



POLICY BRIEF

Climate & Development
Knowledge Network

January 2021

Key messages

- Cities play a major role in urban resilience planning in Bangladesh.
- They need to understand local climate impacts to take appropriate actions. Here, resilience-building tools can help them assess local climate risks and vulnerabilities effectively.
- Reporting to the national government on baseline climate scenarios and local assessments of climate risks is essential for aligning national policy with local needs.
- It is critical to ensure regular monitoring of the impacts of climate actions and coordination of local and national government agencies to effectively integrate local climate needs into national policies.
- City governments should communicate with Central ministries to ensure appropriate budget allocation for local climate action.

Author:

Md. Jubaer Rashid & Najiba Rashid,
ICLEI South Asia

Urban Resilience Planning in Bangladesh: Development and Integration in National Planning Processes

Bangladesh is often referred to as 'ground zero for climate change'.¹ The topography and location of the country make it highly prone to extreme weather events, including cyclones, floods, salinity intrusion and storm surges. Socio-economic factors, such as a high dependence on agriculture and other resource-dependent sectors, high population density and a high poverty rate, add to its woes.

Bangladesh is ranked seventh on the Global Climate Risk Index 2020 of the countries most affected by climate change since 1995.² Climate impact is expected to lead to a 3.1% annual fall in the country's agricultural gross domestic product, totalling USD 36 billion in the 2005-2050 period.³ The World Bank (2010) estimates the cost of adapting to cyclones, storm surges and inland flooding could amount to USD 8.2 billion in Bangladesh, in addition to recurring annual costs of USD 160 million. Approximately USD 40 billion would be required from 2015 to 2030 for implementing key adaptation measures.⁴ As per its Nationally Determined Contributions (NDC), climate change can lead to an annual GDP loss by 0.5 percent to 1 percent.⁵ Therefore, if it wants to become a middle-income country by 2021, Bangladesh needs to focus on building climate adaptation and resilience.

Studies show that there is a 20% increase in mortality during heat waves in the country. Although it is in the early stages of heat-wave preparedness, research shows that a Heat Early Warning System could forecast an event 10 days in advance.⁶ Rising sea levels could displace millions of people from coastal regions, according to the Bangladesh Climate Change Strategy and Action Plan 2009, with adverse impacts on their livelihood and health.⁷ With growing population and urbanisation, there will be significant water shortages in coastal cities, besides increased incidence of waterlogging and, potentially, water-borne diseases⁸, impacting urban systems and development processes.⁹

The Government of Bangladesh (GoB) has responded to climate risks with a range of policies and programmes, besides allocating budgets for reducing



vulnerabilities and engaging the private sector. However, without decisive action by local governments, these measures cannot be effective. This policy brief presents a snapshot of current policies on climate resilience at the local level and assesses the role of local governments in achieving the national targets and international commitments such as the Sustainable Development Goals (SDGs).

Integrating local resilience plans at the national level

Global development agendas like the Agenda 2030, SDGs, Paris Agreement 2015 and the Sendai Framework 2015 have highlighted the role of local governments and communities in addressing climate risks and building resilience through a bottom-up approach and collective actions.

According to the UNDP, local governments undertake more than 70 percent of climate change reduction measures and 90 percent of adaptation measures.¹⁰ Therefore, it is essential to integrate their experiences and investment requirements to ensure that national policies and programmes are well-informed and responsive to local needs. These actions will help to generate awareness of new policies, ownership and compliance and reduce sectoral segregation in planning and implementation.

However, integrating local needs into national plans is not an easy process, owing to limited finances, political interference and institutional challenges. Local government staff do not have the requisite technical capacity, while the absence of vertical and horizontal integration, and of documentation and monitoring of programmes and policies at the local level are additional issues.

