POLICY BRIEF

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Breaking Climate Change, Poverty and Inequality Nexus in Bangladesh

Can 'Resilience Dividend' Pave the Pathway?

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Summary

Climate change hazard, along with its interrelationships with environmental degradation, poverty and inequality are, no doubt, real having the capacity to create far reaching and devastating consequences, especially for a highly climate vulnerable country like Bangladesh. Considering the deep concerns of climate change and environmental issues, Bangladesh adopted the National Adaptation Plan of Action (NAPA) on Climate Change in 2005 which was updated in 2009; including the Bangladesh Climate Change Strategy and Action Plan (BCCSAP). Both these policy guidelines highlight two basic principles: (i) integrated approach to socioeconomic development and climate change management; and (ii) pursuit of low carbon development pathway.

The analysis of the nexus between climate change, poverty and inequality may be structured using an analytical framework. Within the framework, three major channels can be identified through which poverty status of the poor and disadvantaged populations and inequality dimensions are influenced by the impact of climate change. These are: (i) increase in the exposure to climate hazards; (ii) increase in susceptibility to damage caused by climate hazards; and (iii) decrease in the ability to cope with and recover from the damages caused by climate hazards. Moreover, the interaction channels of climate change on poverty and inequality are influenced by socioeconomic, political, cultural, governance and other characteristics that prevail in the society.

In Bangladesh, the ground reality brings out the fact that GHG-intensive activities mostly serve the needs and comforts of the rich and privileged groups in society; moreover, they have the ability to protect themselves from the adverse effects of climate change through enjoying the benefits of protection and adaptation measures. As a result, in highly unequal and poverty-ridden Bangladeshi society, public policies usually leave the poor and disadvantaged sections more exposed and susceptible to climate hazards. The adaptation policies often benefit the advantaged groups more than the poor and hence can be quite pervasive. The ground realities further indicate that, along with many other drivers of poverty and inequality, climate change is a serious threat to both. Climate change threatens to frustrate the past accomplishments; it also prolongs the existing poverty cycles, increases inequality, deepens food insecurity, and frustrates the inclusive development efforts.

The current status of climate induced hazards in Bangladesh brings out an urgent priority: Climate resilience has to be seen as one of the major cross-cutting issues in the pathway to prosperity for Bangladesh. In this context, special focus is needed for the marginalised and intersectional population groups who are more at risk to climate hazards. For paving the pathway for realising 'Resilience Dividend' to withstand climate-induced disasters, several key policy

implications have been derived from the analysis. At a broader level, the results highlight that it is possible to address these three goals simultaneously within an integrated framework to realise maximum synergies. The key is poverty and inequality reduction, which also helps to contain the adverse effects of climate change through building resilience of the people facing disasters. Moreover, through the feedback effects, these can address adaptation capacity to climate change itself. Thus, with the implementation of right policies, a 'virtuous cycle' may replace the present 'vicious cycle' in Bangladesh.

In Bangladesh, the approach to deal with climate change, poverty and inequality needs to cover five strategic elements:

- Inclusive and poverty/inequality sensitive climate adaptation.
- Climate-sensitive poverty/inequality reduction initiatives.
- Maximum exploitation of cross-cutting and sectoral synergies.
- Desired coherence and coordination within and among relevant institutions.
- Strengthening and supporting local initiatives.

The above can be articulated as follows:

> **A set of cross-cutting programmes which would provide complementary mechanisms to support the approach, along with creating synergies in implementation.** More specifically, the programmes may include disaster risk reduction; social protection; resilience-building strategies and systems approaches (e.g. livelihood and food systems); climate finance; and environmental conservation, stewardship and ecosystem approaches. Some of these programmes are already in existence in different contexts in Bangladesh.

> **The cross-cutting programmes, as well as other components of the approach, can draw on synergy-supporting tools.** These may include integrated climate change-poverty/inequality vulnerability assessment; resilience assessment; integrated monitoring; and poverty/inequality focused adaptation toolboxes.

> **Regardless of the level and scale of implementation of the approach, the need is to make explicit appropriate pathways that would be followed over time, to reach the desired goals.** This will ensure the consideration of both short- and long-term dimensions, as well as prior recognition of the need for implementation at multiple levels (national and sub-national), along with necessary scaling up and adjustments.

> **Finally, the implementation of the approach requires consideration of several key aspects.** These include a host of diverse issues like the underlying social value systems, specific local socioeconomic characteristics and risks, and a number of operational factors, such as financing and incentives, capacity-building and knowledge development, and awareness building, communications and information dissemination, and other factors responsible for creating a facilitating environment for effective implementation.

For moving forward, one key aspect is to comprehensively measure and disseminate information on changes in poverty and inequality levels, climate change impacts and environmental transformations, along with their mutual interactions and relationships with emphasis on producing evidence-rich development interventions to guide practical policies. The policymakers need also to expand the indicators of measuring progress to include, in addition to gross domestic product (GDP) focused economic indicators, decent jobs and other indicators of human wellbeing including climate change and environment related indicators.

Nationally, Bangladesh needs to ensure the required coordination and implementation capacity to secure the best utilisation of available financial, technological and human resources, while trying to enhance the availability of these resources by taking effective and appropriate actions. For the purpose, several actions may be highlighted.

Prioritise action programmes/projects considering the severity of the adversities caused by climate related disasters and anticipated robustness of the outcomes/benefits. However, it might be realistic to adjust the adopted priority

ordering over regular intervals considering the impacts of natural disasters occurring each year. In terms of geographic locations, climate hotspots such as coastal belts, haors, islands, river banks prone to erosion and major flood-prone areas are likely to always remain in the priority list.

- Ensure full participation of the residents of the intervention areas at all stages of the intervention cycle from identification to implementation. They are the best 'consultants' to guide the design and implementation details to provide the desired outcomes.

- Ascertain proper coordination among authorities/ agencies that are involved in designing and implementing respective interventions.

- Secure strict monitoring and evaluation to ensure that programmes/projects are implemented efficiently and timely without leakage of financial and other resources.

Overall, the message is loud and clear: Eliminating poverty/reducing inequality and fighting climate change cannot be done in isolation – the two can much more easily be achieved if they are addressed within an integrated framework in Bangladesh.

A useful pathway towards averting, minimising and addressing loss and damage for communities at risk could be to implement targeted policy actions. The relevant authorities may prepare location-specific Road Maps for climate induced disaster risk reduction with multiple pillars, such as adopting operational framework for integrating climate change and disaster resilience at the village level in disaster-prone areas; installing people-centred multi-hazard early warning systems; promoting nature-based solutions to assist ecosystem-based adaptation to sustainably manage, protect and restore the degraded environment to reduce disaster risk; and setting up 'Loss and Damage Fund (LDF)', as articulated at COP28, to address losses and damages caused by slow-onset and extreme weather events. Bangladesh needs to actively engage with global leaders dealing with climate change for support in establishing an active LDF which would help support at-risk communities. The LDF could be an instrument of climate justice if it is integrated with adaptation and resilience at the grassroots community level which would lead to averting, minimising and addressing loss and damage from climate change.

The country has a window of opportunities to build resilience and reduce short-term climate change impacts on poverty and inequality through development policies that are inclusive and climate-informed. This is particularly true for investments that involve high immediate costs, but are urgently needed to prevent lock-ins into carbon-intensive patterns, such as for urban transport, energy infrastructure or deforestation.

However, the threats to development and the eradication of poverty and high inequality will become complicated over time if there are no mitigation measures at the global level. This means that the global community must take immediate action to cut their GHG emissions and strengthen two prime strategies: (i) Pay close attention to ways to reduce emissions that have positive effects on health, economy and development, such as using mini-grids and renewable energy sources in isolated areas or changing to energy-efficient light bulbs and appliances; and (ii) Assist adequately the climate vulnerable low income countries to protect the poor by enhancing social protection, resilience and coping capacity, sustainable livelihoods and other physical and human capital accumulation efforts, which may be paid for by energy taxes, elimination of fossil-fuel subsidies and other climate-friendly resource mobilisation efforts especially in the large GHG emitting countries.

