Briefing

URBAN RESILIENCE IN BANGLADESH PRACTICES, GAPS, AND WAY FORWARD

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Urban Vulnerabilities and Climate Risks

Rapid urbanization and climate change have made Bangladeshi cities highly vulnerable to flooding, heat waves, cyclones, and disease outbreaks, with urban slum populations facing the greatest risks due to poor housing, limited services, and dependence on informal livelihoods.

Policy and Institutional Frameworks

Bangladesh has established robust policies including the NAP (2023–2050), BCCSAP, Delta Plan 2100, and Mujib Climate Prosperity Plan supported by multi-tiered governance, ministries, and local governments. These frameworks aim to strengthen climate-smart urban development and resilience-building initiatives.

Policy & Governance

Major challenges include lack of comprehensive data, insufficient funding, poor coordination among agencies, weak service delivery in slums, and limited community participation. These gaps requires improved research, resource mobilization, integrated planning, upgraded infrastructure, and inclusive community-based adaptation.

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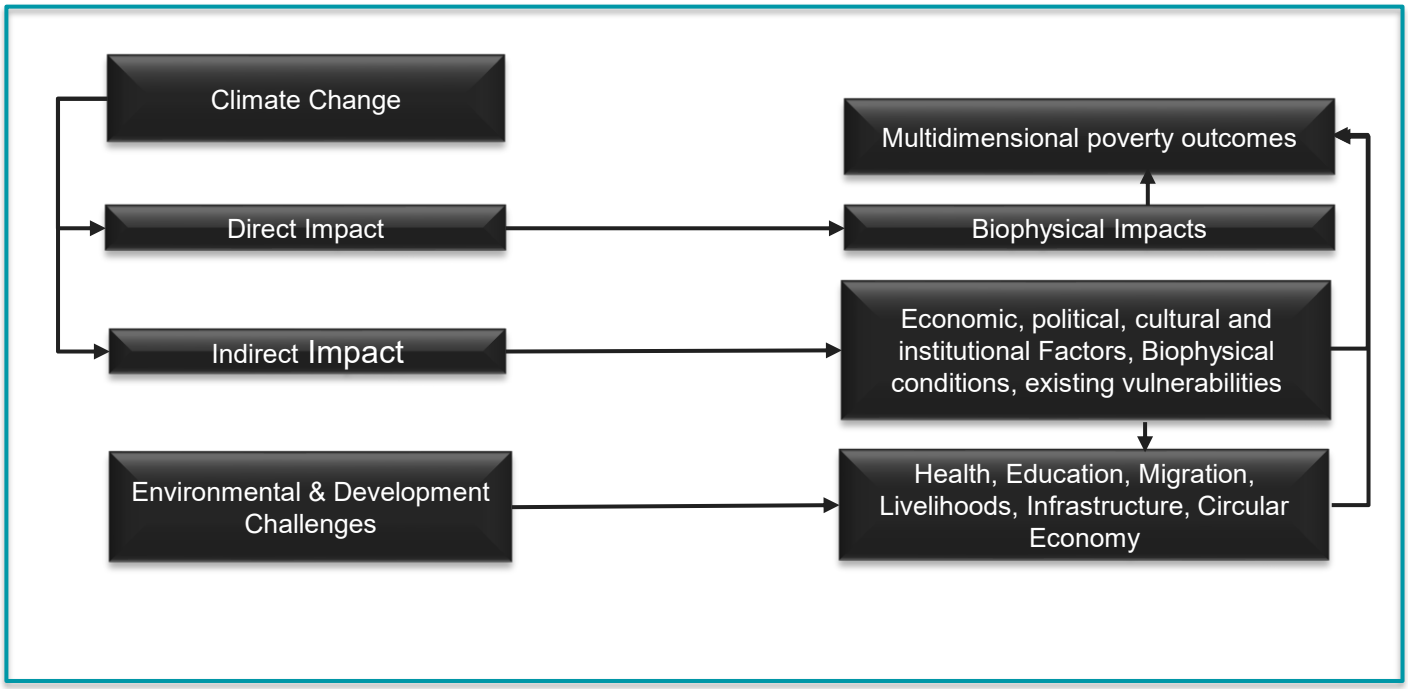
Bangladesh, one of the most densely populated countries in the world, has witnessed rapid population growth over the past century, although this trend has recently started to stabilize (UNFPA, 2015). The nation is on the verge of a significant urbanization wave, with estimates suggesting that by 2050, nearly half of the population will reside in urban areas (World Bank, 2020). This urban expansion is accompanied by a rapid transformation of urban climates nationwide.

