TECHNICAL ASSISTANCE REPORT

BANGLADESH

Disaster Risk Financing

October 2024

Prepared By

Suphachol Suphachalasai, Barry Maher, Danielle Minnett, and Junko Mochizuki

Fiscal Affairs Department

The analysis and policy considerations expressed in this publication are those of the IMF Fiscal Affairs Department.

International Monetary Fund, IMF Publications
P.O. Box 92780, Washington, DC 20090, U.S.A.
T. +(1) 202.623.7430 • F. +(1) 202.623.7201
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Acronyms and Abbreviations

AAL	Annual Average Loss
ADB	Asia Development Bank
ADP	Annual Development Programme
BB	Bangladesh Bank
BDRCS	Bangladesh Red Crecent Society
CATDDO	Catastrophe Deferred Drawdown Option
CCDR	Country Climate Development Report
CDF	Credit and Development Forum
CDRI	Coalition for Disaster Resilient Infrastructure
CEA	California Earthquake Authority
CERF	Central Emergency Response Fund
CFF	Climate Fiscal Framework
CMSME	Cottage, Micro, Small and Medium-size Enterprise
CMC	Central Management Committee
CPIC	Citizens Property Insurance Corporation
CRU	Climatic Research Unit
CSR	Corporate Social Responsibility
DM	Disaster Management
DRF	Disaster Risk Finance
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EAP	Early Action Protocol
ERM	Emergency Response Management
FAD	Fiscal Affairs Department
FD	Finance Division
FPOCG	Focal Point Operation Coordination Group
FY	Financial Year
GDP	Gross Domestic Product
GOB	Government of Bangladesh
GR	Gratuitous Relief
GRADE	Global Rapid Post-Disaster Damage Estimation
IDRA	Insurance Development Regulatory Authority
IMF	International Monetary Fund

IMED	Implementation Monitoring and Evaluating Division
JICA	Japan International Cooperation Agency
JRSMP	Jamuna River Sustainable Management Project
KPI	Key Performance Indicators
LDC	Least Developed Country
LGU	Local Government Unit
LGD	Local Government Division
M&E	Monitor and Evaluation
MFI	Microfinance Institution
MODMR	Ministry of Disaster Management and Relief
MOF	Ministry of Finance
MOFOOD	Ministry of Food
MoU	Memorandum of Understanding
MRA	Microcredit Regulatory Authority
NDMC	National Disaster Management Council
NAP	National Adaptation Plan
NBFI	Non-Bank Financial Institution
NDRFS	National Disaster Risk Financing Strategy
NDMAC	National Disaster Management Advisory Committee
NDRCG	National Disaster Response Coordinating Group
NAWG	Needs Assessment Working Group
NGO	Non-Governmental Organization
NPDM	National Plan for Disaster Management
PCB	Private Commercial Bank
PCG	Partial Credit Guarantee
PDNA	Post-Disaster Needs Assessment
PFM	Public Finance Management
PMO	Prime Minister's Office
RCF	Rapid Credit Facility
RFI	Rapid Financing Instrument
PKSF	Palli Karma-Sahayak Foundation
PPPA	Public Private Partnership Authority
SBC	Sadharan Bima Corporation
SOD	Standing Orders on Disaster
SPS	Social Protection System
SPSs	Social Protection Systems

SRSP	Shock Responsive Social Protection
SSP	Shared Socioeconomic Pathways
SSPS	Social Security Policy Support
TR	Test Relief
UNDRR	United Nations Office for Disaster Risk Reduction
UNRCO	United Nations Resident Coordinator Office
VGF	Vulnerable Group Feeding
WB	World Bank
WBCIS	Weather-Based Crop Index Insurance

Preface

In response to a request from Dr. Mohammad Altaf-Ul-Alam, Additional Secretary of Ministry of Finance, for capacity development (CD) on disaster risk financing strategy, a CD mission visited Dhaka during February 25—March 7, 2024. This mission of the International Monetary Fund's (IMF) Fiscal Affairs Department (FAD) was led by Mr. Suphachol Suphachalasai and comprised Mr. Barry Maher, Ms. Danielle Minnett, and Ms. Junko Mochizuki (all FAD).

The mission had engaging and productive discussions with the Secretary of Finance, Dr. Md Khairuzzaman Mozumder, the Secretary of the Ministry of Disaster Management and Relief, Mr. Md. Kamrul Hasan, the Secretary of the Ministry of Food (MOFOOD), Mr. Md. Ismiel Hossain, the Secretary of the Ministry of Social Welfare, Mr. Md. Khairul Alam Shiekh, and senior officials from Finance Division, Financial Institution Division, and Economic Relations Division of Ministry of Finance; Ministry of Agriculture, Ministry of Environment, Forest and Climate Change; Ministry of Food (MOFOOD); Ministry of Local Government, Rural Development and Cooperatives; Ministry of Social Welfare; Ministry of Water Resources, Planning Commission; Bangladesh Bank; Insurance Development and Regulatory Authority (IDRA); Public Procurement Authority; Microcredit Regulatory Authority (MRA); and Palli Karma-Sahayak Foundation (PKSF).

The mission is grateful for the Macroeconomic Wing of Finance Division for their efficient support provided in organizing and facilitating the discussions and multi-stakeholder workshop. In addition, the mission is grateful to the IMF Resident Representative, Mr. Jayendu De and his staff, Mr. Saiful Islam and Ms. Gloria Halder for the tremendous support and coordination provided before and during the mission.

Executive Summary

Disasters have posed significant economic costs to Bangladesh. The country is highly exposed to disasters, particularly floods and tropical cyclones. Between 2000-2023, natural hazards affected 130 million people and caused US$13.6 billion in total damage. Disasters are impediments to Bangladesh's poverty reduction and development objectives, while climate change is expected to make extreme events more severe and frequent. Disasters in Bangladesh have profound economic impacts, affecting agriculture by destroying crops and fisheries, disrupting industries, damaging infrastructure like roads and buildings, and leading to loss of lives and displacement of people. The country's low-lying delta region makes it particularly vulnerable to these disasters, requiring significant resources for recovery and rebuilding efforts.

Bangladesh's financing needs for disaster response are substantial. The total funding need in response to a recurrent event that occurs once every 2 years is estimated at US$4.7 billion, about 1 percent of annual Gross Domestic Product (GDP). This comprises immediate response and early recovery efforts (including food, shelter, health, and income recovery support) for floods and cyclones of US$1.2 billion and medium-term costs for rehabilitation and reconstruction of US$3.5 billion. The total resource requirements are expected to increase significantly for more severe natural disasters such as those that occur once in 50 years—the needs would amount to US$20 billion (about 4 percent of annual GDP) and are comparable in magnitudes to the 2004 floods and the 2007 Cyclone Sidr in terms of the share of GDP. In this scenario, the short-term needs for relief and early recovery is estimated at US$5 billion and the needs for medium-term reconstruction at US$15 billion.

Bangladesh has put in place fiscal mechanisms, social protection programs, and financial instruments to respond to natural disasters. With the policy mechanisms that are already in place, a total of approximately US$1.5 billion can be mobilized for the immediate response and early recovery phase of disaster response. The government's fiscal instruments consist of the annual budget allocation to disaster relief efforts and the general budget contingency for unexpected events. With respect to social programs, the government has relief-focused social safety nets and a contingency fund to channel relief assistance to vulnerable households. In addition, financial sector's resources can be mobilized through a number of channels including social services financing from micro-finance institutions, the climate risk fund which banks in Bangladesh may establish as part of the central bank's Corporate Social Responsibility (CSR) initiative, as well as the disaster recovery loans to affected households extended by the Palli Karma-Sahayak Foundation. For the mid-term rehabilitation and reconstruction, it is estimated that US$3.2 billion can be mobilized post disaster through the Annual Development Programme for capital investments.

While Bangladesh has adequate resources for recurrent natural hazards, the financing gap in response to moderate and severe disasters remains large. The government has initiated the process of developing a disaster risk layering approach consisting of multiple financial instruments to finance disaster response for small, to moderate, to large disasters, in alignment with international best practice. Under the status quo, the financial resources available to the government can fully finance response costs and the majority of reconstruction costs up to the disaster event which is expected to occur every other year. However, for moderate disasters such as those occurring every three to five years, the

government faces a financing gap. For a one-in-five-year disaster event (with a 20 percent chance of occurrence in a year), the financing gap for immediate relief and early recovery is US$0.9 billion (0.2 percent of GDP), and the mid-term reconstruction financing gap is US$4 billion (nearly 1 percent of GDP). For catastrophic disaster events, the financing gap increases significantly—a one-in-fifty-year disaster event leads to a short-term financing gap of US$3.5 billion (0.8 percent of GDP), and the reconstruction financing gap of US$11.8 billion (2.6 percent of GDP).

Fiscal policy mechanisms can be strengthened to help close the financing gap. Bangladesh's current fiscal buffers—fiscal space available to cover unexpected expenditure increases—are at the level that is sufficient to meet the needs of the annual average cost of immediate disaster response and relief. Strengthening fiscal buffers will support closing the short-term financing gap for moderate disasters, while putting in place contingent lines of credit would help create fiscal space for more severe disasters. In addition, Bangladesh could consider insurance of public assets, including critical public infrastructure and large assets under public-private partnerships, to control fiscal risks associated with natural disasters. The government could also integrate disaster risk financing need considerations in its medium-term budget framework and conduct a public expenditure review of disaster related expenditures to reveal the true fiscal cost of natural disasters in Bangladesh.

Making social programs more shock-responsive and scalable is crucial in the times of disaster. Utilizing already established social protection systems (SPSs) can be a key element to protecting livelihoods, ensuring food security and improving resilience. The government has widely recognized the social protection systems' responsibility to deliver shock-responsive relief and mainstream adaptive social protection across strategies. In Financial Year (FY) 2022-23, Bangladesh spent about 2.7 percent of GDP on social assistance, with only around 3.4 percent of this being allocated to relief programs. The government has a dedicated budget line for dealing with economic and natural shocks that can provide support to victims of natural calamities. This budget item doubles the size of the social safety net budget that can be allocated for relief and provides flexible resources to scale up programs when disasters occur. Also, Bangladesh is a large recipient of humanitarian aid, which can play an important role in disaster response. However, humanitarian financing can be uncertain. Looking forward, the government should identify scalable programs for relief support and could establish a harmonized database that can be used to rapidly scale up and identify beneficiaries during times of disaster, based on multi-hazard vulnerability maps. Digitalization of cash transfer and consolidation of cash support programs could help improve the efficiency of relief delivery.