Background

Tackling global climate change and its severe consequences are of urgent priority for the survival of the mother planet, Earth and its inhabitants. Climate change refers mainly to long-term shifts in global temperatures and weather patterns. Such shifts can be natural; but since the 1800s, human activities have been the main driver of climate change, primarily due to excessive burning of fossil fuels like coal, oil and gas. Burning fossil fuels generates greenhouse gas (GHG) emissions that act like a blanket wrapped around the Earth, trapping the sun's heat

and raising temperatures. In 2023, the global temperature increased by 1.5° Celsius above the nineteenth century benchmark. This warming trend will continue, leading to an irreversible widening of the risk and resilience gaps unless climate action is accelerated.

Humans are responsible for global warming

Scientific analysis by climate experts shows that humans are responsible for virtually all global warming over the last 200 years. The last decade (2011-2020) was the warmest on record, and each of the last four decades has been warmer than any previous decade since 1850. Moreover, climate change does not mean warmer temperatures alone. Rising temperature is only the beginning of the story. Because the Earth is a complex interconnected system, changes in one aspect influences changes in all other dimensions as well.

According to the Intergovernmental Panel on Climate Change (IPCC), even if there is a positive change in the course of development, the amount of carbon dioxide that will be stored in the atmosphere by 2150 will be more than twice the level before the First Industrial Revolution; and that will increase the average temperature of the Earth by 1.5 to 4.5 degrees Celsius. If the current global emissions continue, by the year 2100, the amount of carbon dioxide in the atmosphere will increase by 40 per cent of the current level. As a result, environmental pollution and degradation, natural disasters, and other calamities will cause massive damage at local, national, regional, and continental levels. Bangladesh has already become one of the most endangered and vulnerable countries in the world due to climate change.

By 2100, sea level may rise by up to 1.1 meters. Weather will behave unpredictably due to increases in sea temperature. Sea storms and tides will increase. Scientists predict large-scale floods worldwide by 2050, with damage increasing by 2 to 3 times due to the steady warming of seas and oceans.[1] As a result, the ice in Greenland and Antarctica is melting. Glaciers in the Andes, Central Europe, and Northern Asia are likely to melt up to 80 per cent by 2100. Rising sea temperatures will affect fisheries, aquatic plants and ecosystems. The level of mercury in the body of the fish will increase. Aquatic animals will change their habitat.

The surface temperature is increasing to such an extent that the goal of limiting the global temperature announced in the Copenhagen and Paris agreements is no longer working. The United Nations Climate Change Conference held in Paris in 2015 (COP 21) pledged to limit global warming to below 2°C by 2030 and reduce GHG emissions to keep it below 1.5°C by 2050. Apart from this, initiatives were taken to create a Climate Fund to deal with the damages. The pledge in 2024 was $300 billion by 2035.

Although every increase in global warming matters, there has been a broad agreement in the 2015 Paris Agreement that limiting global temperature rise to no more than 1.5°C would help the Earth to avoid the worst climate impacts and maintain a livable climate. Yet policies and mitigation measures currently in place point up to 3.5°C of warming by the end of the century. In recent times, the high-level participation at the COP26 in Glasgow in 2021 and COP27 in Sharm-el-Sheikh in 2022 have brought out the grave concerns of world leaders as well as the scientists and policymakers regarding the disastrous consequences of climate change on human civilisation and the Earth itself.

The COP28, held in Dubai in 2023, adopted an ambitious response to transition away from fossil fuels to reach net zero along with encouraging all countries to submit economy-wide nationally determined contributions (NDCs). It also covered a new specific target to triple renewables and double energy efficiency by 2030, and build momentum behind a new architecture for climate finance. The Action Agenda of COP28 spans the four pillars of the Paris Agreement: (i) fast tracking a just and orderly energy transition; (ii) fixing climate finance to make it more available, affordable, and accessible; (iii) focusing on people, nature, lives and livelihoods; and (iv) fostering full inclusivity in climate action. It also reached an agreement on loss and damage, and advanced the Global Goal on Adaptation (GGA) especially on energy transition. The most critical challenge of the agreement reached at COP28 is to start transitioning away from oil, coal and gas during this decade, to reaching net zero by 2050.

[1] Scientific analysis shows that the oceans absorb about 90 per cent of the excess heat generated in the environment.

The consequences of climate change include, among others, heat waves, intense droughts, irregular rainfall patterns, water scarcity, severe fires, rising sea levels, flooding, melting polar ice, catastrophic storms, salinity intrusion, and declining biodiversity. Humans experience climate change effects in diverse ways. Climate change can affect the health status, food production, housing, human safety, ability to work and labour productivity. Conditions like sea-level rise, saltwater intrusion and river erosions force communities to relocate, and protracted droughts put people at risk of food deficiency and malnutrition.

Climate change solutions can deliver multiple benefits

Many climate change solutions can deliver economic benefits while improving human lives and protecting the environment. Global frameworks and agreements are available to guide progress, such as the Sustainable Development Goals (SDGs), UN Framework Convention on Climate Change (FCCC) and the Paris Agreement. Three broad categories of action are available: (i) reduce emissions; (ii) adapt to climate impacts; and (iii) finance required adjustments.

Switching energy systems from fossil fuels to renewables like solar or wind reduce the emissions driving climate change. While a growing number of countries are committing to net zero emissions by 2050, emissions must be cut in half by 2030 to keep warming below 1.5°C. Achieving this means huge declines in the use of coal, oil and gas: production and consumption of all fossil fuels need to be cut by at least 30 per cent by 2030 in order to prevent catastrophic levels of climate change.

Adapting to climate consequences protects people, homes, businesses, livelihoods, infrastructure and natural ecosystems. It covers current impacts and those likely in the future. Adaptation is needed everywhere, but the key is to prioritise now for the most vulnerable people with the fewest resources to cope with climate hazards. With the right priority, the social rate of return will be very high. Early warning systems for disasters, for instance, save lives and property, and can deliver benefits up to 10 times the initial costs. Climate action requires significant financial investments by the governments, businesses and households. On the other hand, climate inaction can be vastly more expensive. The critical step is for the developed countries to support developing countries so that they can adapt and move towards greener environment.

The major climate-affecting decisions are shaped, at the end, by humans – their needs, demands and priorities. Winning the fight against climate change requires a rethinking of these needs, limiting the demands and resetting the priorities. The need is to move swiftly to collective action—fueled by human ability to change the world for the better.

As the UN Secretary-General António Guterres has observed in June 2024, the humanity is on a highway to climate hell and the need is to avail an exit ramp off the highway. Although he is confident that the humans have the control of the wheel, the fact is that the drivers, particularly the lead drivers (big GHG polluters) responsible for the climate debacle that humanity now faces, are not yet moving together in taking the exit. Science clearly exemplifies how fast climate change is intensifying and why and how the worsening consequences are playing havoc with the planet Earth and its inhabitants. But the global actions still fall way below the requirements.

Climate Change and Bangladesh

Bangladesh is one of most climate vulnerable countries of the world mainly due to its location, geographical characteristics and the size of population. The country is deltaic, low-lying and is located at the bottom of three major river systems – the Ganges, Brahmaputra and Meghna (GBM). Bangladesh has a coastline of 710 km along the Bay of Bengal; and about one-fourth of the country is less than 7 feet and two-thirds are less than 15 feet above the sea level. The country is also criss-crossed by a large number of rivers.

With a population of nearly 176 million in 2025 and an area of 148,460 km², the density of population is about 1,300 people per sq. km, which is highest in the world except for a few city states such as Singapore. The geographic reality

Bangladesh's contribution to global GHG emission is an insignificant 0.4 per cent of the annual global total.

of Bangladesh makes it particularly prone to climate induced disasters while the country's high population density means that a similar disaster harms a much larger number of people in Bangladesh than in any other country. The country is also resource-poor so that its ability to combat the climate change impacts is very limited.