National and international agencies have developed several tools to help local governments develop localised resilience action plans. Some of these are:

- The City Resilience Profiling Tool (CRPT) by UN-Habitat for urban resilience¹¹

- Building Urban Resilience in East Asia by the World Bank¹²
- Urban Adaptation Support Tool (UAST) by Covenant of Mayors by Climate Change¹³
- ICLEI ACCCRN Process, by ICLEI - Local Governments for Sustainability¹⁴
- Climate Resilience CITIES Action Plan Methodology (CRCAP), by ICLEI¹⁵
- How to Make Cities More Resilient: A Handbook for Local Government Leaders, by United Nations Office for Disaster Risk Reduction¹⁶
- Guide to Climate Change Adaptation in Cities, by the World Bank¹⁷
- Dynamic Adaptation Model by Institute of Flood and Water Management at Bangladesh University of Engineering and Technology (BUET)¹⁸

The Dynamic Adaptation Model (DAM)

(DAM) is a continuation of the Delta Dynamic Integrated Emulator Model developed in the Ecosystem Services for Poverty Alleviation Deltas project (2010-2018). It applies nonlinear programming to compute adaptation deficiency to minimise future climate risks in selected coastal hotspots of Bangladesh. The model considers several dynamic factors such as social, cultural, political and financial barriers, geographical indicators and geo-morphological changes to ensure accuracy of results. The output from this model includes top adaptation measures, and the map of a changed condition if an adaptation measure is invested in. It supports the implementation of the Bangladesh Delta Plan 2100 (BDP 2100), National Adaptation Plan, National Resilience Project, and the Coastal Embankment Improvement Project.

The CRCAP Process, developed by ICLEI South Asia with support from the Swiss Agency for Development and Cooperation, provides step-by-step guidance to develop a climate-resilient city action plan, based on the premise that climate resilience refers to both mitigation (reduction of GHG emissions) and adaptation (addressing impacts such as sea-level rise, precipitation and temperature changes), and the linkages therein. This process equips local governments to estimate their GHG emissions, assess climate risks, identify adaptation actions, develop an implementation and monitoring plan, and steer mitigation measures.



Using these tools does not involve great cost. However, resilience planning requires the involvement of relevant stakeholders, regular monitoring of local resilience actions to understand their impacts on national plans and targets and ensure proper implementation, checking maladaptation and measuring the increase in adaptive capacity of communities. Since central government still administers local governments in Bangladesh, local plans need to be integrated with national objectives for better budget allocations.

Existing national policies to support urban resilience

Bangladesh has several policies that support local resilience actions. The



Image: Rain water harvesting in Mongla for drinking water to city - ICLEI South Asia.

National Adaptation Programme of Action has 15 adaptation programmes.¹⁹ The 10-year Bangladesh Climate Change Strategy and Action Plan 2009 (BCCSAP), based on immediate, short, medium and long-term programmes for climate adaptation and low-carbon development, has 44 climate action programmes under six major pillars.²⁰ One of the key climate action policies, it is currently under revision.

The country's NDCs aim to increase resilience to climate change and achieve lower GHG emissions in power, industry and transport sector, with action strategies up to 2030. The flagship programme on Comprehensive Disaster Management until 2014 developed climate change vulnerability and disaster risk reduction policies.²¹

The BDP 2100²² is the latest long-term and integrated policy, consisting of 65 infrastructure and 15 institutional and knowledge development projects in six hotspots over the next decade.²³

The formulation of the National Adaptation Plan (NAP) started in 2018, with a focus on long-term adaptation investment and enhancement of national capacity.²⁴ Additional sectoral policies relevant to climate change have also been developed in line with BCCSAP.

The Ministry of Environment, Forest and Climate Change supervises

inter-ministerial coordination and mainstreaming of climate change policies into projects; the Planning Commission approves these projects through five-year plans and annual development programmes. The Ministry of Housing and Public Works has also developed policies through the Urban Development Directorate, Rajdhani Unnayan Kartripakkha, Chattogram Development Authority, Rajshahi Development Authority, Khulna Development Authority, among others. The Local Government Engineering Department developed several 20-year municipal master plans in the 2008-2014 period, which had sectoral and cross-cutting strategies to deal with disasters and climate change. The draft National Urban Policy 2006, yet to be approved by the government, includes sectoral policies for climate change.

In 59 urban areas that do not yet have development strategies,²⁵ the master plans developed for other areas should be considered as the framework for developing climate resilience plans. However, as development authorities and city corporations fall under different ministries and administrative jurisdictions, there is limited coordination among them, hampering the effective implementation of master plans. Some municipalities are also unwilling to follow and implement these guidelines.

Challenges and Recommendations

Vertical integration and participation in national consultation process

Issue: Bottom-up vertical integration is more effective than top-down processes in formulating policies. However, in Bangladesh, as seen through ICLEI's work, corporation staff even in big cities like Rajshahi and Narayanganj are not always aware of national policy goals, let alone smaller municipalities like Singra or Faridpur. Cities are rarely consulted by national governments while preparing national plans, although these plans are implemented through them. As a result, national plans do not always respond to ground requirements.