Bangladesh could better leverage the financial sector instruments to enhance disaster resilience. The financial sector, including private actors, has a major role to play in disaster risk financing. Bangladesh's efforts to strengthen financial inclusion offers opportunities to enhance private sector resilience, while the central bank emphasizes risk management of financial institutions and use of innovative products in under-served sectors. The central bank promotes the establishment of climate risk fund to support post-disaster response and recovery as part of corporate social responsibility, and operates nation-wide partial credit guarantee (PCG) schemes for the cottage, micro, small and medium-size enterprises (CMSME) sector and other vulnerable groups. Bangladesh has an extensive network of micro-finance institutions, which foster financial resilience against disaster shocks. The non-life insurance market is fragmented with limited penetration, though efforts are ongoing to strengthen demand- and supply- side enablers including an introduction of compulsory insurance for public and private high-rise

buildings and pilot testing of promising index-based agriculture insurance schemes. Looking ahead, the government should develop alternative channels to encourage disaster-related insurance, insurance linked loans and post-disaster credit access to different segments of population. To encourage greater financial sector engagement, the government should better-target needs-based support to the most vulnerable, while scaling down broad-based post-disaster support and strengthen the capacity of the domestic insurance sector.

Bangladesh has a robust foundation of legal and institutional framework to support disaster risk financing. Roles and responsibilities regarding disaster risk management (DRM) are clearly defined in the country's 2019 Standing Order on Disasters. However, the country would benefit from mainstreaming the national disaster risk financing strategy (NDRFS) into the the National Plan for Disaster Management, as well as the five-year national development plan. The government could also develop a comprehensive implementation plan and a monitoring and evaluation framework and establish a timeline for mid-term review and update of the national disaster risk financing strategy.

Recommendations

Recommendations	Timing	Priority
Fiscal Policy Response to Disaster Risks		
Assess and right-size existing fiscal buffers as part of the Medium-Term Budget Framework (MTBF).	MT	H
Establish ex-ante contingent lines of credit at concessional lending rates from International Financial Institutions (IFIs) and development partners.	ST	H
Conduct an expenditure analysis of disaster related expenditure for past disaster events to estimate the natural disaster-related expenditure from the budget.	MT	M
By Line Ministry, assess the exposure and vulnerability of key public assets to natural disasters.	MT	M
Pilot an insurance of public assets scheme, focusing on the Ministry which represents the largest contingent liability to the Government of Bangladesh (GOB)	MT	M
Implement a comprehensive capacity development strategy for relevant organs of state on disaster-responsive public procurement methods.	ST	M
Expand the scope of the disaster-responsive public procurement guidelines to improve the speed and efficacy of relief resources.	ST	M
Shock-responsive Social Protection		
Create a harmonized Management Information System (MIS) of social protection programs that can be used to quickly scale up and identify beneficiaries during times of disaster.	MT	M
Develop a hazard-vulnerability map under the purview of the Ministry of Disaster Management and Relief (MODMR).	LT	M
Identify scalable non-relief oriented social protection programs and establish a plan on how to leverage them during disasters.	ST	H
Assess and develop a consolidation plan for efficient social protection programs.	MT	M
Expand digitalization features across cash transfer oriented social protection programs.	MT	L
Put in place a monitoring and evaluation framework for relief and scalable programs with key performance indicators (KPIs).	MT	L
Establish an inter-ministerial committee on adaptive social protection as expressed in the new guidelines for adaptive social protection.	ST	H
Financial Sector Instruments		
Evaluate alternative channels to foster disaster-related insurance, insurance linked loans and post-disaster credit access (such as through microfinance institutions (MFI), cooperatives, banks, insurance companies, etc.) and identify promising programs for scaling.	ST	H
Foster greater alignment of licensed activities/supervision of banks, insurance, microfinance, and other institutions such as cooperatives regarding insurance-related services provision.	MT	M
Complete enactment of mandatory insurance by public- and private high-rise buildings.	LT	M
Evaluate options to reduce broad-based provision of post-disaster assistance, as a way to encourage private sector participation and market-based risk sharing arrangements.	MT	H

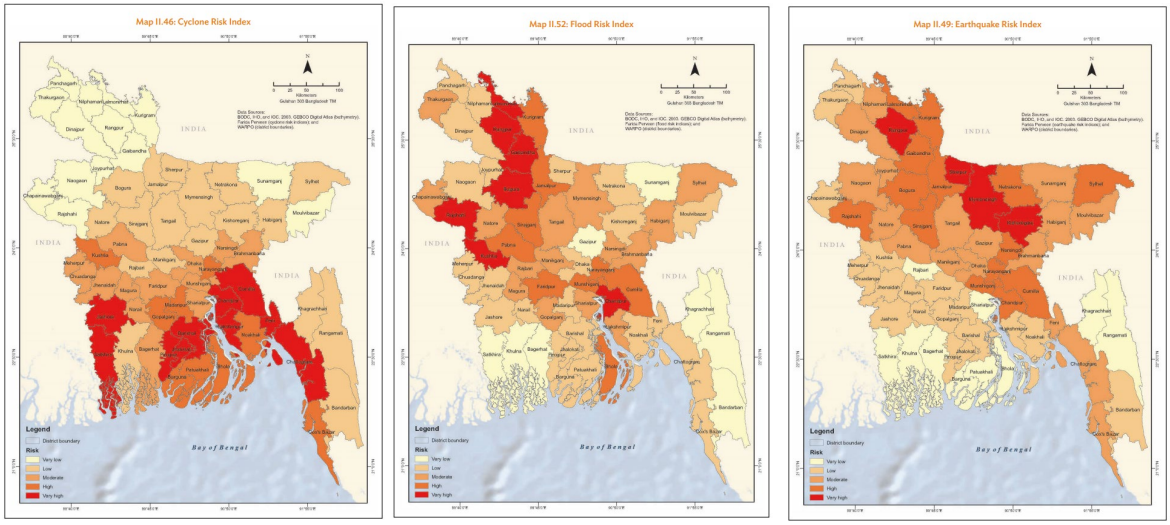
Strengthen the financial, regulatory, and technical capacities of the domestic insurance sector through targeted capacity-building programs, leveraging development partner support.	LT	H
Institutional Framework		
Mainstream strategic priorities of the forthcoming National Disaster Risk Financing Strategy (NDRFS) into the National Plan for Disaster Management.	MT	H
Establish a robust monitoring and evaluation framework for the implementation of the NDRFS that includes key performance indicators.	MT	H
Establish a mid-term review to understand and improve strategic implementation progress.	LT	M
Recommendations that are characterized as short-term (ST) may be undertaken quickly by the authorities (in a year) if agreed. Proposals that require longer time to implement are labeled medium (2-3 years, MT) or long-term (3+ years, LT).		

I. Context

Natural Hazards Profile

1. Bangladesh is highly exposed to disasters including floods, tropical cyclones, and earthquakes. According to the INFORM Risk Index 2024, the country ranks at 12th most exposed to cyclone risk and the most exposed to riverine floods globally.[1] Situated in the North Indian Ocean cyclone basin, the Bay of Bengal is annually exposed to approximately five tropical cyclones, with an average of one making a landfall.[2] Flood is an annual hazard in Bangladesh affecting 30 per cent of the country, or as much as 70 percent in worst cases.[3] Generally, four types of floods occur in Bangladesh including (a) floods caused by river overflows in the eastern and northern regions during April to May and September to November, (b) floods caused by intense rain and inadequate drainage, (c) monsoon floods during June to September and (d) coastal floods triggered by storm surges. Seismic hazard risk is considered high in the north and eastern part of Bangladesh. Figure 1 shows major hazard risks in Bangladesh.

Figure 1. Cyclone Flood and Earthquake Hazard Maps in Bangladesh



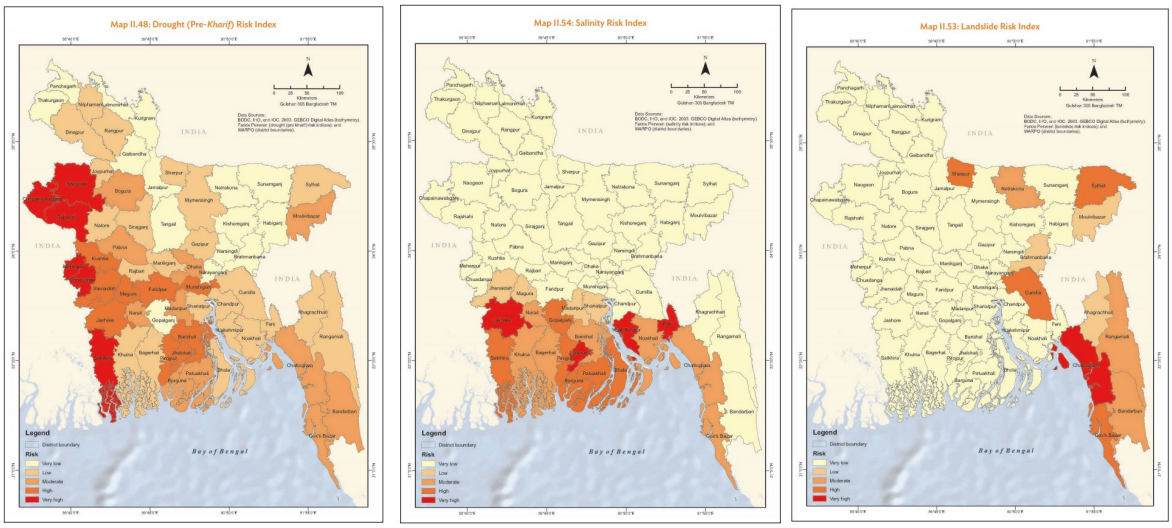
Source: Bangladesh Climate and Disaster Risk Atlas 2021.[4]

2. The national plan for disaster risk management (NPDM) 2021-2025 further identifies main hazards including: drought, salinity intrusion, and landslides among others. The dry areas of Bangladesh are located near the western border with the mean annual rainfall ranging approximately between 1,250-1,750 mm. Salinity intrusion is a concern over the country's coastal zone, covering approximately 30 percent of cultivated areas.[5] Landslide risk is considered high in the eastern part of Bangladesh (Figure 2).