The reality is that Bangladesh, in effect, makes no contribution to climate change. Although natural disasters are not uncommon in Bangladesh, but the occurrences were few and far between in the past. In recent decades, with intensifying climate change, both frequency and intensity of different kinds of natural disasters have increased, causing more losses and damages. These natural disasters include, among others, erratic rainfalls, floods, cyclones, sea level rise, storm surges, coastal inundation, salinity intrusion, river erosion and disaster-induced displacement of people. The burgeoning adverse impacts of these disasters fall on various socioeconomic, infrastructure and production sectors, livelihoods of people and human health, and other aspects of society; all undermining both economic and social development prospects of the country. In addition, poverty and inequality, unemployment and food insecurity issues become increasingly difficult to address with the rising adverse impacts of climate change. The fast worsening climate change thus constitutes a severe obstacle to the pursuit of sustainable and inclusive development in Bangladesh.

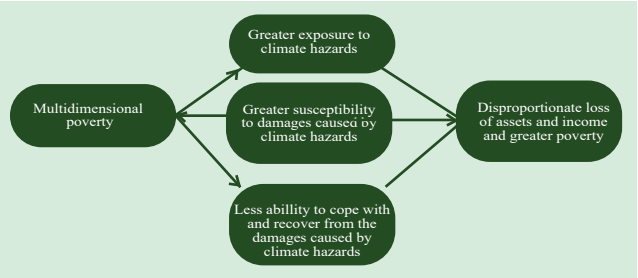
The key for Bangladesh is to adapt itself to these changing circumstances. For this, an urgent imperative is to strengthen adaptation measures to accelerate climate action and protect the lives and livelihoods of the most vulnerable amid the increasing climate change-fueled disaster risk. The risk from warming is global, but adaptation is always local, and resilience is specific to the people, community and the ecosystem.

Moreover, meaningful adaptation requires assessment of vulnerability across different disciplines, which obviously requires an integrated approach. In principle, three adaptive options may be conceived for Bangladesh: (i) retreat; (ii) accommodation; and (iii) protection. Considering high population density, rising number of population in the coming decades, shortage of land and, in the presence of other realities, retreat is not a feasible option for Bangladesh. This leaves two relevant options for the country -- accommodation and protection.

Channels of Interaction

The analysis of the nexus between climate change, poverty and inequality may be structured using an analytical framework. Within the framework, three major channels can be identified through which poverty status of the poor and disadvantaged populations and inequality dimensions are influenced by the impact of climate change (Figure 1). These are: (i) increase in the exposure to climate hazards; (ii) increase in susceptibility to damage caused by climate hazards; and (iii) decrease in the ability to cope with and recover from the damages caused by climate hazards.

Figure 1: Major channels of climate change-poverty nexus



These channels work in different ways -- both spatially and for specific type of climate change hazards. Consider, for example, the consequences of increased flooding due to climate change. Evidence shows that poverty often compels the poor and disadvantaged populations to live in areas that are more prone to flooding, thus increasing their exposure to flooding caused by climate change. Further, among all populations living in the flood-prone locations, the poor and disadvantaged groups are more susceptible to the damages caused by flooding. For example, their dwellings are washed away or are severely damaged, because these are often kutcha houses. By contrast, the houses of the well-off suffer the least damage because these are pucca houses made of brick and concrete. Additionally, the poor has less ability to cope with and recover

from the damages caused by floods. The richer people have the resources to repair the damages and may buy housing insurance and thus can get compensated for the damages. By contrast, the poor are not generally able to afford the required resources and thus have to absorb the entire loss using their meagre accumulated savings and taking recourse to borrowing.

Interlocking dimension of climate change, poverty and inequality

Moreover, as a consequence of the combined effects of the nexus channels, climate change, poverty and inequality may become interlocked in a vicious cycle, such that climate change hazards end up aggravating both poverty and inequality. The cycle begins with multidimensional poverty, which causes greater exposure of the poor to climate hazards, increases their susceptibility to damage caused by the hazards, and decreases their ability to cope with and recover from the damages. As a consequence, when different climate hazards repeatedly occur, the poor suffer disproportionate loss of household earnings and various types of capital (e.g. physical, financial, human, and social). Climate change thus makes poverty worse, perpetuating the climate change-poverty vicious cycle over generations.

No doubt, the above story is somewhat simplified and treats climate change effects as exogenous. In reality, there are feedback loops of poverty and inequality on climate change, making the vicious cycle stronger with more destructive impacts. This may take place in several ways. Usually, poverty (and inequality) aggravates climate change and environmental impacts on the poor and vulnerable communities, resulting in further worsening of climate change hazards. Generally, countries with lower poverty tend to have higher per capita levels of waste generation, water use, and meat and fish consumption. These imply that such countries will tend to have higher levels of per capita GHG emissions. Thus, when climate change is treated as endogenous such that feedback effects of poverty and inequality on climate change are taken into account, breaking the vicious cycle between climate change and poverty becomes more important and urgent.

Moreover, the interaction channels of climate change on poverty and inequality are influenced by socioeconomic, political, cultural, governance and other characteristics that prevail in a society. For example, the economic structure may work through reduction of private resources available to the poor and disadvantaged groups in a society. In an unequal society with a large number of people living in poverty, the poor and disadvantaged groups have less assets and income from their own resources; and hence they are more exposed and susceptible to climate hazards along with less capability to cope and recover.

Elite capture of state power

Similarly, the social structure may be captured by the rich and influential sections in society and hence may remain highly biased towards these interest groups. In such circumstances, the social structure remains mostly unresponsive to the needs and requirements of the poor and disadvantaged sections in society during climate disasters. The political and governance framework, on the other hand, works through the state power. In an unequal society, the privileged sections (owning most of the productive resources and enjoying disproportionate state power and privileges, both legally and illegally) acquire dominating influence on the functioning of the state, and hence can dictate policies to serve their own interests. As a consequence, more public (state) resources are deployed for the protection of their interests against climate hazards, while leaving the poor and disadvantaged groups with the residuals, if any. The political and governance framework thus contributes towards rising poverty and inequality that further aggravate environmental degradation and climate hazards.

In reality, social decisions are not based on maximisation of aggregate 'utilities' that accrue to different sections of people in the society from a particular decision. Rather, public decisions in an unequal society, where the state power is captured by vested interest groups, are

[4]Climate justice links human rights and development to achieve a human-centred approach, safeguarding the rights of the most vulnerable people and sharing the burdens and benefits of climate change and its impacts equitably and fairly. Climate justice is informed by science, responds to science and acknowledges the need for equitable stewardship of the world's resources. The core principles of climate justice are rooted in the frameworks of international and regional human rights law. These include: Respect and protect human rights; Support the right to development; Share benefits and burdens equitably; Ensure that decisions on climate change are participatory, transparent and accountable; Highlight gender equality and equity; Harness the transformative power of education for climate stewardship; and Use effective partnerships to secure climate justice. Environmental justice, on the other hand, is a social movement that aims to ensure that all people have fair access to the environment and its resources. It also seeks to address health disparities that can arise from environmental hazards.

determined by the weighted sum of 'utilities', in which the 'utilities' of the rich, powerful vested interest groups are given much higher weights relative to those of the poor.

In Bangladesh, the ground reality brings out the fact that GHG-intensive activities mostly serve the needs and comforts of the rich and privileged groups in society; moreover, they have the ability to protect themselves from the adverse effects of climate change through enjoying the benefits of protection and adaptation measures. As a result, in highly unequal and poverty-ridden Bangladeshi society, public policies usually leave the poor and disadvantaged sections more exposed and susceptible to climate hazards. The adaptation policies often benefit the advantaged groups more than the poor and hence can be quite pervasive.

Lessons from Ground Realities

The major challenge that Bangladesh faces is to find effective ways to deal with poverty and inequality, along with adapting to climate change impacts. Despite recent advances in understanding the links between climate change and poverty, there still remains a need to improve the coherence and coordination of policies, as well as strengthen the institutional, financial and practical linkages between climate responses (e.g. adaptation) and poverty/inequality reduction initiatives. This is particularly critical for Bangladesh since policies and actions, if not coherently designed and implemented, may create unintended negative consequences – such as, climate responses contributing to rising poverty and inequality; and development actions resulting in less efficient climate adaptation responses.