Recommendation: Local governments should participate in consultation processes with the Planning Commission along with NGOs/CBOs, policy and research institutions, while formulating national plans and programmes. This will ensure regional holistic planning for cities and nearby villages that are interdependent. Project monitoring could provide vital information from the field about effective and financially viable climate adaptive interventions and provide documented evidence to the plans and programmes of the Ministry of

Environment, Forest and Climate Change, Ministry of Local Government, Rural Development and Co-operatives, Department of Environment, and others. Climate programmes can be reported to these national agencies to align with six hotspots identified in Bangladesh Delta Plan 2100. Resilience planning tools such as the CRCAP of ICLEI South Asia provide guidance on integrating local actions into national policies and programmes,²⁶ and can help develop participatory strategies.

Increased resource allocation to accelerate local climate actions

Issue: Larger city corporations allocate some funds for climate resilience action, but no municipality has a separate budget head for climate. There is also no financial arrangement by the national government and multilateral entities to channel climate finance to the local level.

Recommendation: The annual budget allocation for environment and climate change, which had been reduced in fiscal year 2020-2021 by about 0.03 percent,²⁷ needs to be increased. The tools mentioned above can also make realistic estimates of climate finance requirements. For economic recovery from climate shocks, the 'build back better' policy²⁸ should be considered. Programmes such as the BCCSAP and the creation of the Climate Change Trust Fund²⁹ for implementing projects are pioneering steps. The BDP 2100 has also identified hotspots for climate action and indicated the required fund allocation.

Bangladesh needs to strengthen the Climate Fiscal Framework,³⁰ enabling the financial management system to be climate-inclusive. Local and regional governments should get more autonomy to leverage investments from PPPs. National knowledge management cells should be established to maintain climate finance information and bring together multiple intermediaries to improve prioritisation and resource allocation. They could also support local governments prepare quality project proposals for climate funds,

identify financing support and develop relevant monitoring verification and reporting systems. Innovative financial instruments like blended finance (loans, grants, bonds, microfinance, tax revenue, community lending and crowdsourcing) should be explored. These cells could help cities to address challenges like stock-taking of institutional and policy development; strengthening intra-government coordination; project development and sound fiduciary management; strengthening technical and scientific capacities to transform climate projections into risk-based standards and a regulation system to guide infrastructure building.

Continuous monitoring and documentation of climate actions

Issue: Local governments are unable to assess the outcomes and impact of their projects on climate resilience, as all actions are not documented and monitored, hence failing to contribute to national government outcomes. The Planning Commission requires Environmental Impact Assessments (EIAs) of each development project prior to approval; but this does not include assessment of climate impacts.

Recommendation: A mix of qualitative and quantitative monitoring of projects helps in assessing their financial efficacy, while ensuring that the most vulnerable people are prioritised. There is sufficient evidence suggesting that qualitative approaches (e.g., outcome harvesting) are essential.³¹ Local governments should use the stakeholder group and core teams to assess the efficacy of development and climate actions. Tools such as the ICLEI ACCCRN Process, implemented in seven cities of Bangladesh, and the DAM Model of BUET, tested in Galachipa and Barguna, have provisions for reiteration to provide qualitative and quantitative data that can assess improvements in adaptive capacity and efficient use of funds. The EIAs of development projects should be supplemented with a Rapid Climate Risk and Vulnerability Assessment report for these projects.

Technical capacity building at local level

Issue: The Local Government and Rural Development Sector Strategy Paper 2018 identified insufficient knowledge and human resources as issues that hindered local governments from performing efficiently.³² There are 12 City Corporations in Bangladesh, while a majority of the urban areas are managed by municipalities with limited staff and funds. Smaller towns like Kushtia, Singra and Mongla have few municipal officials who can plan for impending climate disasters. Even the recently hired municipal planners have little knowledge about climate change and its implications on urban development. There is no holistic regional plans to address rural and urban needs collectively, even though they are closely linked socio-economically and ecologically.

