



National Adaptation Plans in focus: Lessons from Bangladesh



Bangladesh is a country of 147,570 km² located in the Bay of Bengal, in the floodplain of several major rivers flowing from the Himalayas.⁽¹⁾ The land is largely low and flat, with some hilly regions.⁽²⁾ Bangladesh is also home to the Sundarbans, the largest natural mangrove forest in the world.⁽³⁾ The climate is tropical, with a monsoon and a dry season. The country has a population of 161.8 million (2016)⁽⁴⁾, of which around 70 percent live in rural areas.⁽⁵⁾ Bangladesh is a least-developed country (LDC); however, the poverty ratio has fallen from 49 percent in 2000 to 23.2 percent in 2016.⁽⁶⁾ Agriculture accounts for around 15 percent of GDP, but employs approximately 40 percent of the workforce.⁽⁷⁾ Industry accounts for 32 percent of GDP, whilst services, including transport and construction services, accounts for 53 percent of GDP.⁽⁸⁾

Climate change risks

Bangladesh is often considered as one of the countries most vulnerable to extreme events, climate variability and change (Global Climate Risk Index; Climate Change Vulnerability Index).⁽⁹⁾ The country's location in the Bay of Bengal makes it susceptible to seasonal cyclones. Its location on a major floodplain increases the risks related to seasonal flooding.⁽¹⁰⁾ Low-lying coastal land is also vulnerable to future sea level rise. An estimated temperature rise of 1.6°C and an increase of precipitation of 8 percent is expected by 2050.⁽¹¹⁾ Floods, tropical cyclones, storm surges and droughts are likely to become more frequent and severe.⁽¹²⁾ Sea level rise and salinity intrusion is already being observed.⁽¹³⁾

Climate change will impact a range of sectors. Rice, the predominant crop, has been found to be climate sensitive. Yields are expected to drop, with direct impact on food security. Changes will occur in forest ecosystems, including the Sundarbans, with a decline in valuable tree species. Climate change has already altered the distribution areas of certain vector-borne diseases, such as malaria. Extreme events will affect both rural and urban infrastructure. Climate change is expected to directly affect livelihoods, and worsen the economy and poverty rates.⁽¹⁴⁾

Groundwork for supporting the NAPs process

Policy, planning and budgeting:

Substantial engagement on climate change and adaptation planning has taken place in Bangladesh. Bangladesh was one of the first two LDCs to submit its National Adaptation Programme of Action (NAPA) in 2005. The NAPA identified and prioritised adaptation projects for immediate and urgent implementation. It was updated in 2009, and additional projects were added. The Bangladesh Climate Change Strategy and Action Plan (BCCSAP) was approved in 2009 and runs until 2018. It sets forward six pillars for climate change adaptation and mitigation, whilst identifying 44 priority programmes. Work is on-going to update the BCCSAP.

Adaptation is included in the key national development plan, the Seventh Five Year Plan (2016-2020). Under the related Annual Development Plans (ADP), climate change screening tools have been integrated into development project proposals. Adaptation has been integrated to a limited degree in key sectoral policies, such as water and agriculture. The Nationally Determined Contribution of Bangladesh (2015) identifies an adaptation goal to “protect the population, enhance their adaptive capacity and livelihood options, and to protect the overall development of the country in its stride for economic progress and wellbeing for the people”. It also identifies key adaptation areas and more specific adaptation priorities for Bangladesh, as defined in the table overleaf.



Priority adaptation activities (INDC 2015)

i.	Improved early warning system for tropical cyclone, flood, flash flood and drought
ii.	Disaster preparedness and construction of flood and cyclone shelters
iii.	Tropical cyclones and storm surge protection
iv.	Inland monsoon flood-proofing and protection
v.	Climate resilient infrastructure and communication
vi.	Climate resilient housing
vii.	Improvement of urban resilience through improvement of drainage system to address urban flooding
viii.	River draining and dredging (including excavation of water bodies, canals and drains)
ix.	Stress tolerant (salinity, drought and flood) variety improvement and cultivation, including for crops, livestock and fisheries
x.	Research and knowledge management
xi.	Adaptation on local-level perspectives etc.
xii.	Adaptation to climate change impacts on health
xiii.	Biodiversity and ecosystem conservation
xiv.	Capacity Building at individual and institutional level to plan and implement adaptation programmes and projects in the country