An effective way in this respect is to adopt a participatory approach to gather insights from ground realities of different types of climate change impacts and poverty perspectives in the country. This helps inclusion not only of climate and poverty aspects, but also inequalities, gender, food security, disaster response and resilience, among others within the integrated framework. Such an approach opens up the avenues for identifying effective opportunities to improve the ways in which policies and actions have to be designed and delivered in Bangladesh -- which could lead to greater alignment of efforts towards cohesion, effectiveness and efficiency leading to more equitable and sustainable development and improved climate adaptation outcomes. For Bangladesh, such an approach is critical since poverty (and inequality) is now a persistent issue in the country's climate change agenda. More importantly, it is a part of the 'climate justice' issue, which in turn is a particular case of 'environmental justice' agenda[4].

Stark global disagreement on sharing climate responsibilities

The hard reality in this context at the global level is that there exist stark differences across countries regarding the responsibility for causing climate change and the consequent responsibility for mitigation (and adaptation) efforts. The Rio principle of 'common but differentiated responsibility (CBDR)' was adopted to resolve the issue; but, in the absence of a just solution, the issue still continues to dominate the global discussion on climate change. In contrast, within-country poverty and inequalities have received much less attention in related discussions. However, the issue is significant that requires urgent and equitable solution for a climate vulnerable country like Bangladesh. The fact is that even people in low income Bangladesh differ widely relating to their GHG emissions, and hence those (e.g. richer segment in society) who contribute more towards climate change hazards should be appropriately taxed to share the adaptation burden for the poor and disadvantaged who contribute little but bear the disproportionately large share of the adverse impacts of climate hazards.

Ground reality of the nexus in Bangladesh

At the ground level, climate change, poverty and inequality nexus in Bangladesh boils down to the direct and disproportionate impact of climate change on the poor and impoverished communities, where extreme climate change induced events severely disrupt livelihoods,

[5]See, Global MPI Country Briefing Bangladesh, South Asia, Oxford Poverty and Human Development Initiative, University of Oxford, Oxford, 2024.

destroy assets, and push the people further into poverty due to their limited capacity to adapt to these disasters. The impact of the events makes them highly vulnerable to future climate-related disasters as well. In effect, climate change acts as a 'threat multiplier' for these already poor and marginalised populations.

The key to addressing the challenges is to develop and implement evidence-based pro-poor policies, strategies and programmes that promote inclusive growth and sustainable livelihoods; as well as increase the resilience, adaptive and coping capacity of these poor and vulnerable communities to climate change. The need for achieving this is to adopt an integrated 'climate-poverty-inequality approach' to support formulation of targeted policies and practical actions by relevant national and local level institutions including the communities and households themselves. In practice, the approach has to integrate insights from many perspectives, covering not only climate, poverty and inequality, but also gender, food security, disaster response, resilience, and, more importantly, the climate vulnerable community perspectives. This is necessary to internalise the results of synergies and linkages between climate adaptation, poverty reduction and livelihood security and other related actions.

The glimpses gathered from ground realities of this study emphasise that poverty is a dynamic and multidimensional outcome of interactions of social, economic, political, and environmental processes; individual and community characteristics; and historical circumstances, among others. These characteristics of the poor or being poor vary among different population groups and communities across different regions of the country.

The ground realities further indicate that, along with many other drivers of poverty and inequality, climate change is a serious threat to both. Climate change threatens to frustrate the past accomplishments; it also prolongs the existing poverty cycles, increases inequality, deepens food insecurity, and frustrates the inclusive development efforts.

In this context, a key question is: Who bears the burden of worsening climate change induced disasters in Bangladesh?

Bangladesh's 2024 Global Multidimensional Poverty Index (MPI) identifies Mymensingh Division (closely followed by Sylhet Division) as having the highest percentage of population who are multidimensionally poor in Bangladesh.[5] Of the total 13 million population in Mymensingh, 24.2 per cent live below the poverty line (in 2022), and as many as 37.7 per cent suffer from multidimensional poverty. Even a small loss of income causes a significant decrease of their consumption, affecting spending on basic necessities and causing a rippling effect on inequality. The disproportionate impact of disasters on the poor has been one of the reasons behind high multi-dimensional poverty in Mymensingh. Similar is the case for Sylhet Division.In general, the highest values of the MPI largely coincide with Divisions that are more climate-induced disaster-prone in the country. This indicates a nexus among disasters fueled by climate change, poverty and inequality in Bangladesh.

For these divisions, the hard reality is: their economy grows, but risk outpaces resilience. Even though the poverty rates in disaster-prone divisions are much higher than the national average, these divisions have performed reasonably well in terms of economic growth and succeeded in pulling large shares of their population out of multidimensional poverty since the 2000s. However, their low performance in terms of poverty vis-à-vis reasonable economic growth reveals how risk is outpacing resilience. This indicates the urgent need to decouple development from the increasing risk and vulnerabilities of disaster-prone communities in Bangladesh.

Similarly, an analysis on climate vulnerability and poverty nexus using upazila level data reveals some interesting results. For this analysis, we selected 30 most poverty-stricken upazilas of Bangladesh from the country's 2022 Poverty Map prepared by BBS.[6] Further, climate vulnerability of these 30 upazilas was taken from the risk

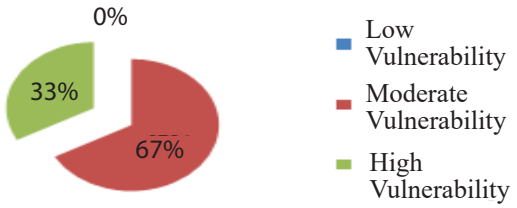
[6] See, Poverty Map of Bangladesh 2022, Bangladesh Bureau of Statistics (BBS), Dhaka, 2025.

[7]These upazilas have been classified using a Vulnerability Index, calculated by incorporating multiple climate-induced disaster indicators including: storm surge inundation, inundation due to riverine flooding, one-day maximum rainfall, salinity intrusion due to sea level rise, drought, cold waves, heat waves, hailstorms, flash floods and river floods. In the initial classification, upazilas have been assigned a vulnerability score ranging from 1 to 5, as 1 (no/very low), 2 (low), 3 (moderate), 4 (high) and 5 (very high) respectively. The Vulnerability Index has been determined using the Principal Component Analysis (PCA) of various risk maps illustrating vulnerability levels. Finally, the upazilas are grouped into three clusters based on their overall vulnerability- -- (1) low, (2) moderate, and (3) high vulnerability. For details see, Risk Mapping for Climate Vulnerability of 487 upazilas in Bangladesh; (Package No. DAE/SD-02), Agro-Meteorological Information Systems Development Project, Department of Agricultural Extension (DAE), Khamarbari, Farmgate, Dhaka, 2020.

mapping for climate vulnerability prepared by the Ministry of Agriculture.[7] This risk mapping helps in identifying the most at-risk upazilas, enabling the adoption of targeted strategies to address both poverty and climate-related risks within an integrated framework.

Figure 2 shows that, out of the 30 highest poverty-stricken upazilas of the country, two-thirds experience moderate climate vulnerability while the remaining one-third face high climate vulnerability. This indicates that poverty in Bangladesh has a strong nexus with climate vulnerability, suggesting the need for targeted actions to address poverty and climate risks simultaneously.

Figure 2: Climate vulnerability and poverty nexus at 30 most poverty-stricken upazilas of Bangladesh



Source: Authors' compilation

Additionally, further insights into the intersection of poverty and climate vulnerability across these upazilas can be drawn using poverty quintiles (Q5) and poverty headcount ratio (HCR) indicating severe economic deprivations (Table 1). On the other hand, total vulnerability index (TVI), derived from multiple climate-induced disaster indicators, varies significantly across these upazilas. It is seen that, in general, upazilas with higher climate vulnerability have high TVI scores, reinforcing the need for location-specific climate adaptation strategies alongside poverty alleviation programmes.