[1] INFORM - Global, open-source risk assessment for humanitarian crises and disasters (europa.eu)
[2] ADB 2015 Bangladesh: Capacity Building for Disaster Risk Finance. Technical Assistance Consultant's Report.
[3] ADB 2015 Bangladesh: Capacity Building for Disaster Risk Finance. Technical Assistance Consultant's Report.
[4] ADB 2021 Bangladesh Climate and Disaster Risk Atlas: Exposures, Vulnerabilities, and Risks—Volume II
[5] Microsoft Word - Bangladesh NAP-main volume-Eng-October 2022-Cabinet Approved.docx (portal.gov.bd)

3. Between 2000-2023, Bangladesh experienced 134 incidents of disasters triggered by natural hazards affecting 130 million people, causing US$13.6 billion in total damage. According to EM-DAT as summarized in Table 1, catastrophic floods in Bangladesh include 2004 riverine floods along Meghna, Ganges-Padma, Brahmaputra-Jamuna basins affecting 36 million people causing an estimated US$3.4 billion in damage and 2007 floods along Brahmaputra-Jamuna and Ganges-Padma tributaries affecting 13.8 million people, causing an estimated US$141 million in damage.

Figure 2. Drought, Salinity, and Landslide Hazard Maps in Bangladesh



Source: Bangladesh Climate and Disaster Risk Atlas 2021.[6]

Table 1. Records of Past Disasters in Bangladesh (2000-2023)

Hazards	Hazard Sub-categories	Event Counts	# of Deaths	# of Affected Population	Total damage (US$1,000)
Drought	-	1	-	-	-
Earthquake	-	5	13	3,500	774,697
Extreme Temperature	-	14	1,553	378,000	-
Flood	Coastal Flood	1	1	-	-
	Flash Flood	9	170	6,734,197	849,753
	Flood (General)	9	712	29,131,015	1,710,700
	Riverine Flood	21	2,593	65,379,605	4,152,485
Land/mudslide		6	265	154,130	-
Storm	Lightening	8	206	60,000	4,939
	Severe weather	3	69	8,155	25,125
	Storm (General)	18	505	214,175	-
	Tornado	8	183	57,870	-
	Tropical Cyclone	31	5,294	27,321,036	6,098,439
Total		**134**	**11,564**	**129,441,683**	**13,616,138**

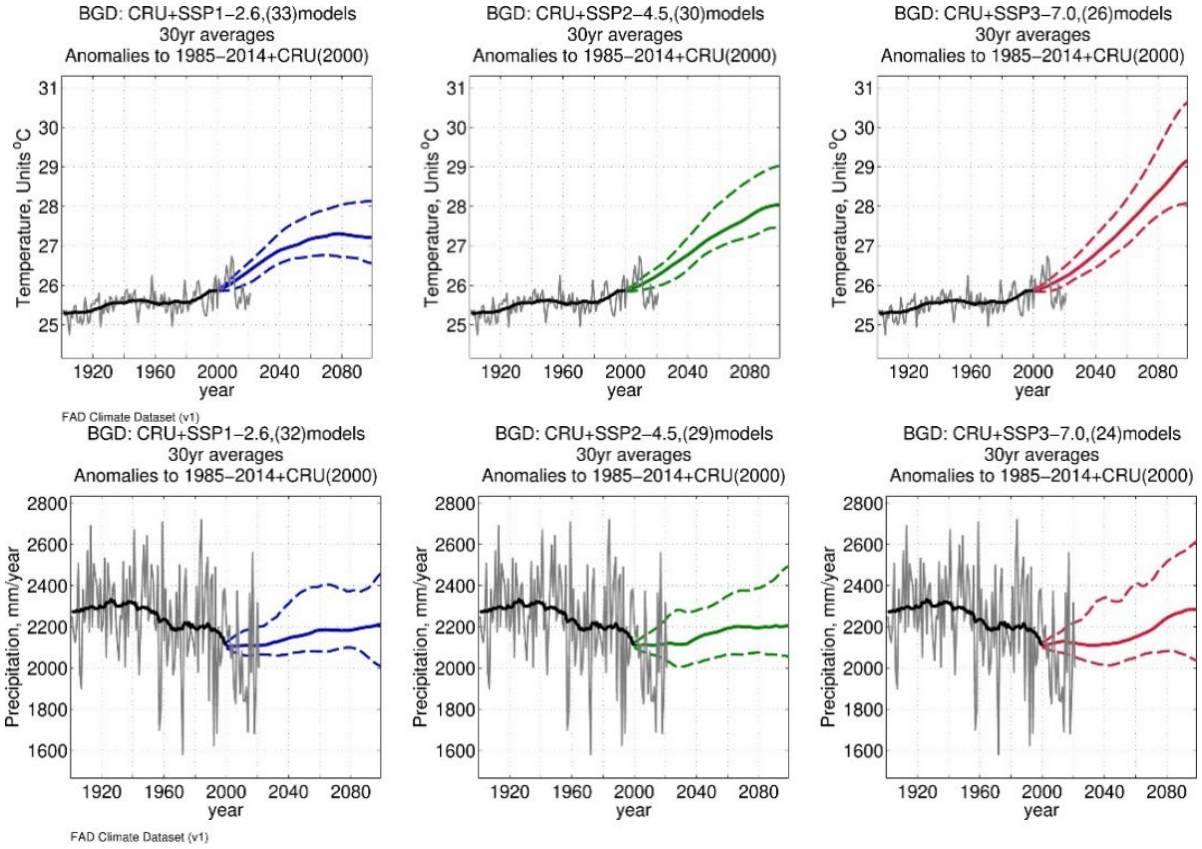
Source: IMF staff estimates based on EM-DAT.

4. Climate change is expected to significantly reshape Bangladesh's disaster risk. Estimates of additional warming in Bangladesh by 2050 relative to the 1995-2014 baseline are 1.1°C in the *Paris*

[6] ADB 2021 Bangladesh Climate and Disaster Risk Atlas: Exposures, Vulnerabilities, and Risks—Volume II

scenario (Shared Socioeconomic Pathways, SSP1-2.6), 1.2°C in the *moderate* scenario (SSP2-4.5), and 1.3°C in the *high* scenario (SSP3-7.0) The region is becoming wetter in general with intense rainfall projected to become more frequent in the region (Figure 3).[7,8] Riverine flood risk is projected to increase – with the present day 100-year discharge level, for example, becoming less than a 25-year event under SSP585[9] towards end-Century (Figure 4). Coastal population exposed to a 100-year coastal flood event, is likewise projected to increase from the current level of 27 percent to 35 percent with 0.5 meter of sea level rise.[10] There is considerable uncertainty regarding the localized estimate of climate change impacts on tropical cyclone risk with cyclone wind intensity potentially declining in the Bay of Bengal.[11]

Figure 3. Changes in Temperature (top) and Precipitation (bottom)



Source: IMF FAD CP Climate Dataset.

Notes: The gray line describes historical mean annual temperature/precipitation based on observations ((Climatic Research Unit (CRU)). The black line describes the 30-year moving average of historical data centered around each 30-year period. Colored lines represent the median and the 80 percent range of temperature and precipitation anomalies (10th and 90th percentiles) added to the CRU value (thick black line in the year 2000). SSP1-2.6 is in line with the Paris goal to keep global mean temperature increase below 2 ºC with respect to pre-industrial times. SSP2-4.5 represents continuation of present trends. SSP3-7.0 is a high emission scenario.

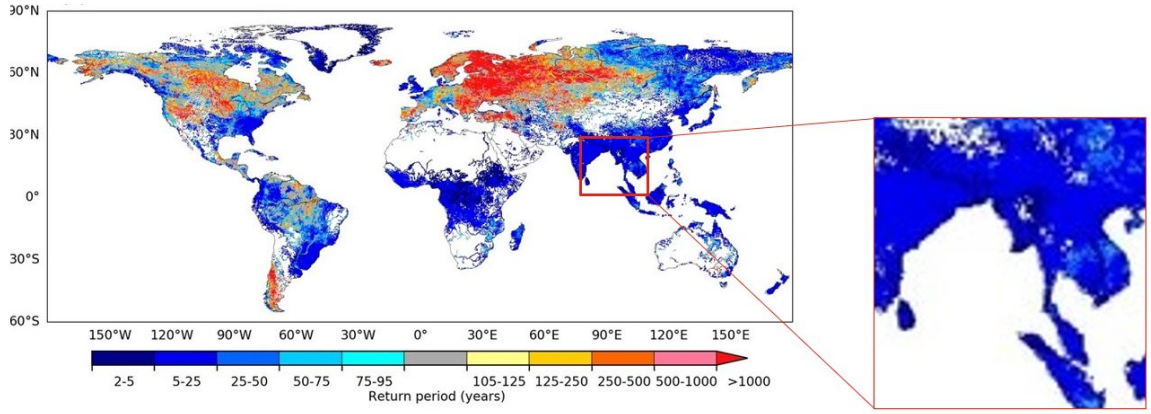
[7] IPCC_AR6_WGII_Chapter10.pdf
[8] IPCC WGI Interactive Atlas

[9] SSP 585 is increasingly considered unlikely high emissions scenarios, which may here be considered as the upper bound of high climate change impact case.

[10] Country Climate Development Report (CCDR) Bangladesh
https://openknowledge.worldbank.org/bitstream/handle/10986/38181/CCDR-Bangladesh-MainReport.pdf

[11] A globally consistent local-scale assessment of future tropical cyclone risk | Science Advances

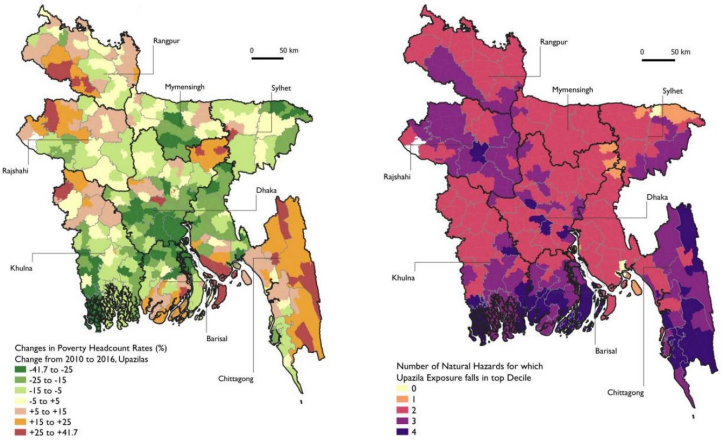
Figure 4. Projected Changes in Frequency of the Present Day 100 Year Flood



Source: Adapted from Hirabayashi et al. 2021.[12]

5. Disasters pose significant impediments to Bangladesh's poverty reduction objective. Bangladesh has achieved a remarkable reduction in poverty rates from an estimated poverty headcount ratio at US$2.25 a day of 41.9 in 1991 to 9.6 in 2022. [13] The trends over the past decade however illustrate that *upazilas* (sub-district*)* exposed to multiple hazards achieved slower rates of poverty reduction compared to non-exposed *upazilas* (Figure 5). Areas including parts of Rangpur, Rajshani, Khulna, Brisal and Chittagong experienced increases in the poverty headcount rates between 2010 to 2016 (those noted orange to red in Figure 5(a)), while these areas are also highly exposed to multiple climate-related hazards (Figure 5(b)). The existing surveys also demonstrate that adopting to and recovering from disasters pose significant economic burden to the most vulnerable population.[14]

Figure 5. (a) Change in Poverty Rates from 2010 to 2016 and (b) Compound Hazard Exposure



Source: World Bank (2022) Bangladesh CCDR.
Note: Hazards include river- and coastal floods, heat stress, drought, tropical cyclones, landslides, and air pollution.