The NDC also presents on-going adaptation actions, climate funds and provides an estimate of adaptation costs. Based on estimates by the World Bank (2010), the costs of adapting to tropical cyclones, storm surges and inland flooding by 2050 could amount to US\$8.2 billion in Bangladesh, in addition to recurring annual costs of US\$160 million. The estimated cost of key adaptation measures between 2015-2030 is US\$40 billion.⁽¹⁵⁾ To implement the BCCSAP, the Bangladesh Climate Change Trust Fund (BCCTF) was created in 2009 to channel government funds, and it has approved more than 400 projects and disbursed over US\$400 million.⁽¹⁶⁾ Based on a Climate Public Expenditure and Institutional Review (CPEIR), climate expenditure ranged from 5.3-7.5 percent of total government budget!⁽¹⁷⁾ In addition, the Bangladesh Climate Change Resilience Fund (BCCRF), established in 2010, funds climate change actions through international donor finance.

Preparing for adaptation planning

Bangladesh has produced a First (2001) and Second National Communication to the UNFCCC (2012), under which impact and vulnerability assessments were carried out, including for priority sectors. Climate scenarios were developed for 2030 and 2050.

Meteorological data is collected across the country and water level data is gathered from tidal stations. However, measurement of sea level rise needs to be improved and climate change scenarios downscaled to local level. There is some capacity in-country to compile and analyse climate data, but there are resource constraints to delivery.

A Technology Needs Assessments and a National Capacity Self-Assessment were carried out in 2007. The importance of a monitoring and evaluation system was highlighted in the BCCSAP, but is yet to be fully implemented.

Under the Climate Finance Governance Project of Ministry of Environment and Forests, Department of Environment is conducting "Nationwide Climate Vulnerability Assessment (CVA)" covering the 64 districts of the country, as well as selected hot spots (coastal, drought prone and flood/flash flood prone areas) with the technical assistance of GIZ. The CVA will be completed by March 2018. The CVA is expected to be one of the major building blocks of the future National Adaptation Plan. Based on the CVA a Climate Vulnerability Index will be developed, which is expected to be one of the decision-making tools of the government for better allocation of resources to the most vulnerable areas.

Implementation of adaptation actions

Bangladesh has extensive experience in implementing adaptation projects, and is a global pioneer in community-based adaptation (CBA). Project funding comes from domestic sources and international sources including bilateral, multi-lateral and private funding. Some highlights include:

- More than 420 implemented projects under national funding of the BCCTF, including on river bank protective works, cyclone resilient housing, afforestation and stress-tolerant crop and seed varieties.
- Four Global Environment Facility (GEF) Least Developed Country Fund (LDCF) projects on CBA and Ecosystem-based Adaptation (EbA), both on-going and closed.
- Six projects under the Climate Investment Funds (CIF) Pilot Program for Climate Resilience (PPCR), with both private and public sources of funding, in agriculture, infrastructure, coastal zone management and capacity building.
- Emergency 2007 Cyclone Recovery and Restoration Project, 2008-2017, co-funded by World Bank and the Government of Bangladesh.





The process to formulate and implement NAPs in Bangladesh

Institutional arrangements

In order to oversee climate change policies/strategies and actions in a more comprehensive way, the Ministry of Environment and Forests has created a Climate Change wing. The wing, inter alia, will monitor implementation of the NAP. Establishment of a Policy Support, Investment, Monitoring Unit (PSIMU) at the Ministry is also in process, to support climate change actions in Bangladesh.

Challenges

Challenges remain in Bangladesh, with regards to institutional coordination and integration of climate change adaptation into budgets and performance frameworks, especially across various sectors. Institutional coordination is also needed to deliver on the parallel processes of the NDC and NAP. Several prioritised adaptation options are still to be financed and implemented. Technical capacity to collect, generate and disseminate climate information remains weak, and climate information is yet to be integrated into policy development.

NAP process timeline



NAP support

The NAP process in Bangladesh has been supported by the Government of Norway, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the joint UNDP and UN Environment NAP Global Support Programme.

Successes

Bangladesh has long-term experience in implementing adaptation projects, in a range of sectors and especially at community level. This provides a good base from which to scale up adaptation actions. In addition, a solid national policy framework enables planning on adaptation and identifies adaptation priorities. Adaptation is a national priority and has strong government support. The approach of having a nationally driven climate trust fund remains unique. In many regards, Bangladesh has been a pioneer in adaptation and provides an interesting model for sharing lessons learned with other LDCs.

What is the process to formulate and implement NAPs?