Table 1: Poverty status and climate vulnerability of 30 most poverty-stricken upazilas of Bangladesh

	District	Upazila	Poverty Quintile (2022)	2022 HCR, upper poverty line (%)	Status of climate vulnerability (Low=0-1, Moderate=1-2, High=2-5)	Total vulnerability index (TVI)
1	Madaripur	Dasar	Very High (Q5)	63.2	Moderate	17
2	Mymensingh	Haluaghat	Very High (Q5)	59.6	Moderate	19
3	Madaripur	Kalkini	Very High (Q5)	56.3	Moderate	17
4	Madaripur	Rajoir	Very High (Q5)	56.0	Moderate	15
5	Madaripur	Shibchar	Very High (Q5)	55.1	Moderate	15
6	Jhalokati	Nalchhity	Very High (Q5)	53.8	Moderate	17
7	Mymensingh	Gouripur	Very High (Q5)	52.9	High	20
8	Madaripur	Madaripur Sadar	Very High (Q5)	50.0	High	21
9	Narsingdi	Belabo	Very High (Q5)	49.5	Moderate	18
10	Panchagarh	Boda	Very High (Q5)	48.2	Moderate	18

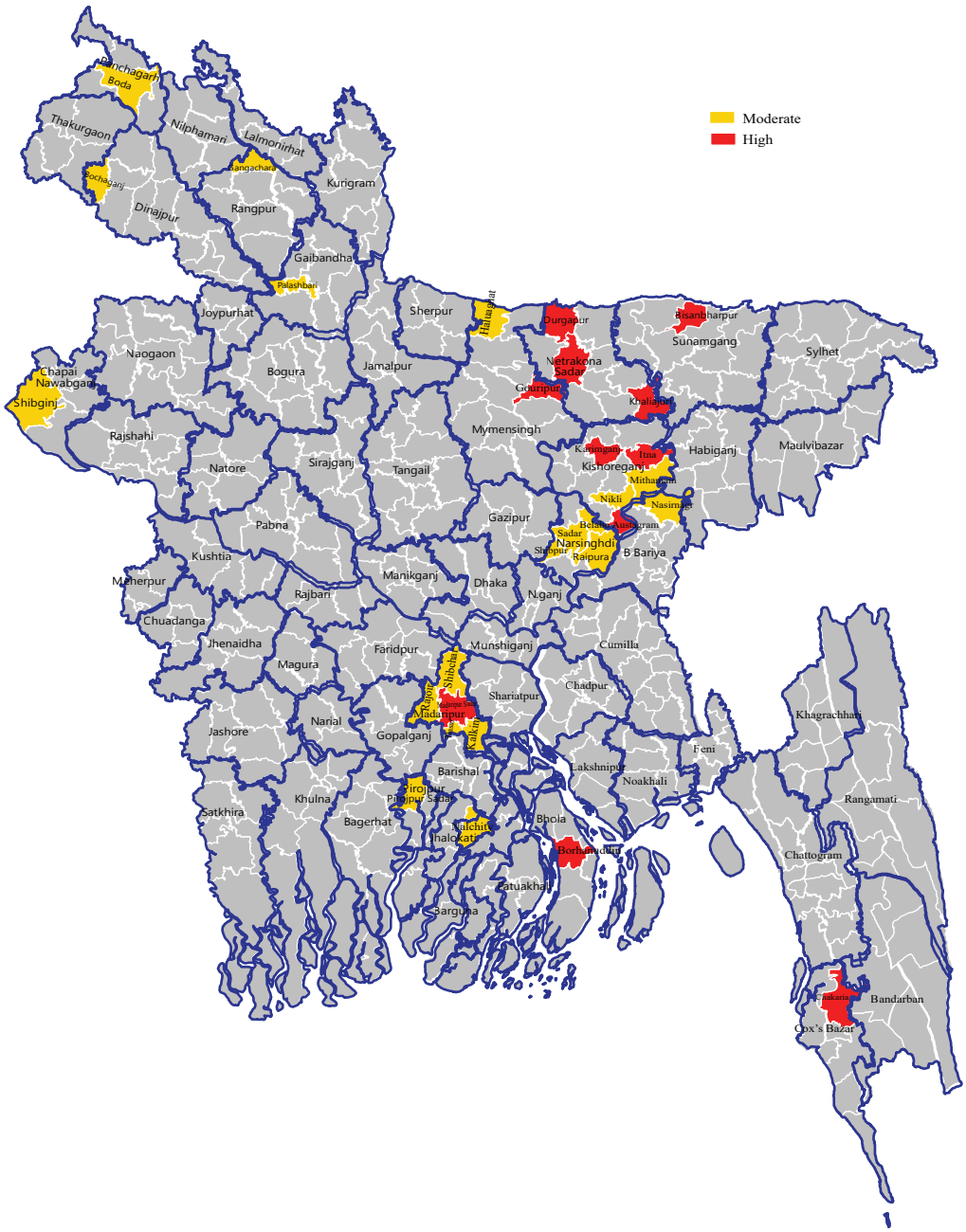
	District	Upazila	Poverty Quintile (2022)	2022 HCR, upper poverty line (%)	Status of climate vulnerability (Low=0-1, Moderate=1-2, High=2-5)	Total vulnerability index (TVI)
11	Pirojpur	Pirojpur Sadar	Very High (Q5)	47.7	Moderate	15
12	Narsingdi	Raipura	Very High (Q5)	47.6	Moderate	13
13	Netrakona	Durgapur	Very High (Q5)	47.6	High	21
14	Kishoreganj	Mithamain	Very High (Q5)	47.4	Moderate	14
15	Kishoreganj	Nikli	Very High (Q5)	47.3	Moderate	13
16	Netrakona	Khaliajuri	Very High (Q5)	47.2	High	23
17	Sunamganj	Bishwambhar pur	Very High (Q5)	46.7	High	28
18	Brahmanbaria	Nasirnagar	Very High (Q5)	45.9	Moderate	16
19	Netrakona	Netrakona Sadar	Very High (Q5)	45.8	High	21
20	Kishoreganj	Itna	Very High (Q5)	45.0	High	25
21	Chapainawabganj	Shibganj	Very High (Q5)	44.6	Moderate	14
22	Dinajpur	Bochaganj	Very High (Q5)	44.6	Moderate	19
23	Bhola	Borhanuddin	Very High (Q5)	44.2	High	28
24	Cox's Bazar	Chakaria	Very High (Q5)	43.3	High	24
25	Narsingdi	Narsingdi Sadar	Very High (Q5)	43.1	Moderate	13
26	Rangpur	Haragachh	Very High (Q5)	42.0	Moderate	13
27	Kishoreganj	Karimganj	Very High (Q5)	41.7	High	24
28	Gaibandha	Palashbari	Very High (Q5)	41.7	Moderate	14
29	Narsingdi	Shibpur	Very High (Q5)	41.4	Moderate	11
30	Kishoreganj	Austagram	Very High (Q5)	40.8	High	24

Source: Authors' estimation

The ground reality is that most of the poor people's livelihoods in Bangladesh are highly dependent on climate-sensitive sectors and they lack the basic infrastructure for dwellings or for accessing basic services at community level. In addition, many of them live in areas that are highly vulnerable to climate change and prone to climate-induced hazards. As a result, they are affected by disasters disproportionately.

In other words, poverty exacerbates, and is exacerbated by, the impact of climate change. It is evident from the findings that the climate change, poverty and inequality nexus in Bangladesh is complex, multifaceted, and context-specific. As such, the poverty and inequality reduction processes are delayed due to climate change if it is not properly addressed.

Map: Bangladesh's 30 most poverty stricken upazilas in 2022



Source: Poverty Map of Bangladesh 2022, BBS

Policy Framework for Adaptation

For ensuring sustainable development, Bangladesh faces two major challenges: (i) expand socioeconomic opportunities to ensure decent and quality life for all; and (ii) address climate change and environmental challenges which, if left unaddressed, could undermine people's abilities to seize the opportunities in an equitable manner. For the purpose, well-articulated national efforts for adaptation (along with required support from the global community) are of critical importance.

Although many of the SDG targets are linked with climate change, SDG13 specifically addresses the issue, which underscores an additional threat that adds to, interacts with, and can reinforce existing risks, placing further strains on the livelihoods and coping strategies of the poor people. Unless concrete and urgent steps are taken to reduce vulnerability and enhance adaptive capacity of the poor, and unless these actions are mainstreamed into broader strategies for poverty eradication and inequality reduction, it will be difficult to meet the country's cherished development goals.