[12] Global exposure to flooding from the new CMIP6 climate model projections | Scientific Reports (nature.com)
[13] Poverty headcount ratio at $2.15 a day (2017 PPP) (% of population) - Bangladesh | Data (worldbank.org)
[14] Shaikh Eskander, Paul Steele, Mamunur Rashid, Nuzhat Imam and Sirazoom Munira (2022) Still bearing the burden: how poor rural women in Bangladesh are paying most for climate risks. IEED working paper. 20851iied.pdf Review Report: 2020 Cyclone & floods in Bangladesh - Ongoing Emergency Response & Recovery - Bangladesh

Legal, Policy, and Institutional Context of Disaster Risk Financing in Bangladesh

6. The foundation of a robust National Disaster Risk Financing Strategy (NDRFS) lies in the Government of Bangladesh (GOB)'s articulation of a clear priority for enhancing fiscal and financial resilience in the face of climate-related shocks. A NDRFS is a public policy instrument designed to ensure the overarching goal of financial protection against disasters, while strengthening aspects such as timeliness of funding, disbursement efficiency and fiscal accountability (please see Annex II). As with all, resources are finite in Bangladesh and thus trade-offs are inevitable in the pursuit of fiscal stability and disaster preparedness. To navigate this complex landscape effectively, the GOB must engage in careful deliberation to determine overarching policy priorities for fiscal and financial resilience to climatic shocks. These priorities should ensure that fiscal resources are channeled strategically to safeguard the nation's fiscal health and protect against the economic impact of climatic shocks.

7. Bangladesh has well-established legal, policy and institutional frameworks for disaster risk management - including disaster risk financing. The legal basis for Bangladesh's national disaster management is founded on the Disaster Management (DM) Act of 2012. The DM Act 2012 codifies formal mandates of key actors and organizations, including the National Disaster Management Council (NDMC) chaired by the Prime Minister as the country's highest policy body on DRM. The NCDM is mandated to guide the country's DRM architecture, including 'strategic guidelines concerned to policies and plans about disaster risk management' while Ministry of Disaster Management and Relief (MODMR)'s Department of Disaster Management assumes the secretarial role. Operational responsibilities, including the financing and implementation of emergency preparedness and response, are shared across national and sub-national government actors. The DM Act 2012 has legal provisions to establish the National and District Disaster Management Funds, financed through government grants and donations, which is yet to be operationalized. Fund execution is governed by a supplementary rule.

8. The National Plan for Disaster Management (2021–2025) establishes strategic direction of the country's DRM, with three core goals of (i) saving lives, (ii) protecting investments, (iii) effective recovery and rebuilding. To achieve these overarching goals, 8 strategic directions are identified including (i) upgrading existing DRM programs and policies (ii) disaster management governance including inter-ministerial mainstreaming, (iii) investments for building resilience (iv) social protection policies and programs to address poverty and vulnerability (v) inclusive development, (vi) risk-informed private sector engagement, (vii) resilient post-disaster response and recovery and (viii) planning for emerging risks such as earthquakes. DRM financial options - private sector, insurance and funding for social protection - are among priority actions under the NPDM 2021-2025 such as Main Activity No. 10: implementing Disaster Risk Reduction (DRR) integrated/inclusive social safety net program (lead: MODMR), Preparing DRR financing strategies for strengthening resilience (lead: MODMR, co-lead: MOF, Economic Relations Division, and Ministry of Planning).

9. Roles and responsibilities of actors are codified in Standing Orders on Disasters 2019. Bangladesh has an extensive multi-level structure for relief, recovery and reconstruction support to disaster- affected communities. The national level coordination, in case of a disaster, is led by the NDMC, providing 'strategic directions to the concerned committees and individuals' supported by the MODMR serving as a secretariat. In general, national level bodies – including National Disaster Response

Coordinating Group (NDRCG) and Focal Point Operation Coordination Group (FPOCG) - are responsible for the overall policy and inter-ministerial response coordination. Local relief and recovery activities are led by sub-national committees of affected areas including Divisional Disaster Management Committee, District Disaster Management Committee, Upazila Disaster Management Committee, Union Disaster Management Committee and Ward Disaster Management Committee. Standing Order on Disaster (SOD) 2019 clarifies mandates relevant for the DRFS such as damage assessment, preparation of asset, prepositioning and distribution of relief goods, and implementation of social safety-net programs.

10. Bangladesh is taking a proactive stance to strengthen the enabling environments for disaster risk financing. The GOB is also working actively with other development partners on technical assistance activities such as with the United Nations Office for Disaster Risk Reduction (UNDRR) on the macroeconomic cost and benefit assessment of disaster risk reduction investment, Asia Development Bank (ADB) on the development of adaptive social protection framework and WB on the development of insurance regulatory environment. As part of the IMF's Resilience and Sustainability Facility with Bangladesh, the GOB is progressing on relevant reform measures including but not limited to: development of methodology for the analysis of macro-fiscal risk arising from climate change, climate-stress testing of financial sectors, and development of public asset registry.

11. The strategic direction of Bangladesh's disaster risk management policy and investment is guided by relevant multi-sectoral and sectoral frameworks. These include, but are not limited to:

- ***Perspective Plan of Bangladesh 2021-2041 –*** aimed at eliminating extreme poverty and become Upper Middle-Income Country by 2031 and High-Income Country by 2041, by strengthening four institutional pillars namely: (i) governance; (ii) democratization; (iii) decentralization and (iv) capacity building.[15]
- ***8th Five-Year Plan 2020-2025 –*** aims at "promoting prosperity fostering inclusiveness" by identifying investment programs and financing across priorities namely: (i) COVID-19 recovery; (ii) GDP growth, employment and poverty; (iii) inclusiveness; (iv) sustainable development, disaster climate resilience; (v) improvement of critical institutions; and (vi) SDGs and mitigating the impact of Least Developed Country (LDC) graduation.[16]
- ***Delta Plan 2100 –*** identifies investment priorities across six hotspots including (a) coastal areas, (b) Barind and drought-prone region, (c) haor and flash flood prone areas (d) Chittagong Hill Tracts region (e) river region and estuaries and (f) urban region.17
- ***Bangladesh Updated Nationally Determined Contribution 2021*** – outlines the country's unconditional and conditional GHG emissions reduction by 5 and 15 percent from Business as Usual (BAU) respectively along with adaptation priorities including disaster risk management.[18]
- ***Mujib Climate Prosperity Plan up to 2030*** -is the first climate vulnerable forum and vulnerable Group of 20 investment plan, aimed at fostering resilience and prosperity, calling for initiatives such as comprehensive climate and disaster risk management and financing strategy, locally-led adaptation hubs, and strategic energy hubs.

[15] Perspective Plan of Bangladesh 2021-2041 | FAOLEX
[16] 8th-Five-Year-Plan-compressed.pdf (prb.org)
[17] Bangladesh Delta Plan
[18] NDC_submission_20210826revised.pdf (unfccc.int)

- ***National Adaptation Plan 2023-2050*** -is aimed at achieving climate resilient nation across six goals including (i) protection against climate change and disasters; (ii) climate resilient agriculture, (iii) climate-smart cities; (iv) nature-based solutions for forestry, biodiversity and well-being (v)good governance of adaptation planning, and (vi) transformative capacity building and innovation.

12. The country's macro-fiscal frameworks further articulate overarching resilience objectives underpinning Bangladesh's disaster risk financing strategy. Bangladesh is currently implementing Public Finance Management (PFM) reforms. As outlined in the PFM Reform Strategy (2016-21) and PFM Action Plan (2018-23),[19] current PFM reforms are aimed at five goals namely: (i) maintain aggregate fiscal discipline compatible with macro-economic stability and pro-poor growth (ii) allocate resources consistent with Government priorities (iii) promote the efficient use of public resources and delivery of services through better budget execution; (iv) promote accountability through external scrutiny and transparency of the budget; and (v) enhance the enabling environment for improved PFM outcomes. Macro-fiscal priorities are further outlined in the Medium-Term Macro Policy Statement.

- **Medium Term Macroeconomic Policy Statement 2022-2023 to 2024-2025** – envisions "Return of Growth Momentum through Resilient Economic Recovery". For FY2025, GDP is projected to grow at 7.8 percent. With fiscal reforms aimed at strengthening of domestic revenue mobilization, the total revenue as percentage of GDP is projected to increase to 10.4 percent of GDP from 10.0 and 9.8 percent of GDP in FY 2024 and 2023 respectively. The current medium term macroeconomic policy statements include qualitative descriptions of climate change and disaster risk impact and priority and GOB is currently receiving IMF's technical assistance to strengthening the quantitative evaluation of macro-fiscal climate and disaster risk.[20]
- ***Bangladesh Climate Fiscal Framework (CFF) 2020*** – provides principles and tools for climate fiscal policymaking, identifying the demand and supply of climate funds while ensuring the transparency and sustainability of climate fiscal policy. Priority areas of interventions include but are not limited to: (i) climate inclusions in Tax, Value-added Tax, Subsidy and Pricing policies, (ii) climate financing options including climate bond, blended finance and emissions trading, (iii) private sector engagement in adaptation and mitigation, (iv) climate inclusive insurance policy, and (v) climate budgeting etc. Bangladesh's climate budget tagging system includes expenditure items relevant for disaster risk reductio and risk financing i but are not limited to: (i) Repair and maintenance of existing flood embankments; (ii) Repair and maintenance of existing cyclone shelters; (iii) Repair and maintenance of existing coastal polders (iv) improvement of urban drainage, etc. GOB has also conducted Annual Development Programme (ADP) expenditure review related to disaster risk reduction under 6th Five Year Plan[21], however, there is currently no explicit tagging methodology to track operational and ADP expenditure related to emergency response, rehabilitation and reconstruction beyond the climate budget tags.

Finally, sectoral framework relevant for DRFS are reviewed in the respective subsections of this report.