The Conference of Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) established the National Adaptation Plan (NAP) process in 2010, to enhance country-led planning and preparedness for climate change adaptation (CCA) in the medium and long-term. The objectives of the NAP are to reduce vulnerability to the impacts of climate change and to integrate adaptation into all levels of development planning. The NAP process is multi-sectoral, involving Ministries of Environment as well as Planning and Finance, in addition to other key Ministries. By bringing greater institutional integration and coordination to adaptation planning, NAPs can enhance ongoing national development planning processes, safeguard development gains, and build resilience.



Opportunities

Climate change risks can be integrated into national and sectoral planning and budgeting processes in the medium- to long-term, through the guidance of both the NAP and the NDC. This includes medium-term national development planning processes, such as the ADPs and the upcoming 8th Five Year Plan (2021-2026), as well as long-term planning under the Perspective Plan to 2040, and the Bangladesh Delta Plan 2100, which identifies delta issues and future scenarios for 50-100 years. The achievement of Sustainable Development Goals (SDGs) through adaptation can be articulated within these and other policies.

Prioritised NAP activities include establishing an inter-institutional NAP coordination mechanism; enhancing climate data and use in planning; carrying out sectoral, regional and ecosystem level vulnerability assessments; drafting a NAP, based on consultations; developing sectoral action plans and budgets; doing appraisal and costing of adaptation options; updating the Climate Fiscal Framework; and establishing a monitoring framework for the NAP process.

Key documents

- [Bangladesh Climate Change Strategy and Action Plan, 2009](#)
- [Second National Communication, 2012](#)
- [NDC, 2015](#)

Notes

- (1) [Government of the People's Republic of Bangladesh \(2016\). *Bangladesh First Nationally Determined Contributions*; Government of the People's Republic of Bangladesh \(2012\). *Second National Communication of Bangladesh to the United Nations Framework Convention on Climate Change*.](#)
- (2) [Government of the People's Republic of Bangladesh \(2012\).](#)
- (3) [Government of the People's Republic of Bangladesh \(2012\).](#)
- (4) [Bangladesh Bureau of Statistics \(2016a\). *Report on Bangladesh Sample Vital Statistics 2016*.](#)
- (5) [Bangladesh Bureau of Statistics \(2011\). *Population & Housing Census 2011*. Statistics and Information Management Department of the People's Republic of Bangladesh \(2016\). *Annual Report 2016-2017. \(Bengali\)*](#)
- (6) [Bangladesh Bureau of Statistics \(2016b\). *Quarterly Labour Force Survey 2016-2016*.](#)
- (7) [Bangladesh Bureau of Statistics \(2016c\). *National Account Statistics: Provisional Estimates of GDP 2015-16 and Final Estimates of GDP 2014-15*.](#)
- (9) [Kreft, S., Eckstein, D., Melchior, I \(2017\). *Global Climate Risk Index 2017* \(English\). Berlin: Germanwatch;](#)
- (10) [Verisk Maplecroft \(2011\). *Climate Change Vulnerability Index 2011*.](#)
- (11) [Government of the People's Republic of Bangladesh \(2016\).](#)
- (12) [Government of the People's Republic of Bangladesh \(2012\).](#)
- (13) [Government of the People's Republic of Bangladesh \(2015\). *Bangladesh Intended Nationally Determined Contributions*.](#)
- (14) [Government of the People's Republic of Bangladesh \(2012\). Government of the People's Republic of Bangladesh \(2012\).](#)
- (15) [The World Bank \(2010\). *Economics of Adaptation to Climate Change – Bangladesh*.](#)
- (16) [Transparency International Bangladesh \(2017, p.9\). *Climate Finance and Local Government Institutions: Governance in Project Implementation*.](#)
- (17) [Ministry of Finance \(2014\). *Climate Fiscal Framework*.](#)

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projects implemented with BCCTF funding

Over US\$8

billion in losses due to climate change by 2050

14

adaptation priorities in NDC

1st

NAPA to be submitted globally (2005)

80

representatives in NAP stakeholder dialogue

About the NAP-GSP

The joint UNDP-UN Environment National Adaptation Plan Global Support Programme (NAP-GSP) was launched in June 2013, financed by the Global Environment Facility (GEF) Least Developed Countries Fund (LDCF), and the Special Climate Change Fund (SCCF). The NAP-GSP, together with partners, are assisting developing countries to identify technical, institutional and financial needs to integrate climate change adaptation into medium and long-term national planning and financing. The NAP-GSP provides technical expertise and guidance on country NAP processes, and provides opportunities for knowledge exchange on NAPs.

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NAP-GSP
NATIONAL ADAPTATION PLAN GLOBAL SUPPORT PROGRAMME