Climate resilience as a cross-cutting issue

The current status of climate induced hazards in Bangladesh brings out an urgent priority: Climate resilience has to be seen as one of the major cross-cutting issues in the pathway to prosperity for Bangladesh. In this context, special focus is needed for the marginalised and intersectional population groups who are more at risk to climate hazards. The reality is that climate-induced hazards result in both slow-onset and rapid onset natural disasters, such as tropical cyclones, high tidal and storm surges, irregular rainfall patterns, floods, prolonged droughts, and salinity intrusion in water and soil. These hazards are all too common especially in the climate vulnerable hotspots in the country. Since the majority of the country's poor are concentrated in these locations, these affect the already marginalised people more badly and further increase their vulnerabilities and inequalities. Along with major livelihood disruptions, climate-related disasters affect social relations within the communities. Relief efforts after disasters, for example, may also disrupt social harmony due to mis-targeting and corruption.

At the community level, the loss and damage associated with climate-induced disasters is also pervasive. When a disaster hits, the government usually provides relief and some financial support to these disaster-affected households, mainly to assist them to fulfill their basic consumption needs. The loss of livelihoods, household assets and high incidence of diseases faced by the household members during and after disasters are not covered by such assistance. For building effective resilience, the need is to look beyond assistance and seek solutions to safeguard the communities from the increasing onslaught of disaster events.

The present study reveals that climate affected people do apply their own resilience strategies, but these are mostly inadequate in the face of the increasing severity and scale of climate-related disasters. Rain water harvesting, raising household plinth, keeping some dry food, for instance, do little to protect against cyclones, tidal surge or flooding. Very few can save their assets during such hazards.

The vulnerabilities to climatic shocks vary over households, depending on their capacity to withstand, cope with or adapt to such hazards or disasters. Those who fail to cope (or have inadequate coping ability) obviously fall further down the poverty ladder, unless their resilience is built through well-planned interventions to tackle climate change impacts.

To build such resilience, the key is to focus on sustainable climate change adaptation – such that any intervention must focus on ways of securing well-being, strengthening adaptive capacity, and addressing the root causes of the vulnerabilities of the affected poor households. Further, adaptation to climate change in many instances may also need to reduce social vulnerability at household and community levels. The approach needs to improve human capital, reinforce physical capital, help the poor to gain access to natural capital, strengthen financial capital and build social capital – all aimed at reducing social vulnerabilities of the poor households to climate change effects. Accordingly, the framework needs to assess livelihood capitals (human, social, natural, financial, physical), which influence vulnerability to climatic shocks, fuel adverse trends, and contribute to distinct seasonality. In

this context, it is important to realise that livelihood strategies are determined through access to and use of all types of capital, and these determine outcomes such as occupational status and income levels, food security and nutrition, human and social wellbeing, among others.

Considering the need for mainstreaming, all relevant activities have to be climate-smart and climate-resilient. The key is to apply climate lens to undertake activities related to livelihood development, nutrition improvement or for addressing other aspects of multidimensional poverty within a gender-sensitive and disability-friendly framework. In particular, for designing effective interventions, the issue of climate change will have to be aligned with other components, such as livelihoods and enterprise development, nutrition, community mobilisation, gender, market system development and policy advocacy.

Considering the deep concerns of climate change and environmental issues, Bangladesh adopted the National Adaptation Plan of Action (NAPA) on Climate Change in 2005 which was updated in 2009 including the Bangladesh Climate Change Strategy and Action Plan (BCCSAP). Both these policy guidelines highlight two basic principles: (i) integrated approach to socioeconomic development and climate change management; and (ii) pursuit of low carbon development pathway.

Under the BCCSAP framework, resources are channeled through NGOs for community level climate actions under the Community Climate Change Project (CCCP). The CCCP covers adaptation projects that aim at enhancing the capacity of selected communities to increase their resilience to the adverse impacts of climate change.

The CCCP has formulated its Operational Manual (OM), Environmental Management Framework (EMF), Social Management Framework (SMF), and other manuals and guidelines for the participating NGOs. The objective of enhancing the capacity of selected communities to increase their resilience to the adverse impacts of climate change is pursued through establishing effective grant financing mechanism of the Palli Karma-Sahayak Foundation (PKSF), the implementing agency, to channel funds to NGOs. This innovative approach to finance community-based adaptation interventions in climate vulnerable areas covers three components: (i) Community Climate Change Adaptation Fund; (ii) Knowledge Management, Monitoring and Evaluation, and Capacity Building; and (iii) Project Management.

The CCCP provides financial assistance to selected NGOs to implement sub-projects focused on community-based climate change adaptation activities. The aim is to sustain, strengthen, and scale up the development of grassroots mechanism for communities to increase their resilience to the impacts of climate change; strengthen community capacity for climate resilient planning for combining investments in hard and soft adaptation options; and develop social policy interventions to take a better account of climate risks. The adaptation options to climate change through adjusting people's lives to expected changing climate scenarios in the short, medium and long-term are explicitly taken into account in the interventions. For the purpose, community mechanisms are emphasised under which groups of climate vulnerable people who are aware about the impact of climate change and knowledgeable about adaptation activities are involved. The community mechanisms are established at the field level through a number of activities, such as beneficiary group formation in the community and awareness raising sessions through group meetings. Besides, every beneficiary is a member of a community group who actively participate in monitoring, procurement and other processes under the sub-projects.

The Bangladesh Climate Change Strategy and Action Plan (BCCSAP) provides the basis of all efforts to combat climate change. The Strategy prioritises adaptation and disaster risk reduction, and addresses low carbon development, mitigation, technology transfer, and provision of adequate finance. The BCCSAP has been built on six pillars:

• Food security, social protection and health: Ensure that the poorest and most vulnerable in society, including women and children, are protected from climate change and that all programmes focus on the needs of this group for food security, safe housing, employment and

access to basic services, including health.

• Comprehensive disaster management: Further strengthen the country's already proven disaster management systems to deal with increasingly frequent and severe natural calamities.

• Infrastructure: Ensure that existing assets (e.g., coastal and river embankments) are well-maintained and fit-for-purpose and that urgently needed infrastructure (e.g. cyclone shelters and urban drainage) is put in place to deal with the likely impacts of climate change.

• Research and knowledge management: Predict likely scale and timing of climate change impacts on different sectors of the economy and socioeconomic groups to underpin future investment strategies and to ensure that Bangladesh is networked into the latest global thinking on climate change.

• Mitigation and low carbon development: Evolve low carbon development options and implement these as the country's economy grows over the coming decades.

• Capacity building and institutional strengthening: Enhance capacity of government ministries and agencies, civil society and private sector to meet the challenges of climate change.

The experience of Bangladesh strongly suggests that one of the best ways to adapt to climate change is to involve the people at the grassroots level in all these efforts. It is also proven that the country's people are very enterprising and innovative. As a matter of fact, they have been living with disasters over centuries. Adapting to changing situations is a familiar traditional practice in the country. What is important is to carry out detailed scientific studies, make the people aware of the impending dangers, and develop -- adopting their traditional knowledge and experience -- effective methods of adaptation.

Linking organised and local adaptation strategies

As climate change adaptation action is mostly local, the need for Bangladesh is to link organised and local adaptation strategies and approaches. This will provide a better understanding of the ways of improving coping and adaptation strategies by climate change impacted communities. This is also likely to provide support towards creating an environment that would make such practices sustainable and more effective by fostering participation, empowering participants, and incorporating indigenous knowledge.

Paving the Pathway

For paving the pathway for realising 'Resilience Dividend' to withstand climate-induced disasters, several key policy implications can be derived from the analysis of the study. At a broader level, these policies can help to achieve both poverty and inequality reduction goals along with adapting to climate change hazards. The results highlight that it is possible to address these three goals simultaneously within an integrated framework to realise maximum synergies. The key, however, is poverty and inequality reduction, which also helps to contain the adverse effects of climate change through building resilience of the people facing disasters. Moreover, through the feedback effects, these can address adaptation capacity to climate change itself. Thus, with the implementation of right policies, a 'virtuous cycle' may replace the present 'vicious cycle' in Bangladesh.