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[19] PFM Action Plan_2018-2023_FinalVersion.pdf (mof.gov.bd)

[20] MTMPS 2023-24 English.pdf (portal.gov.bd)

[21] GOB (2026) Trends of Disaster Related Public Fund Allocation in Bangladesh An analysis of ADPs during 6th Five Year Plan period (FY 2011- FY 2015)

II. Disaster Risk Financing Gap

A. Disaster Risk Financing Needs

13. The government's legal and moral obligations to finance response, recovery and reconstruction fall either as (a) explicit contingent and (b) implicit contingent liability within the fiscal risk assessment framework. Disasters cause significant destructions of physical assets and livelihoods, temporary (or sometimes permanently) displacing affected population. The government has a leading role to play in coordinating and financing emergency response, recovery (rehabilitation) and reconstruction, which could cause significant fiscal outlays. *Explicit liabilities* are legally binding obligations that governments must settle while *Implicit liabilities* represent non-legally binding moral obligations arising from public expectations or political pressures (Table 2). International experiences show that a country takes a variety of approaches to prepare for explicit and implicit liabilities [22]. Taking stock of, and clarifying, legal and moral obligations prior to disasters is an important prerequisite to strengthening fiscal resilience against disasters.

Table 2. Fiscal Risk Matrix with Examples of Direct and Contingent Liabilities

Labilities	**Direct** (obligation in any event)	**Contingent** (obligation if a particular event occurs)
Explicit Government liability as recognized by a law or contract	- Foreign and domestic sovereign borrowing (loans contracted and securities issued by central government) -Budgetary expenditures legally binding in the long term (e.g. civil servants' salaries and pensions)	-State guarantees for non-sovereign borrowing and obligations issued to subnational governments and public and private sector entities; -State insurance schemes (e.g. crop insurance, flood insurance); -Rehabilitation and reconstruction of public infrastructure following disasters;
Implicit A moral obligation of government that reflects public and interest-group pressure	- Future public pensions (as opposed to civil service pensions), if not required by law - Future health care financing, if not required by law - Future recurrent costs of public investments (e.g. climate adaptation)	-Defaults of subnational government or public or private entities on nonguaranteed debt and other obligations - Banking failure (support beyond state insurance) - Disaster relief, rehabilitation, and reconstruction support to private sector entities (households/firms);

Source: adapted from IMF 1999.

[22] A recent review by the Organizations of Economic Cooperation and Development (OECD) shows that while countries such as Australia, Japan and Mexico have more formal legal provisions for disaster-related contingent liabilities, countries such as Colombia France and Peru takes an alternative approach in which the scope of explicit liability is limited.

14. Disaster costs are typically distinguished among direct, indirect and macro-fiscal costs. According to the Post-Disaster Needs Assessment (PDNA) Guideline, direct costs (damage) refer to "partial or total destruction of public and private infrastructure and physical assets both in terms of number of units and their monetary value", while indirect costs (loss) refer to "an estimate of the changes in economic flows arising from the disaster" such as agricultural output losses, services disruption, and emergency relief expenditure. Macro-fiscal costs include changes in aggregate indicators such as GDP, balance of payments and fiscal balance. The exact magnitudes of macro- and fiscal costs are hard to discern , due to a number of factors such as the lack of robust counterfactuals, potentially longer-term nature of disaster impacts[23] and the frequent use of budget relocation which mask forgone fiscal costs, among others.[24] In this section we will focus on the direct and indirect costs (damage and losses) to characterize the resources needed for response, recovery (rehabilitation) and reconstruction.

15. Direct and indirect costs of disasters may be estimated based on catastrophe simulation or statistical analysis of past disaster events. 25 Based on the available global and national-scale assessments, there is considerable uncertainty regarding potential direct and indirect costs of disasters, underscoring the need to improve the availability of risk information. Among the three data sources reviewed, the analysis based on the EM-DAT database between 2000-2022 results in the lower bound estimates of disaster risk (Table 3). Floods on average resulted in reported damage twice every five years, at approximately US$670 million each (in 2022 price). Storms on average results in substantial damage once every three years causing US$880 million in damage (in 2022 price). ADB (2015) adopts a catastrophe simulation for cyclones and statistical analysis for past flood records and estimates that the annual average loss (AAL) (i.e. probability weighted average damage of disasters) to be approximately 0.7 percent of GDP (US$990 million in 2013 price) for cyclone and 1.5 percent of GDP ($2.2 billion in 2013 price) for floods. Coalition for Disaster Resilient Infrastructure (CDRI) (2023) adopts catastrophe assessments of floods, cyclone and landslides, and yields the upper bound estimates, with AAL of floods, cyclones and landslides to be approximately US$9.1 billion[26] .

Table 3. Direct and Indirect Cost of Disasters in Bangladesh

Year	Document	Source	Findings
Direct Cost of Disasters			
2024	EM-DAT 2000-2022	EM-DAT /IMF	Floods happen twice every five years, causing an estimated total damage of around US$670 million (in 2022 price) when they occur. Storms, including tropical cyclones, manifest approximately. once every three years with total damage of around US$880 million (in 2022 price) upon occurrence.

[23] IPCC (2012) Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation
[24] IMF 2023 Bangladesh - Improving the Fiscal Risk Statement
[25] Given the likely impact of climate change, forward-looking assessment is recommended over the use of past information.
[26] While the technical documentations do not state explicitly, GIRI database adopts 2018 as a base year of all geospatial and statistical information. It can thus be plausibly assumed that their economic values are expressed in 2018 price.

2023	Global Infrastructure Risk Model and Resilience Index	CDRI	Multi-hazard AALs is estimated at US$9.1 billion, which is expected to rise to US$10.2 billion under a high emissions scenario (SSP5-8.5). The largest shares of damage are expected in buildings, education and power facilities.
2015	Capacity building for disaster risk finance (DRF) in Bangladesh.	ADB	The AALs for cyclone and flood are estimated at 0.7% of GDP ($990 million in 2013 price) and1.5% of GDP ($2.2 billion in 2013 price).

Source: IMF staff compilation based on EM-DAT, CDRI, ADB.

16. Robust disaster risk financing planning in Bangladesh requires improvement in risk knowledge. The large differences observed regarding the above estimates stem from differences in risk assessment methodologies and analytical scales, together with potential data gaps. Significant progress has been made to collect underlying data that may be used to improve risk knowledge such as population exposure and vulnerability under Disaster and Climate Risk Information Platform (plancomm.gov.bd) Yet, the GOB currently does not have a unified risk modeling set up that may be used, both to derive probabilistic estimates regarding the costs of disasters and serve as a basis of disaster risk financing discussions as well as rapid post-disaster damage assessment (e.g. such as those implemented by WB's Global Rapid Post-Disaster Damage Estimation (GRADE) approach).[27] In the subsequent analysis of this report, we adopt ADB (2015)28 as a mid-range estimate to derive the potential response, recovery and reconstruction needs.

17. Direct and indirect costs of disasters may further be distinguished across the phases of disaster management operation namely (a) disaster response/early recovery and (b) rehabilitation, and reconstruction. The disaster (or humanitarian) response phase begins immediately after an initial disaster shock lasting weeks to a few months, including immediate life-saving relief activities as well as early recovery efforts which aim to restore the basic functionality of infrastructure, economic and social systems. Full recovery, rehabilitation, and reconstruction begins generally after the response phase, which may take a few years or over a decade depending on the scale of an event and reconstruction approaches taken. Understanding disaster management phases and preparing for different resource needs is an important part of disaster risk financing strategy.

18. Bangladesh will require considerable resources for (a) disaster response/early recovery and (b) rehabilitation, and reconstruction. While robust estimates of country's disaster risk will require detailed catastrophe modeling and in-depth analysis of past disaster response, rehabilitation and reconstruction expenditure, Figure 6 provides indicative combined annual risk of cyclone and flood estimated via 1,000 runs of stochastic simulations.[29] Underlying single hazard risk curves for floods and cyclones refer to ADB (2015). The ADB 2015 aggregate estimates of flood and cyclone risk respectively

[27] GFDRR The Global Rapid post-disaster Damage Estimation (GRADE) approach

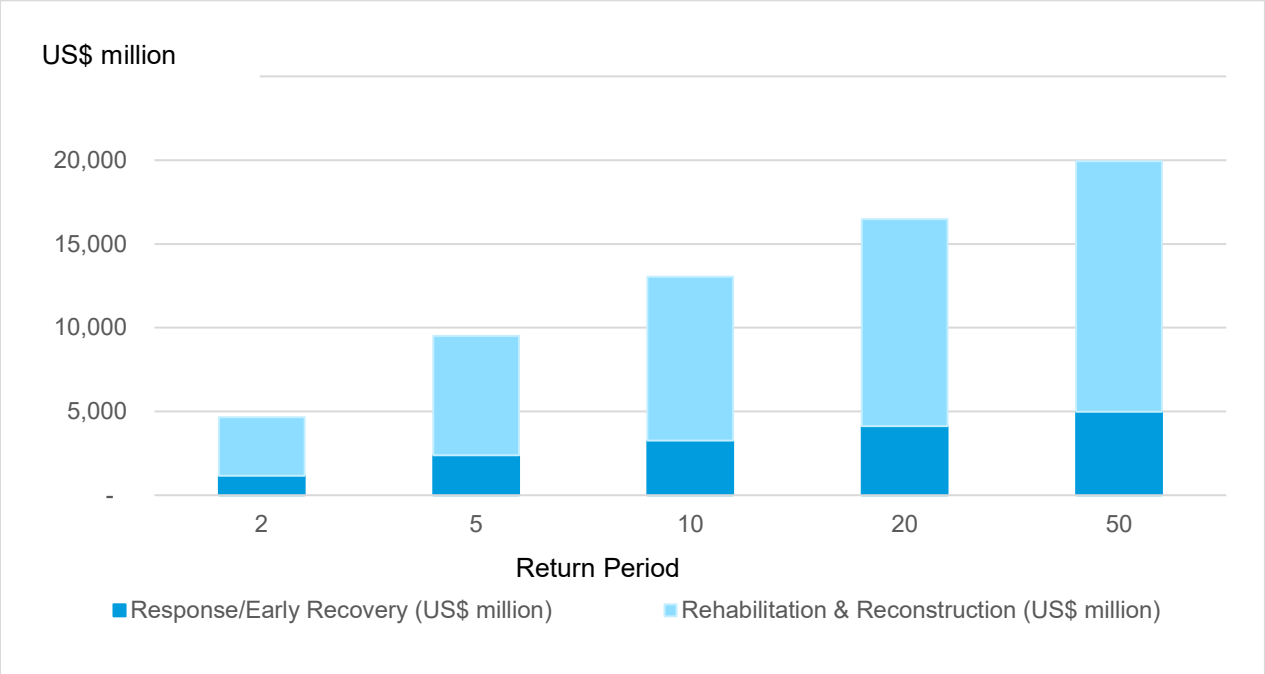
[28] In addition to being the mid-range estimate, ADB (2015) is based on local data collection, which was deemed more appropriate for the current assessment than GIRI 2023 based on global proxy analysis.