Recommendation: Local government staff should be given technical training, besides opportunities to participate in conferences and workshops to sensitise them and help them understand climate change. Follow-up events organised internally can disseminate the learnings from conferences/ workshops to other officers. Skill development on holistic planning to support long-term resilient development and best approaches to utilise municipal funds or access, leverage, mobilise and disburse national and international climate finance is essential. Local government capacity needs to be enhanced to consider gender responsive climate actions and regional cooperation to make resilience plans environmentally sustainable and socially equitable.

An internal unit can be set up to facilitate capacity-building initiatives using services of public institutions, NGOs and research institutes. Trainings can be generic or specific, such as on waste and water management and transport, rural-urban linkages, climate and gender inclusivity. Cities need to be proactive in requesting training, which can be organised through public-private partnerships (PPP) to increase

ownership of actions and to reduce dependency on external institutions.

Improved consultation and coordination with key local actors

Issue: There is little social accountability of development projects, leading to low acceptance of development interventions. Citizens' participation or consultation in planning, formulation and implementation of programmes is rare. In cities like Rajshahi, Mongla and Faridpur, there were no formal mechanisms of public consultations before ICLEI South Asia's work in

developing climate plans which set up stakeholder groups in the cities.

Recommendation: Local governments must consult key actors such as public institutions, NGOs/CBOs, academia, community representatives and private and research institutions in assessing climate risks and identifying solutions. They must ensure inclusion of women and other marginalised sections in stakeholder groups to factor in their specific needs. In Rajshahi and Narayanganj, ICLEI South Asia formed stakeholder groups for certain projects in consultation with the local

governments. These groups now consult with the municipalities for other projects as well. Stakeholder Groups should consist of members who could facilitate action on climate change in the city, or are impacted by climate change, or can provide information regarding climate change impacts in the city. In addition, interdepartmental cooperation within municipality and with other government agencies such as the local disaster management committee³³ can promote good governance for better resilience planning and action.

References

1. <https://www.nrdc.org/onearth/bangladesh-country-underwater-culture-move>
2. https://www.germanwatch.org/sites/germanwatch.org/files/20-2-01e%20Global%20Climate%20Risk%20Index%202020_14.pdf
3. <https://climateknowledgeportal.worldbank.org/country/bangladesh>
4. <https://www.undp.org/content/undp/en/home/librarypage/climate-and-disaster-resilience-/national-adaptation-plan-process-in-focus--lessons-from-banglade.html>
5. https://moef.portal.gov.bd/sites/default/files/files/moef.portal.gov.bd/page/a0ce881_4b1d_4844_a426_1b6ee36d2453/NDC%20Roadmap%20and%20Sectoral%20Action%20%20Plan.pdf
6. https://www.researchgate.net/publication/318871645_Defining_and_Predicting_Heat_Waves_in_Bangladesh/link/59d3d890a6fdcc181ad94813/download
7. <http://nda.erd.gov.bd/en/c/publication/bangladesh-climate-change-strategy-action-plan-bccsap-2009> (Bangladesh Climate Change Strategy Action Plan 2009)
8. <http://nda.erd.gov.bd/en/c/publication/national-adaptation-programme-of-action-napa-2005> (National Adaptation Programme for Action 2005)
9. <https://www.bufbd.org/download/category/3-1st-urban-forum> (Bangladesh Urban Forum 2011)
10. <https://cor.europa.eu/en/news/Pages/Worlds-cities-regions-unite-in-battle-on-climate-change1113-5037.aspx>
11. <https://reliefweb.int/report/world/city-resilience-profiling-tool>
12. <https://openknowledge.worldbank.org/handle/10986/13109>
13. [https://climate-adapt.eea.europa.eu/knowledge/tools/urban-ast/\(UAST\)](https://climate-adapt.eea.europa.eu/knowledge/tools/urban-ast/(UAST))
14. http://southasia.iclei.org/fileadmin/user_upload/documents/ICLEI_ACCCRN_Workbook_WORKBOOK.pdf
15. <http://www.capacitiesindia.org/crcap-methodology/>
16. https://www.unisdr.org/files/26462_handbookfinalonlineversion.pdf
17. <https://openknowledge.worldbank.org/bitstream/handle/10986/27396/653590WP0v200B0Urban0Handbook0Final.pdf?sequence=1&isAllowed=y&handle/10986/27396/653590WP0v200B0Urban0Handbook0Final.pdf?sequence=1&isAllowed=y>
18. https://iwfm.buet.ac.bd/site/research_interfunded/evaluation-of-adaptation-trials-for-coastal-livelihoods-in-gbm-delta/
19. <https://www4.unfccc.int/sites/NAPC/Country%20Documents/Parties/ban01.pdf>
20. https://moef.gov.bd/sites/default/files/files/moef.portal.gov.bd/page/7022053a_0809_4e4b_a63b_60585c699de2/climate_change_strategy2009.pdf
21. <http://www.cdmp.org.bd/>
22. <http://www.plancomm.gov.bd/site/files/0adcee77-2db8-41bf-b36b-657b5ee1efb9/Bangladesh-Delta-Plan-2100>
23. <http://documents1.worldbank.org/curated/en/890611546628658220/pdf/Investment-Plan-for-BDP-2100.pdf>
24. <https://www.bd.undp.org/content/bangladesh/en/home/presscenter/pressreleases/2019/10/26/national-adaptation-plan-for-medium-and-long-term-climate-change.html>
25. <http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/06/Research-Report-Bangladesh-National-Urban-Policies-and-City-Profiles-for-Dhaka-and-Khulna.pdf>
26. <http://www.capacitiesindia.org/crcap-methodology/>
27. In the year of 2019-20 allocated budget was 52.6% and for 2020-21 allocated budget is 43.6%. (Climate Financing for sustainable Development, Budget report 20-21) <https://mof.portal.gov.bd/site/page/a9e79828-cef8-4920-97b5-c65ba4134605>
28. The use of the recovery, rehabilitation and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems, and into the revitalization of livelihoods, economies, and the environment (United Nations General Assembly, 2016) (https://www.unisdr.org/files/53213_bbb.pdf)
29. <http://www.bcct.gov.bd/>
30. [http://nda.erd.gov.bd/files/1/Publications/CC%20Policy%20Documents/Climate%20Fiscal%20Framework%20\(CFF\).pdf](http://nda.erd.gov.bd/files/1/Publications/CC%20Policy%20Documents/Climate%20Fiscal%20Framework%20(CFF).pdf)
31. <https://link.springer.com/article/10.1007/s10668-016-9891-7>
32. https://plandiv.portal.gov.bd/sites/default/files/files/plandiv.portal.gov.bd/publications/0c526c77_bb8b_42fe_99d7_f6c217986e77/LGRD-SSP.pdf
33. http://southasia.iclei.org/fileadmin/user_upload/documents/ICLEI_ACCCRN_Workbook_WORKBOOK.pdf