The effects of climate change are increasingly driving large numbers of people displaced from other climate-vulnerable regions into urban areas. In these cities, climate change brings a multitude of challenges, including flooding, extreme temperatures, waterlogging, drainage congestion, water pollution, and the spread of water- and vector-borne diseases (Rahaman et al., 2019). Bangladesh is particularly susceptible to climate change impacts, such as rising sea levels, more frequent cyclones, and increased flooding (Rahman et al., 2024; Rahman et al., 2023).

Intense monsoon rainfall in urban areas often leads to flooding in low-lying regions. Climate change exacerbates the severity and frequency of these flooding events and other extreme weather phenomena, resulting in more devastating disasters. Urban slums, with their precarious living conditions, are especially vulnerable to these effects. The majority of slum residents are daily wage earners engaged in the informal sector, including rickshaw pullers, day laborers, and domestic workers. Their livelihoods heavily depend on the environment, making them particularly susceptible to the economic consequences of climate-induced disruptions.



The Interconnections Between Climate Change and Urban Vulnerabilities: A Comprehensive Overview of Impacts on Health, Infrastructure, and Livelihoods in Bangladeshi Cities.

Both Khulna and Satkhira receive high annual rainfall due to their proximity to the Bay of Bengal and strong monsoonal influences. However, Khulna and Satkhira are classified as highly vulnerable to the combined effects of climate factors such as temperature, rainfall, and wind speed, whereas Khulna exhibits a moderate vulnerability. Bangladesh has established a comprehensive approach to urban adaptation through several key policies and plans, including the National Adaptation Plan (NAP) 2023-2050, the Bangladesh Climate Change Strategy and Action Plan (BCCSAP), and the Delta Plan 2100. The NAP aims to create a climate-resilient Bangladesh by addressing various sectors, including urban areas. It sets goals for climate-smart cities and includes strategies for protecting nature, integrating adaptation into planning, and building capacity for innovation (NAP, 2023). The NAP identifies 113 specific interventions across eight sectors, emphasizing the need for effective adaptation strategies and sustainable urban development.

The BCCSAP, developed in 2009, outlines Bangladesh's strategy for addressing climate change impacts. It emphasizes adaptation measures, disaster risk reduction, and infrastructure improvements in urban areas (BCCSAP, 2009). This plan has been pivotal in guiding climate resilience efforts and has been integrated into subsequent policies, including the NAP. The Delta Plan 2100 focuses on long-term sustainable development, particularly in water management and climate adaptation.

It includes urban infrastructure development, flood management, and measures to protect coastal cities from rising sea levels and other climate impacts. The Mujib Climate Prosperity Plan (MCPP), established in 2020, is a comprehensive initiative that incorporates urban adaptation measures, such as climate-resilient urban planning and upgrading urban infrastructure to withstand extreme weather events (Mujib Climate Prosperity Plan, 2020).

Urban Heat Island (UHI) intensity in Khulna City Corporation and Satkhira Municipality has gradually risen from 1994 to 2024. In 1994, there were 47 locations in the Khulna City Corporation area and 4 locations in the Satkhira Municipality area that formed UHI, which increased to 152 locations in Khulna City Corporation and 20 locations in Satkhira Municipality during 2024.

Institutional Arrangement for Urban Adaptation in Bangladesh

In Bangladesh, the institutional arrangement for urban adaptation employs a multi-tiered approach that encompasses various national, sub-national, and local entities, including:

National Framework and Planning: The Bangladesh National Adaptation Plan (NAP), approved in 2022, serves as the overarching framework guiding climate adaptation efforts. It outlines long-term strategies and prioritizes interventions across sectors such as water resources, agriculture, and urban development. The NAP emphasizes a whole-of-government approach, integrating climate adaptation into national planning, budgeting, and policy processes.