[29] Assuming two hazards are independent, monte-carlo simulation was conducted drawing from cyclone and flood risk curves.

was simply inflated into 2022-year prices. The annual combined risk includes those pertaining to private and public response, rehabilitation, and reconstruction needs.

19. Disaster response/early recovery costs include humanitarian response and early recovery efforts such as food, shelter, health, and income recovery support. Combined needs for annual response and early recovery for floods and cyclones were estimated approximately at US$1.2 billion (2 year event), US$3.3 billion (10 year event), US$5.0 billion (50 year event) respectively, accounting for 25 percent of total needs (Figure 6). According to Cyclone Sidr 2008 PDNA, early recovery requirements were estimated as 27 percent of total needs (US$ 360 million in 2008 prices), including items such as food (71 percent), shelter (13 percent), economic and social infrastructure repair (8 percent), income recovery support for agriculture (3%).[30] According to 2022 PDNA of Flashflood, humanitarian appeal accounted for US$ 55 million.[31]

Figure 6. Combined Annual Cost of (a) Response/Early Recovery, (b) Rehabilitation and Reconstruction Due to Flood and Cyclone



Source: IMF estimates.
Note: the horizontal axis represents return period of disasters such as once in two years, once in ten years, and so on.

20. Rehabilitation and reconstruction costs include resources needed to rebuild public and private assets including critical infrastructure. Combined needs for rehabilitation, and reconstruction costs for floods and cyclones were estimated approximately at US$3.5 billion (2 year event), US$9.8 billion (10 year event), US$15 billion (50 year event) respectively, accounting for 75% of total needs. According to Cyclone Sidr 2008 PDNA, rehabilitation and reconstruction needs were estimated as 73% of total needs (US$ 953 million in 2008 prices), including items such as housing (11%), transport (11%),

[30] Cyclone Sidr in Bangladesh: damage, loss and needs assessment for disaster recovery and reconstruction, March 2008
[31] GoB 2022 Post Disaster Needs Assessment 2002 FlashFlood.

water and sanitation (12%) embankment and water control (11%), education (11%).[32] According to 2022 PDNA of Flashflood, total rehabilitation and reconstruction needs of four key sectors were estimated at US$580 million including roads (54%), water resources management (25%), water supply and sanitation (7%) and agriculture and livestock (14%).[33]

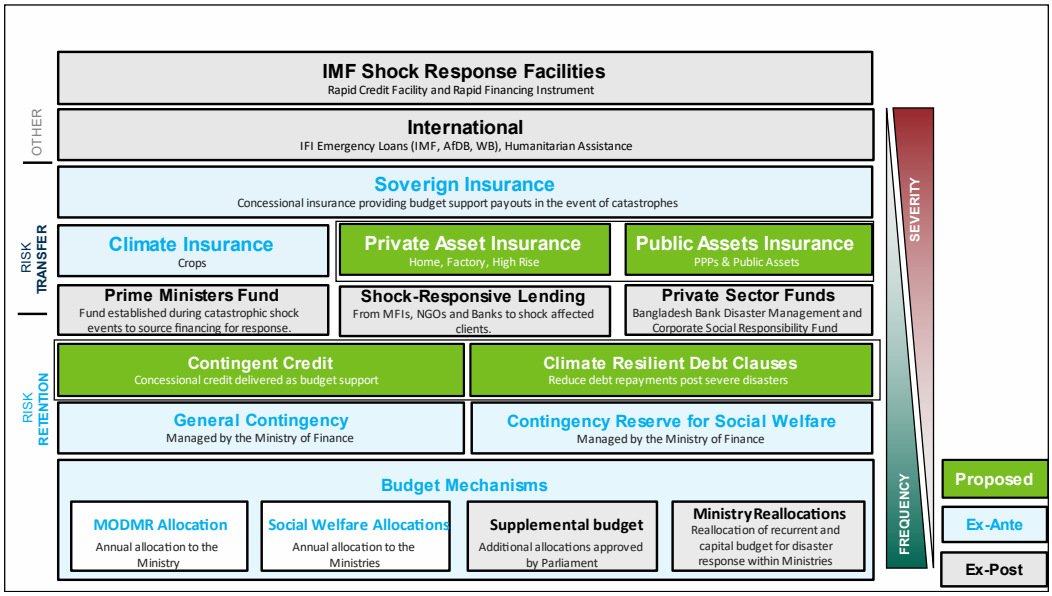
B. Financing Gap Analysis

21. A financing gap analysis is an assessment of the difference between the financial resources available and the actual funds required to effectively manage and respond to disasters. By assessing this gap, the GOB can understand the extent to which there is a funding shortfall (or not) for moderate, severe, and catastrophic disasters. Based on this understanding, the GOB can strategically mobilize additional risk financing instruments (including risk retention and risk transfer) to cover costs of disaster response, recovery, and reconstruction. Analyzing the findings of the financing gap analysis allows for more informed decision-making in allocating resources to enhance resilience and ensure swift and effective responses when disasters strike.

22. The following financing gap analysis will assess the status quo approach of the GOB when financing disaster response. The status quo analysis draws from the review of existing funding sources available to the GOB conducted in chapters III, IV and V, and compares these funding sources to the potential financial needs based on the risk assessment above. Based on the findings of this analysis, the recommendations in the remainder of the report discuss options for the GOB to consider to close the financing gap, initially focusing on frequently occurring events (occurring every 3-5 years), followed by a discussion of closing the financing gap for severe disaster events (occurring 10+ years). A graphical representation of the risk financing instruments available to the GOB is given in Figure 7 below (note the figure also includes proposed instruments, which the GOB does not currently use, in green. These are discussed in more detail throughout the report.

[32] Cyclone Sidr in Bangladesh: damage, loss and needs assessment for disaster recovery and reconstruction, March 2008
[33] GoB 2022 Post Disaster Needs Assessment 2002 FlashFlood.

Figure 7. Disaster Risk Layering in Bangladesh



Source: IMF staff.

Status Quo

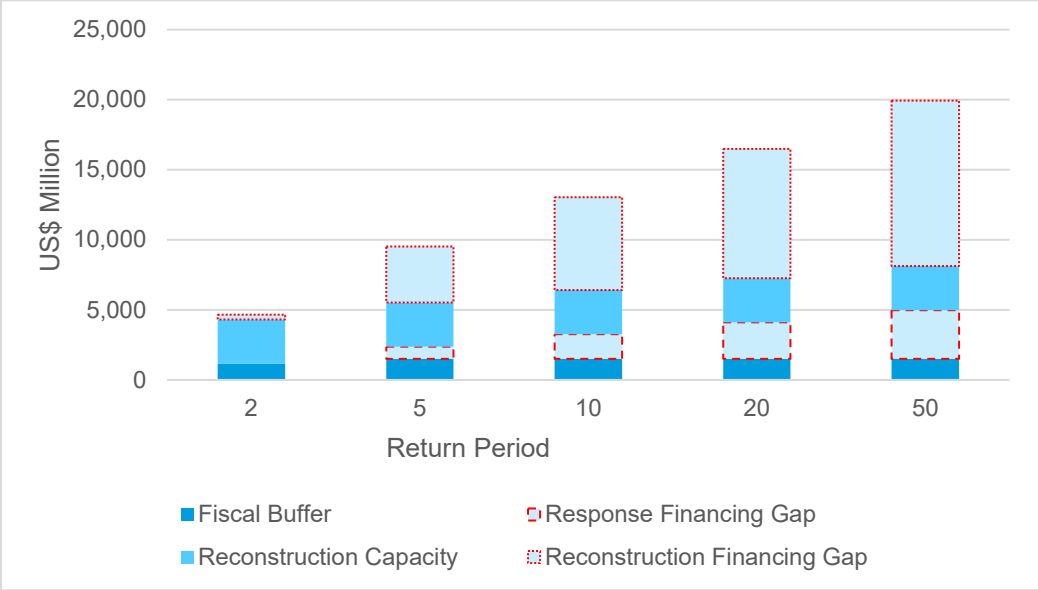
23. It is assumed that approximately US$1,502 million, or 0.32 percent of GDP can be mobilized for the response and early recovery phase. Discussed in Chapter III, GOB's ***fiscal instruments*** consist of the annual allocation to the MODMR and the general budget contingency. These instruments can mobilize US$816 million, or 0.2% of GDP. As discussed in Chapter IV the GOB has relief focused safety nets in the Ministries of Local Government Development, Land and Water. In addition, the Ministry of Finance (MOF) has established since FY 2021-2022 a contingency fund to channel relief assistance to vulnerable households via support social safety nets. Based on the budget allocations from FY 2022-2023 and 2023-2024, it is assumed that US$631 million, or 0.14% of GDP is available via these ***social instruments***. Finally, as discussed in chapter V, there are three instruments in the financial sector which can be mobilized for disaster response. The first is social services financing from MFIs, of which we estimate US$8.4 million could be channeled towards disaster response. The second is the climate risk fund which banks in Bangladesh may establish as part of Bangladesh Bank (BB)'s Corporate Social Responsibility initiative. Based on data from June 2023, we estimate that approx. US$18.9 million could be mobilized from this fund for disaster response. Third is the 'Sahos' fund[34] deployed by Palli Karma-Sahayak Foundation (PKSF), which enables Non-Governmental Organizations (NGOs) and MFIs to extend emergency lines of credit to vulnerable households impacted by shocks. This fund is approx. US$27.3 million. This places resource availability for disaster response from ***financial instruments*** at US$54.6 million, or 0.01% of GDP.

24. For rehabilitation and reconstruction, it is assumed that US$3,150 million, or 0.7 percent of GDP, can be mobilized post disaster. There is a 'disaster risk management' indicator within the

[34] Sahos - Palli Karma-Sahayak Foundation (PKSF)

climate budget tagging process being implemented by the GOB, however the indicator does not disaggregate between the various elements of disaster risk management, including risk preparedness, risk information, risk mitigation, risk finance and risk response. It is therefore difficult to assess whether past expenditures were for rehabilitation and reconstruction due to disaster events. That said, the Planning Commission conducted an analysis of disaster related public fund allocation as part of the ADP from FY 2011- FY 2015. This report has a broad definition of what is disaster related, ranging for investments in preparedness, risk reduction, risk mitigation and response. Based on the data in this report, we estimate that approx. 18 percent of projects implemented by disaster exposed Ministries have a disaster related focus. Drawing from this estimate and discussions with the authorities, we have assumed that 18% of the ADP is available for reconstruction. With the actual expended ADP in FY2022-2023 at US$34.6 billion, this equates to US$3,150 million, or 0.7% of GDP. This assumption could be revised based on an expenditures analysis (see Increase Clarity of Disaster Expenditures).