Despite significant reduction of poverty over the past decades, poverty still remains at unacceptable levels along with widespread and rising inequality, while Bangladesh is highly susceptible to climate change hazards. In such circumstances, the distinction among 'exposure', 'susceptibility' and 'ability to cope and recover' is critical in formulating policies that can address different poverty and inequality enhancing effects in the context of climate change. No doubt, there are overlaps among these effects, and policies are needed that can address more than one of these effects simultaneously. In this context, the above distinction can help in sequencing and targeting what needs to be addressed and what should be the entry point, since the issues are enormous, complex and context-specific. Also, it is important to recognise that these effects vary according to specific local contexts in each region of Bangladesh and hence 'one-size-fits-all' policies are not pragmatic. Instead, it points to the necessity of designing and implementing policies

and programmes based on deeper analyses of local circumstances of specific regions of the country. Nevertheless, the important issue is to recognise that the linkages between poverty, inequality and climate change can be successfully exploited only if effective policies and programmes to reduce poverty and inequality are in place.

In a highly climate change responsive country like Bangladesh, the approach to deal with climate change, poverty and inequality needs to cover five strategic elements:

- Inclusive and poverty/inequality sensitive climate adaptation.
- Climate-sensitive poverty/inequality reduction initiatives.
- Maximum exploitation of cross-cutting and sectoral synergies.
- Desired coherence and coordination within and among relevant institutions.
- Strengthening and supporting local initiatives.

Among the above, the first three strategic elements focus on improving the nexus among existing policy and institutional contexts. The first element is concerned primarily with climate-focused policies or institutions to bring poverty/inequality reduction considerations more fully into the climate agenda. On the other hand, the second one emphasises on better integration of the climate agenda with poverty/inequality and inclusive development-focused policy or institutions. The third strategic element puts emphasis on adoption of existing and new synergistic approaches that address the climate change, poverty and inequality nexus, that are included in sector-specific and broad-based approaches, policies and programmes that do not as yet explicitly address poverty/inequality reduction and climate change in an integrated manner.

The fourth and fifth strategic elements under the approach are more focused on monitoring and implementation, in recognition of the fact that addressing the climate-poverty/inequality nexus requires particular attention to (i) the institutional structure involved (including accompanying policies and programmes), and (ii) multiple geographical levels of intervention – covering national, regional and local (community) levels.

The overall approach has to be based on the above five strategic elements, including recommendations for institutional and policy improvements. Within the framework, some practical programmes and actions are indicated below that could be considered as mechanisms to achieve the goals of each element, depending on their appropriateness in the context of specific locational characteristics. As such, these can be viewed at a number of different tiers – national, regional, local and community levels. For instance, the above can be articulated as follows:

> A set of cross-cutting programmes which would provide complementary mechanisms to support the approach, along with creating synergies in implementation. More specifically, the programmes may include disaster risk reduction; social protection; resilience-building strategies and systems approaches (e.g. livelihood and food systems); climate finance; and environmental conservation, stewardship and ecosystem approaches. Some of these programmes are already in existence in different contexts in Bangladesh.

> The cross-cutting programmes, as well as other components of the approach, can draw on synergy-supporting tools, such as integrated climate change-poverty/inequality vulnerability assessment; resilience assessment; integrated monitoring; and poverty/inequality focused adaptation toolboxes.

> Regardless of the level and scale of implementation of the approach, the need is to make explicit appropriate pathways that would be followed over time, to reach the desired goals. This will ensure the consideration of both short- and long-term dimensions, as well as prior recognition of the need for implementation at multiple levels (national and sub-national), along with necessary scaling up and adjustments.

> Finally, the implementation of the approach requires consideration of the underlying social value systems, key socioeconomic considerations and risks, and a host of operational factors, such as financing and incentives, capacity-building and knowledge development, and awareness building, communications and information dissemination, and other factors responsible for creating a

facilitating environment for effective implementation.

In Bangladesh, the need for, and the implementation of, an integrated climate change-poverty/inequality reduction approach cannot be over-emphasised. The approach is particularly relevant to local communities living in diverse climate change vulnerable locations in Bangladesh such as cyclone and flood prone areas, dry lands and other agro-ecosystems that are threatened by the changing climate, as well as dealing with poverty, deprivations and inequalities.

Indeed, whatever may be the location, the key for Bangladesh is to adopt an integrated approach and ensure necessary reforms towards improving policy, institutions, and programmes concerning climate change and poverty/inequality nexus. For ensuring success under the approach, decision-making at all levels needs to be geared specifically to improving the effectiveness of local initiatives linking poverty/inequality reduction and climate responses. This would, among others, involve improving the engagement of local actors and communities, particularly in the disaster prone rural areas, with relevant policy institutions at various levels.

Focus on preparing location-specific Road Maps for climate induced disaster risk reduction with multiple pillars and set up LDF

A useful pathway towards averting, minimising and addressing loss and damage for communities at risk could be to implement targeted policy actions. The relevant authorities may prepare location-specific Road Maps for climate induced disaster risk reduction with multiple pillars, such as adopting operational framework for integrating climate change and disaster resilience at the village level in disaster-prone areas; installing people-centred multi-hazard early warning systems; promoting nature-based solutions to assist ecosystem-based adaptation to sustainably manage, protect and restore the degraded environment to reduce disaster risk; and setting up 'Loss and Damage Fund (LDF)', as articulated at COP28, to address losses and damages caused by slow-onset and extreme weather events. Bangladesh needs to actively engage with global leaders dealing with climate change for support in establishing an active LDF which would help support at-risk communities. The LDF could be an instrument of climate justice if it is integrated with adaptation and resilience at the grassroots community level which would lead to averting, minimising and addressing loss and damage from climate change.

In addition, localising SDGs in multi-hazard risk hotspots could be the key to addressing the nexus of multidimensional poverty, food insecurity and inequalities. In this context, it could be the entry point for a just transition to climate change adaptation.

Looking Ahead

Climate change hazard, along with its interrelationships with environmental degradation, poverty and inequality are, no doubt, real having the capacity to create far reaching and devastating consequences. The traditional treatment of land, water, forests, biodiversity and the nature solely as 'resources' with the only purpose of serving the development aspirations of human beings, unfortunately, ignores the limits of the Earth's ecosystems; its potential carrying capacity relating to the effects of human activities and impact on climate change; and their role in ensuring critical life-supporting services. Moreover, one must also realise that there is no silver bullet to alleviating poverty and inequality without exceeding planetary boundaries and causing irreparable climate change and environmental damages.

Available global estimates highlight that the levels of food, energy, and household incomes are not likely to reach acceptably high levels for all human beings across all countries of the world without overstepping the planetary boundaries. However, this may not be achievable at the high level which the world's richest countries enjoy under the present unacceptable and unequal global system; but curtailing the excessive resource consumption by the wealthiest 10 per cent of the world's population would allow the poor to emerge out of poverty and help ensure that the Earth remains within 'the safe and just space for humanity'. The policies may include luxury taxes on energy-hungry cars, private jets, second

homes, yachts and similar items. There could also be tax breaks to encourage recycling, repairing, and reusing clothing and other consumer goods to avoid discarding them and buying new ones.

The global approach has to reflect the core of the 2030 Sustainable Development Agenda—a more equal world where everyone can enjoy the fruits of development. Further, consumption and human wellbeing are not necessarily positively associated: fossil fuel consumption, for example, can be reduced while still maintaining a good quality of life in many respects, such as health and nutrition, life expectancy, education and skill levels, quality jobs, and other sociocultural aspects of human life.

For moving forward, one key aspect is to comprehensively measure and disseminate information on changes in poverty and inequality levels, climate change impacts and environmental transformations, along with their mutual interactions and relationships with emphasis on producing evidence-rich development interventions to guide practical policies. The policymakers need also to expand the indicators of measuring progress to include, in addition to gross domestic product (GDP) focused economic indicators, decent jobs and other indicators of human wellbeing including climate change and environment related indicators.