Ministry of Environment, Forests and Climate Change: This Ministry plays a pivotal role in coordinating national climate policies and strategies. It collaborates with other ministries, such as the Ministry of Finance, the Ministry of Planning, the Ministry of Agriculture, the Ministry of Health and Family Welfare, and the Ministry of Water Resources, to ensure that climate adaptation is integrated into economic and developmental agendas.

Local Government Institutions: Local governments, including city corporations and municipalities, are crucial for implementing adaptation measures on the ground. These entities are responsible for urban planning, infrastructure development, and community-based adaptation projects. However, their effectiveness is often limited by financial and technical capacities.

Community and Civil Society Engagement: Effective urban adaptation also relies on significant input from civil society organizations and local communities. Community-based adaptation initiatives, such as those documented in coastal and urban areas, highlight the importance of involving local populations in planning and implementing adaptation measures.

Multi-Level Governance: Urban adaptation in Bangladesh operates within a multi-level governance framework, which includes coordination between national, regional, and local levels to ensure coherent policy implementation and resource allocation. For instance, Dhaka's city development plans incorporate climate risk assessments and institutional arrangements to enhance urban resilience.

Urban Adaptation: Current Context and Gaps

Bangladesh's vulnerability to climate change impacts, such as flooding, heat waves, and cyclones especially in urban areas has made urban climate resilience increasingly critical. To promote urban adaptation and resilience, the Government of Bangladesh has initiated various programs and strategies, which include:

Policy Framework and Initiatives: The Bangladesh Urban Resilience Project (URP), spearheaded by the government with support from international organizations like the World Bank, focuses on enhancing disaster risk management and structural resilience. This involves improving emergency response capabilities, developing risk-sensitive land-use planning, and promoting safe construction standards.

City-Specific Strategies: In Rajshahi, for example, ICLEI South Asia is assisting the city with a Climate-Resilient Strategies and City Action Plan (CRCAP). This plan aims to mitigate climate impacts by preserving natural resources, reducing greenhouse gas emissions, and creating green spaces. Vulnerability assessments identify critical risks in water supply, health, biodiversity, and the economy, which guide resilience interventions.

National and Local Integration: Effective climate resilience in urban settings in Bangladesh requires integrating local plans with national policies. Coordination among various government agencies and civil society organizations is emphasized to address data gaps, funding challenges, and community participation in resilience building.

These initiatives highlight the multi-faceted approach needed to build urban climate resilience, addressing immediate risks while laying the groundwork for sustainable urban development in Bangladesh.

Urban adaptation gaps in Bangladesh reveal several significant challenges that impede effective climate resilience and adaptation efforts in its swiftly urbanizing regions. The main gaps include:

Lack of Comprehensive Data and Research: A considerable shortage of systematic research and dependable data on urban climate resilience exists. This deficiency hampers policymakers and urban planners from formulating informed and effective strategies to tackle climate-related risks in urban environments.

Insufficient Funding: Municipalities frequently face insufficient funding to invest in essential climate adaptation infrastructure and services. This financial deficit impacts the development and upkeep of critical urban systems such as drainage, waste management, and flood protection, which are vital for alleviating the effects of climate change.

Poor Coordination among Agencies: A significant lack of coordination exists among various governmental organizations and agencies. This fragmented approach results in inefficiencies and redundancies in executing adaptation measures, diminishing overall effectiveness.

Inadequate Public Services in Slums: Urban slums are especially susceptible due to insufficient access to public services like clean water, sanitation, and healthcare. The high population density in these regions intensifies the effects of climate-related events, highlighting the necessity to enhance service delivery and infrastructure in these communities.

Lack of Community Participation: Effective adaptation necessitates active community involvement, which is currently lacking. Empowering local communities to participate in resilience-building initiatives can improve the sustainability and acceptance of adaptation measures.

Tackling these gaps demands a multi-faceted strategy that involves strengthening research capabilities, obtaining financial resources, enhancing inter-agency coordination, upgrading infrastructure in at-risk urban areas, and promoting increased community engagement in adaptation initiatives.

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