Figure 8. Financing Gap for Disaster Response and Reconstruction in Bangladesh



Source: IMF staff estimates.
Note: the horizontal axis represents return period of disasters such as once in two years, once in ten years, and so on.

25. GOB has access to sufficient resources to meet the cost of response and reconstruction due to disasters in an average year, however faces financing gaps for moderate and severe disaster events. Under the status quo, the financial resources available to the GOB can fully finance response costs and the majority of reconstruction costs up the median loss event, that is the disaster event which is expected to occur every other year. As shown in Figure 8 above, there is no financing gap for response, and a small financing gap for reconstruction, for the 1-in-2-year event. However, for moderate disasters such as those occurring every three to five years, the GOB faces a financing gap. For a one-in-five-year disaster event (each year there is a 20% chance of occurrence), the response financing gap is US$880 million, and the reconstruction financing gap is US$4.0 billion. Looking at catastrophic disaster events the financing gap increases significantly – for a one-in-fifty-year disaster event leads to a response financing gap of US$3.5 billion, and the reconstruction financing gap is US$11.8 billion.

III. Fiscal Policy Response to Disaster Risks

A. Landscape of Fiscal Policy Response to Disaster Risks

26. This section consists of an analysis of the fiscal instruments which the Government of Bangladesh (GoB) utilizes to finance response to disasters. It summarizes the various budgetary, credit and insurance for public asset instruments available to the GOB to mobilize resources for the relief, recovery, and reconstruction phases of disaster response. When discussing the various instruments, key attributes are expanded including the speed at which they can be mobilized to finance disaster response, the volume of resources mobilized in addition to the triggering mechanisms enabling access to the instrument. Based on this analysis, existing policy gaps are identified followed by recommendations to strengthen fiscal policies for DRF in Bangladesh.

27. The GOB has initiated the process of developing a disaster risk layering approach to finance disaster response in alignment with international best practice. This approach includes the combination of multiple fiscal instruments which can be drawn upon to mobilize funding to respond to disasters. This approach seeks to maximize cost-effective financial management by utilizing the most financially efficient instruments to finance disaster response to a range of disaster events (from frequent to catastrophic) (an example of risk layering is given in Box 1 below). Over the medium-long term, this mitigates the impacts of disasters on the fiscal balance. The risk layering approach of the GOB relies on an array of budgetary instruments to finance disaster response in addition to a pilot sovereign insurance product. Box 1 shows additional risk financing instruments from the Philippines.

Box 1. Risk Layering in the Philippines

Context

Located within the Pacific Ring of Fire the Philippines is highly prone to devastating natural hazards. It is estimated that on average the country is hit by 20 typhoons each year, and earthquakes are common as well. The annual average loss of public and private assets due to typhoons and earthquakes is approximately US$3.5 billion (1 percent of GDP). The financial impact of these disasters hurts efforts to reduce poverty and promote sustainable economic growth in the country. These disasters not only cause immediate destruction but also have long-term economic impacts reducing growth and capital stock.

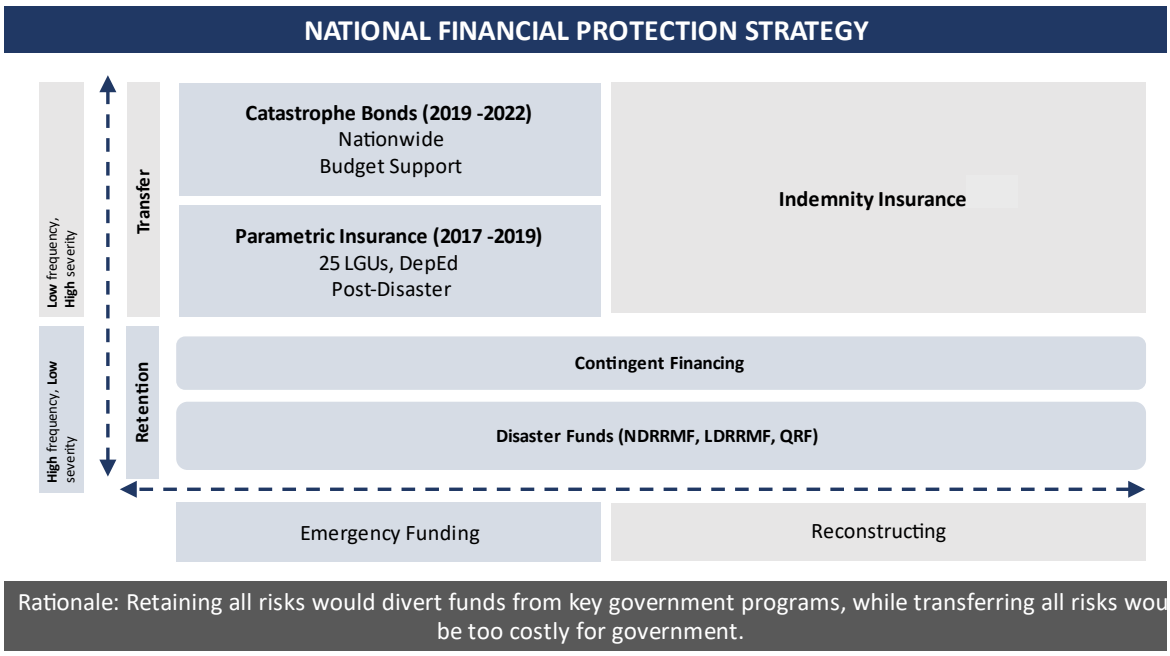
National Disaster Risk Financing Strategy

In response to these challenges, the Philippines has implemented a comprehensive disaster risk financing strategy. This strategy aims to provide financial protection against natural disasters and reduce the socio-economic impact on vulnerable populations. The strategy seeks to strengthen resilience to disasters at the national, provincial, and local level.

Box 1. Risk Layering in the Philippines (cont.)

Risk Layering

Risk layering is a key part of the Philippines' risk financing strategy. The Government of the Philippines (GoPH) has systematically expanded its suite of risk financing instruments over time. Through developing an appropriate mix of risk retention and risk transfer instruments, the GoPH has significantly expanded its fiscal buffers with cost effective coverage for disaster response with fiscal risk from shocks distributed across different markets and instruments. The risk retention instruments established by the GoPH include multiple disaster funds in addition to multiple contingent lines of credit from development partners and MDBs. Complementing the risk retention instruments, the GoPH has actively leveraged risk transfer instruments at the local and international level through purchasing a Catastrophe bond, parametric insurance for its provinces and indemnity insurance for critical public assets.



Source: Government of the Philippines.

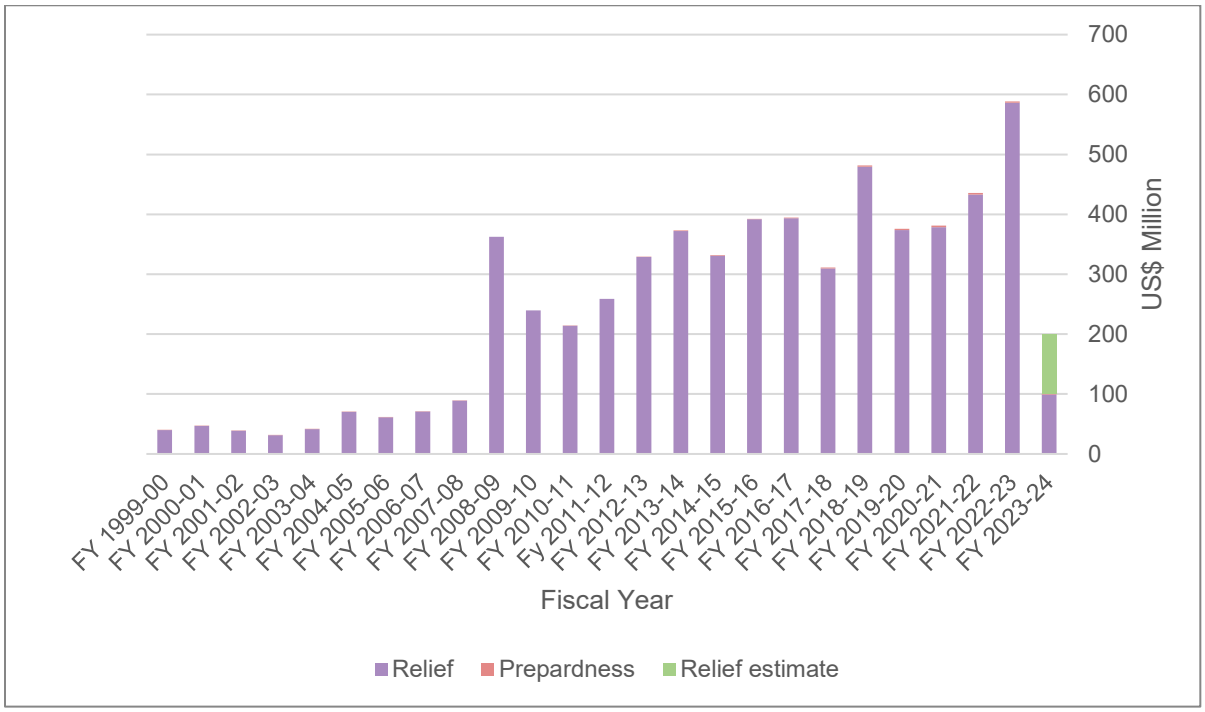
Budgetary Instruments

28. Post disaster budget execution mechanisms can be used to rapidly mobilize funds for disaster response. They include: i) annual contingency reserves within a budget which provide flexibility to the government to respond quickly in the immediate aftermath of a natural disaster, ii) specialized disaster funds established to provide short-term liquidity in the immediate aftermaths of disasters, and iii) budget reallocations, including virements, supplemental budgets and reprioritization. These budgetary instruments are critical for highly vulnerable countries such as Bangladesh which can experience large disasters shocks as a percentage of their GDP (see Disaster Risk Financing Needs). That said, they require strong governance structures with objective and transparent rules for disbursement to ensure effectual use of public funds. A more detailed discussion of these instruments can be found in 'How to

Manage the Fiscal Costs of Natural Disasters' (IMF, 2018) and 'Strengthening infrastructure Governance for Climate-Responsive Public Investment' (IMF, 2022).