Moreover, policies are needed that treat climate change issues and environmental sustainability as central to eradicating poverty and reducing inequality. No doubt, climate change is a long-term threat to the planet and a threat to livelihoods and human welfare. As such, eradicating poverty and addressing inequality are directly linked with how climate change hazards are addressed; and how efficiently and effectively the ecosystems and the goods and services they provide are managed. In many respects, the wellbeing and livelihoods of rural communities, particularly rural women, depend heavily on the health and productivity of the land. Women's equal access to land and other resources, ownership, and control over household and community resources including land and other natural resources can lead to greater gender equality, higher agricultural productivity, better conservation of natural resources, and inclusive growth and development—all essential to poverty eradication and inequality reduction along with environmental conservation and climate change adaptation. The urgent need is to fix climate change and other long-term fragilities, inequalities and injustices. Now is the time to fix these challenges, build a strong recovery, and seize the opportunity for change.

The present status of the poverty-inequality-climate change nexus highlights the need for adopting an integrated policy approach towards breaking the nexus and maximise 'resilience dividend' in Bangladesh. The beginning of such an integrated approach may be made in Bangladesh by undertaking pilot projects in different types of climate hazard intensive locations supplemented by compilation of relevant data and information in order to test the best modes for implementation of specific approaches. Such actions will help to meet the challenges of ensuring better linking of climate adaptation with poverty/inequality reduction initiatives under specific locational characteristics.

Finally, in the context of Bangladesh, it needs to be recognised that financial inclusion is a great enabler to build resilience for the people and businesses vulnerable to climate change and natural disasters. The majority of the country's adults without formal financial accounts reside in places at risk from climate change, intensifying their susceptibility to economic and environmental shocks. Financial services enable individuals and businesses to invest in climate-resilient infrastructure, adopt sustainable and climate-smart agricultural practices, and implement energy-efficient technologies, thereby contributing to the reduction of climate change hazards. Moreover, availability of insurance and savings products accelerates recovery from many of the climate hazards. In fostering uptake and market development of financial products and services, policymakers can do better by addressing the range of risks that financial consumers may face; and through becoming responsive to new and changed consumer issues from innovative products and new providers. Effective financial consumer protection regulation and market conduct supervision assists in ensuring that uptake and usage of financial products and services are beneficial to the vulnerable consumers. At the global level, the

fact, however, remains:

- The lowest income countries produce one-tenth of emissions, but are the most heavily impacted by climate change.
- Vulnerable populations in these countries suffer damaging outcomes in terms of health, food and nutrition, water supply and sanitation, education and most other basic needs.

Despite these stark inequalities, developing countries like Bangladesh have a window of opportunities to put effective policies in place. In this context, the world stands at a crossroads regarding fighting the multiple challenges confronting humanity, the most pressing one being climate change. But the impacts of climate change vary greatly among regions and population groups in Bangladesh. No doubt, this climate crisis is a deeply unfair one, with the poor being disproportionately affected. Bangladesh, being a country with few resources, bears the greatest burden in terms of loss of life and property as well as adverse effects on investment and the economy. No doubt, unchecked climate change would force millions of people to migrate within the country, pushing more people into poverty along with greater inequality in all aspects of human life. In particular, the impacts on the lives of the poor and vulnerable populations are many. For example, in the case of health, climate crisis severely jeopardises the realisation of universal health coverage (UHC) in various ways, including by compounding the existing burden of disease and by exacerbating existing barriers to accessing health services, often at times when they are most needed. Increased water shortages have an impact on water quality and cleanliness, and diarrhoea becomes more common. In terms of food security, the poor people are impacted the most by changes in food production system, higher prices and changes in rural incomes as a consequence of impacts on agricultural productivity and prices driven up by either gradual changes in long-term climate trends or more frequent and severe natural disasters. The crop yield losses mean that food prices are higher on average. Similarly, access to water is threatened by climate change.

Frequent droughts, increased evaporation and changes in rainfall patterns and run-off particularly impact water availability in many parts of the country. Under the circumstances, many households survive economic downturns brought on by decimated livelihoods through counter-productive means, such as pulling their children out of school to save on fees and/or putting them to work to make up for lost income. Furthermore, climate change is a powerful driver of internal migration because of its impacts on people's livelihoods and loss of liveability in highly exposed locations. This will create millions of climate refugees through displacement. In addition, work-related hazards are likely to create adverse impact on productivity. For instance, excessive heat during work creates occupational health risks; it restricts a worker's physical functions and capabilities, work capacity and productivity.

Clearly, a climate catastrophe is looming large for Bangladesh as well as for the world at large. However, the good news is that humans still have the 'control of the wheel' and it is possible to avert the catastrophe and a good deal of its debilitating consequences. But, for that to happen the world must come together without further loss of time and act on the basis of the dictates of science and human conscience, rising above the narrow political and other interests. Bangladesh needs to further strengthen its efforts in COPs and other relevant international forums to highlight the fast deteriorating implications of climate change for the country and the people at large. The country also needs to work more closely with other climate vulnerable countries to exert the needed pressure on the developed countries and other large GHG emitting countries to work together for saving the planet Earth and its inhabitants by reducing GHG emissions enough to keep global warming limited to 1.5°Celcius by the end of this century. Further, the climate vulnerable countries need to work together to convince the international community to enhance adequately the international climate finance to support developing, resource-poor, and climate vulnerable countries to adapt to the fast worsening climate change impacts.

Nationally, Bangladesh needs to ensure the required coordination and implementation capacity to secure the best utilisation of available financial, technological and human resources, while trying to enhance the availability of these resources by taking effective and appropriate

actions. For the purpose, several actions may be highlighted.

- Prioritise action programmes/projects considering the severity of the adversities caused by climate related disasters and anticipated robustness of the outcomes/benefits. However, it might be realistic to adjust the adopted priority ordering over regular intervals considering the impacts of natural disasters occurring each year. In terms of geographic locations, climate hotspots such as coastal belts, haors, islands, river banks prone to erosion and major flood-prone areas are likely to always remain in the priority list.

- Ensure full participation of the residents of the intervention areas at all stages of the intervention cycle from identification to implementation. They are the best 'consultants' to guide the design and implementation details to provide the desired outcomes.

- Ascertain proper coordination among authorities/agencies that are involved in designing and implementing respective interventions.

- Secure strict monitoring and evaluation to ensure that programmes/projects are implemented efficiently and timely without leakage of financial and other resources.

Overall, the message is loud and clear: Eliminating poverty/reducing inequality and fighting climate change cannot be done in isolation – the two can much more easily be achieved if they are addressed within an integrated framework in Bangladesh. The country has a window of opportunities to build resilience and reduce short-term climate change impacts on poverty and inequality through development policies that are inclusive and climate-informed. This is particularly true for investments that involve high immediate costs, but are urgently needed to prevent lock-ins into carbon-intensive patterns, such as for urban transport, energy infrastructure or deforestation.

In particular, the structural transformation of the rural economy needs to be speeded up so that fewer agricultural workers are exposed to climate risks. Other important policy measures that can help are skills development, promotion of an enabling environment for sustainable enterprises, public investments in green infrastructure, and improved integration into global trade. The international community can help Bangladesh adapt to climate hazards by providing financial support, technological assistance and developing institutional capacity.

However, the threats to development and the eradication of poverty and high inequality will become complicated over time if there are no mitigation measures at the global level. This means that the global community must take immediate action to cut their GHG emissions and strengthen two prime strategies: (i) Pay close attention to ways to reduce emissions that have positive effects on health, economy and development, such as using mini-grids and renewable energy sources in isolated areas or changing to energy-efficient light bulbs and appliances; and (ii) Assist adequately the climate vulnerable low income countries to protect the poor by enhancing social protection, resilience and coping capacity, sustainable livelihoods and other physical and human capital accumulation efforts, which may be paid for by energy taxes, elimination of fossil-fuel subsidies and other climate-friendly resource mobilisation efforts especially in the large GHG emitting countries.

For details on issues discussed in this publication, see, BANGLADESH: Poverty Watch Report 2024—Climate Change and Poverty Nexus, Institute for Inclusive Finance and Development (InM) and Center for Inclusive Development Dialogue (CIDD), Dhaka, 2025.