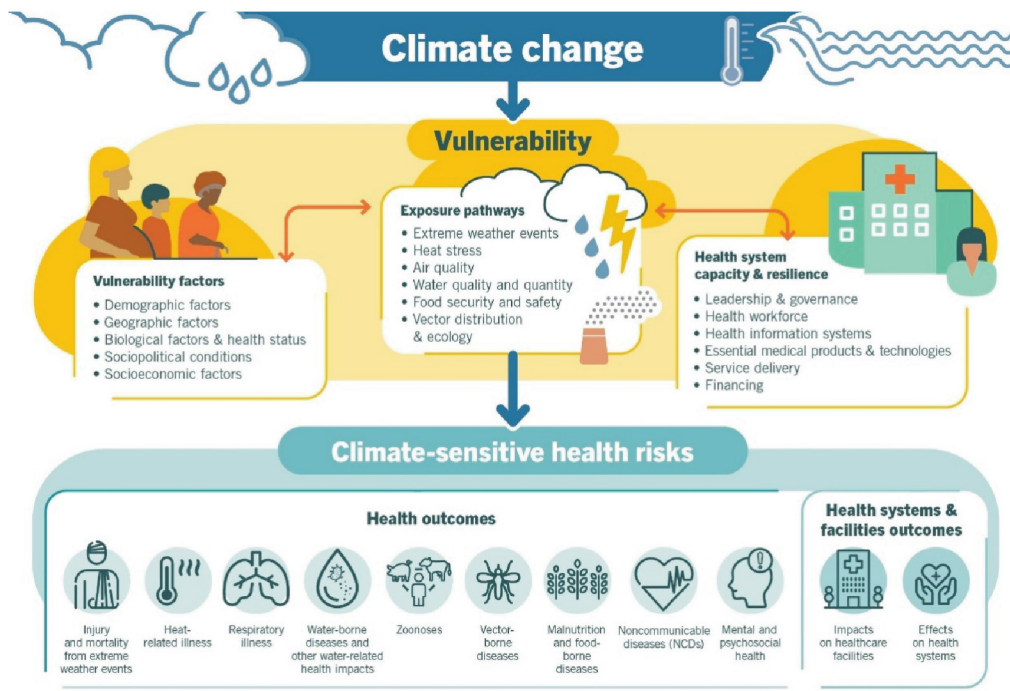


Figure: An overview of climate-sensitive health risks, their exposure pathways and vulnerability factors. Climate change impacts health both directly and indirectly, and is strongly mediated by environmental, social and public health determinants.

(Source: WHO, Fact Sheet-Climate Change and Health, 2021)

Women and Children are most vulnerable to Climate Change:

Bangladesh faces up to climate reality and children are the most at risk. As the country combats the impacts of climate change, experts say the challenges posed by rising temperatures and changing weather patterns will be the toughest on women and children. Women are ever more vulnerable to the impact of climate change than men, because they have very limited access to financial resources, land, education, health services and in decision making process. Increasing coastal salinity has already put many children in the middle of a clean drinking water crisis.

Children from poor families displaced by erosion and struggling with food security face the dangers of being forced into labour or marriage at an early age.

Vulnerable poor people are suffering the most from climate-sensitive diseases and insufficient healthcare facilities in the absence of a climate-resilient health system.

Healthcare facilities need to assess climate change risks and adopt adaptive management strategies to be resilient.



Data Collection in a remote coastal Upazila (Rangabali) of Patuakhali District

Mainstreaming Climate Change and Health Adaptation into health system enhances resilience:

To reduce climate change risks and lower vulnerabilities, adaptation must be mainstreamed into health policies and plans. Mainstreaming is the process by which information on climate risks, hazards, and vulnerabilities is integrated into development policies, programs, plans, and projects to make them climate resilient, which often leads to improved development outcomes. Mainstreaming adaptation can lead to “no-regrets” opportunities to improve health systems now, regardless of the severity of climate impacts, and help

reduce vulnerabilities to future climate and non-climate shocks. This will increase the likelihood of achieving development goals that are resilient to climate impacts and support the livelihoods of the most vulnerable groups of people.

In addition to mainstreaming adaptation into plans and policies, the gap between planning and on-the-ground implementation must also be addressed. This implementation gap can exist due to a variety of factors.

Adaptation is more likely to be mainstreamed across sectors and from the national to the local level—and the implementation gap is thus more likely to be closed—if five factors work together:

- Supportive policy frameworks
- Leadership from within and outside the government to drive the mainstreaming process
- Coordination mechanisms that allow actors to cooperate across sectors and government departments to attain common mainstreaming goals
- Information, monitoring, and evaluation frameworks and tools that enable learning
- Finances to implement action (other authors have also noted the importance of increased finance to implement climate change adaptation activities)

Policy Recommendations:

By 2050, Bangladesh is expected to experience an increase in temperature of about 1.5°C. And between 2040 and 2059, annual rainfall is also expected to increase by 74 millimeters. These projected changes will escalate spread of infectious diseases and mental health issues. By taking urgent actions, Bangladesh can remain better prepared to adapt and/or mitigate the impacts of climate change on health.

Way Forward:

The COVID-19 pandemic is shining a spotlight on the importance of robust and resilient health care systems that serve the needs of both the wealthy and people living in poverty. Strengthening the overall capacities and resources of health systems—e.g., building robust supply chains, increasing training of medical staff, retrofitting technology and equipment, and establishing protections against interrupted health services—will increase adaptive capacity to deal with climate impacts while providing many other benefits. Increasing human capacity and financial resources is paramount to ensuring that effective measures are taken to better manage rapidly mounting climate-related risks to health.

This policy brief suggests some ways for better adaptation:

Policy Framework

Government should establish policy frameworks and collaboration mechanisms to provide needed guidance and support for mainstreaming climate adaptation in the health sector

Strengthening Health Systems

Strengthen health systems to preempt and mitigate outbreaks of infectious and other emerging or reemerging climate-sensitive diseases

Mainstreaming Climate and Health

Ensuring that mainstreaming climate and health remains a priority after changes in administration which occur frequently.



Technical Advisory Group Meeting

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