Acknowledgments

We are grateful to our external reviewers Dr. S M Munjurul Hannan Khan, Climate Change and Environmental Expert, Dr. Saleemul Huq, Director, International Centre for Climate Change and Development (ICCCAD), Dr. Munsur Rahman, Professor, Institute of Water and Flood Management (IWFM) at BUET, Dr. Aditya Bahadur, PhD., IIED, Mr. S.M. Mehedi Ahsan, Senior Urban Resilient Specialist, KfW Development Bank, Mr. Enamul Haq, Advisor, GIZ Bangladesh, Dr. Md. Taibur Rahman, Programme Coordinator (On Lien), National Policy Formulation and Implementation of Climate Change Programme, UNDP for their critical feedback and for their continued support in helping to conceptualise the policy brief.

Thank you to Ms. Lisa McNamara (SouthSouthNorth), Ms. Bedoshruti Sadhukhan and Ms. Ritu Thakur (ICLEI South Asia) for their review and editorial support, Ms. Subuhi Parvez and Ms. Saira Kurup (ICLEI South Asia) for production support.

About CDKN

CDKN works to enhance the quality of life for the poorest and most vulnerable to climate change. We support decision-makers in designing and delivering climate compatible development.

Contact us:

CDKN Asia

ICLEI - Local Governments for Sustainability, South Asia, New Delhi, India

cdknasia@iclei.org



This work was carried out with the aid of a grant from the Ministry of Foreign Affairs of the Netherlands and the International Development Research Centre (IDRC), Canada, as part of the Climate and Development Knowledge Network (CDKN) Programme. The views expressed herein do not necessarily represent those of the Ministry of Foreign Affairs of the Netherlands, or of the International Development Research Centre (IDRC) or its Board of Governors, or of the entities managing CDKN.

Copyright © 2020, Climate and Development Knowledge Network. All rights reserved.