29. A significant proportion of the annual budget allocation to the Ministry of Disaster Management and Relief (MODMR) is spent on disaster response, serving as the primary fiscal buffer for disaster response. Based on an analysis of past five years of expenditures, the MODMR spend an average of approx. US$453 million, or 0.1 percent of GDP, per annum. Of the total allocation, an average of 95 percent is spent on disaster relief efforts and risk reduction purposes. Given the cost of disaster response is unknown at the start of a budget cycle, the MOF set an initial allocation for the MODMR. As the budget year progresses the MOF then revises this allocation up/down based on experience, as seen by the annual variability in expenditure in Figure 9. However, it should be noted that for years when severe disasters hit Bangladesh (severe floods in 2004, tropical cyclone Sidr in 2007), the expenditures of MOMDR did not increase significantly, demonstrating that historically the GOB did not significantly increase the budget allocations to MODMR in such years. In regular budget of the MODMR nearly US$10 million is allocated to face any unforeseen disaster which supports the ministry in mega disaster events.

Figure 9. Annual Expenditures MODMR



Source: Budget data, nominal values

30. The MOF establishes a general contingency reserve as part of the annual budgeting process, which can serve as a secondary fiscal buffer for disaster response. This contingency reserve is used for unforeseen expenditures. The value allocated to this contingency reserve varies in the range of 0.4-0.7 percent of the total budget with an average of 0.52 percent of budget over the past 10 years. In the FY2023-2024 budget the size of this reserve was US$363 million. Beyond the initial allocation, the MOF can, if needed, re-allocate expenditures within their Ministry to top-up the reserve

when Line Ministries incur unforeseen expenditures for emergencies (including but not exclusively natural disasters) beyond their financing capacity, they send a proposal to the MoF to access the reserve. The MoF assesses the proposals against set criteria and decide as to whether to approve or deny the request. Proposals up to 2 million Taka (US$18,000) are approved by the Additional Secretary, with the Secretary approving larger proposals. A drawback of this reserve from a risk financing perspective is that it can be used to meet any unforeseen expenditures. Thus, if a disaster occurs late in the budget cycle and the reserve is depleted then the GOB will not be able to rely on it as a fiscal buffer.

31. The MOF also recently established an additional contingency fund to finance relief efforts via social welfare programs, with an average allocation of approx. US$ 590 million over the past two fiscal years. This fund is discussed in more detail in Shock-Responsive Social Protection.

32. Line ministries establish their own contingency reserves and reallocate expenditures from their operating and capital budgets to finance disaster response activities but the funding level is not sufficient. Line Ministries can establish a line in their operating budget which can be used to meet unexpected or emergency expenditures. This amount has varied significantly over the past four fiscal years, from US$4-41 million. As with the general contingency reserve, these resources can be used to meet any unforeseen expenditure. With disasters impacting multiple sectors in Bangladesh, line ministries are often forced to reallocate resources away from key projects to channel into relief efforts. These relief activities by line ministries are not directly budgeted for nor tracked by the MOF, meaning it is difficult to ascribe a value to them. Furthermore, the reallocation of funds away from capital projects incur a high opportunity cost, delaying, or at times eliminating, the economic and development gains expected from such projects. Such reallocations can undermine the GOB's ambitious development objective to become a high-income country by 2041. Ministries which conduct such reallocations include the Ministry of Public Works, the Ministry of Agriculture, and the Bangladesh Water Development Board under the Ministry of Water Resources.

33. The Ministry of Food maintains a strategic food reserve to enable the rapid mobilization of in-kind relief to disaster affected vulnerable households. The size of this food reserve fluctuates over time. As of February 2024, its size was 1,412,314 tons of rice, 237,570 tons of wheat and 15,916 tons of paddy. Ascribing a value to the food reserve is challenging, given the fluctuating nature of rice and wheat prices on both domestic and international markets. That said, an indicative value for the food reserve based on international prices for grains is approx. US$580 million[35]. While not a financial instrument, the strategic food reserve serves as a fiscal buffer of sorts as it alleviates the fiscal burden of procuring food to provide in-kind support to vulnerable households when disasters occur.

34. The legal and regulatory environment in Bangladesh has created the possibility to establish multiple contingency funds to finance disaster response, however in practice none are active. Numerous disaster and contingency funds exist on paper to address various shocks, distributed across different ministries and agencies including the Ministry of Disaster Management and Relief (MODMR), district disaster management committees, the Water Development Board, Upazila Disaster Response Coordination Group, Ministry of Fisheries and Livestock, Rural Development and Cooperatives Division, and the Federation of Bangladesh Chambers of Commerce & Industries (FBCCI). Furthermore,

[35] Prices based on spot prices on US traded exchanges

the Disaster Management act of 2012 authorizes the Ministry of Disaster Management and Relief to establish 'The Disaster Management Fund'. The rules governing the fund were finalized in 2021 by the MODMR. Based on interactions with the authorities none of these contingency funds are active.

35. Tax revenue mobilization can also complement budgetary mechanisms to increase buffers for disaster expenditures. Bangladesh's tax-to-GDP ratio is one of the lowest in the world, which has constrained critical spending, including disaster expenditures. Sustained revenue mobilization over the medium term could effectively enhance buffers for disaster expenditures.

Creating Fiscal Space with Contingent Credit

36. Currently, the GOB does not utilize any ex-ante contingent credit instruments to support the financing of disaster response. As contingent lines of credit are (generally) offered on concessional terms, they are a cost-effective instrument which can support fiscal buffers available to the MoF.

37. There are an expanding number of ex-ante contingent credit instruments available to Bangladesh which provide concessional credit in the event of severe climatic shocks. Whilst a loan instrument which ultimately needs to be repaid, contingent credit provides numerous advantages for Bangladesh. First, International Finance Institutions (IFIs) provide loans on concessional terms[36], given the purpose of the instrument is to protect the fiscal position of a country impacted by a disaster shock. Second, for ex-ante contingent lines of credit, the Ministry of Finance as well as market participants in the country are assured in the knowledge that the government can immediately access liquidity in the event of a large disaster occurring. And third, the instruments have pre-specified drawdown triggers, typically the member country's declaration of a state of emergency, removing uncertainty as to whether there will be a payout in the event of large disasters[37]. Based on a review of documentation, discussions with IFIs and Bangladesh's status as a low-income country, it is estimated that the GoB could mobilize an additional approx. US$1.1 billion, 0.23 percent of GDP via ex-ante contingent credit arrangements. As the limits for contingent credit arrangements are driven by income status, this would increase to 0.4 percent of GDP should Bangladesh graduate from low-income status.

38. The GOB can build on experience utilizing ex-post contingent lines of credit to support the financing of extreme disaster events. In 2020 the GOB received support from the IMF's Rapid Financing Instrument (RFI) and Rapid Credit Facility (RCF) to provide prompt financial assistance of 0.2% of GDP for their Covid-19 pandemic response (details in Box 2 below). These facilities are available to any IMF member country facing an urgent balance of payments need and can be called upon to provide additional surge liquidity for extreme shocks. While significant volumes of finance can be mobilized using the RFI and RCF, it should be noted that these instruments are only eligible for countries impacted by extreme shock events, and thus should only be relied upon in such circumstance.

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[36] The repayments rates of the World Bank Development Policy Operation with Catastrophe Deferred Drawdown Option (CATDDO) would match those of other World Bank loans which the GOB utilizes. A similar approach is taken for contingent lines of credit offered by the Intra-American Development Bank, the Asian Development Bank and the Japan International Cooperation Agency

[37] As opposed to parametric insurance contracts which provide payouts based on modelled loss and are subject to basis risk – i.e., the risk of a disaster occurring, and no payout being triggered.

Box 2. IMF's Rapid Credit Facility

Case Study: IMF Emergency Financial Assistance to Bangladesh Amidst the COVID-19 Pandemic

Introduction:

On May 29, 2020, the International Monetary Fund (IMF) approved a disbursement of US$732 million in emergency financial assistance to Bangladesh. This assistance, comprising SDR 177.77 million under the Rapid Credit Facility (RCF) and SDR 355.53 million under the Rapid Financing Instrument (RFI), was necessitated by the severe impact of the COVID-19 pandemic, creating a temporary balance of payments shock, and impacting the country's economic stability.

Background:

As a result of the Covid-19 pandemic, Bangladesh's economy faced significant challenges, including weakened domestic demand, a sharp decline in exports, and a reduction in remittances. The Government of Bangladesh swiftly responded to the crisis with a comprehensive set of measures. These included increased health expenditures, expanded food distribution, cash transfer programs for vulnerable populations, ensuring wage payments in export-oriented industries, and facilitating working capital for businesses and farmers.

IMF Assistance and Purpose:

The approved funds from the IMF were provided as budget support, supporting the financing needs of the government in response measures under health, social protection, and macroeconomic stabilization. The disbursement aimed to meet urgent balance-of-payments and fiscal needs, mitigating the economic fallout from the pandemic and catalyzing additional support from the international community.

While this case study focuses on the COVID-19 pandemic, it is important to note that the RCF and RFI can serve as a rapid response mechanism for various shocks, including climatic disasters. The IMF's support under the RCF helps countries navigate the immediate challenges of shocks, maintaining macroeconomic stability, and facilitating subsequent economic recovery. The disbursement mechanism ensures timely access to liquidity, providing a lifeline for countries facing crises. This case underscores the flexibility and effectiveness of the IMF's financial instruments in addressing diverse and unforeseen challenges, aligning with the principles of fiscal resilience and risk mitigation.

Source: IMF staff.

39. Beyond contingent lines of credit, the Government of Bangladesh could explore debt innovations such as climate resilient debt clauses (CDRCs) which create fiscal space upon the occurrence of disasters. CDRCs enable disaster affected countries to defer their debt payments for a pre-determined period, with the aim of expanding fiscal space to provide aid and support to affected populations. CDRCs could support the GoB avoid liquidity challenges when impacted by disasters, and in extreme circumstances avoid costly defaults. CDRCs are already used in Caribbean countries like

Barbados and Granada which are regularly impacted by hurricanes. In addition to CDRCs, other instruments which crate fiscal space post disaster include the IMF's Catastrophe Containment and Relief Trust (CCRT) which provides grants for debt relief for the poorest and most vulnerable countries hit by catastrophic natural disasters or public health disasters (Box 3).

Box 3. The Catastrophe Containment and Relief Trust (CCRT)

Case Study: The Catastrophe Containment and Relief Trust (CCRT): Providing Crucial Support in Times of Crisis

The CCRT:

The Catastrophe Containment and Relief Trust (CCRT) plays a pivotal role in providing grants for debt relief to the world's poorest and most vulnerable countries facing catastrophic natural or public health disasters. CCRT assistance is extended to countries eligible to borrow from the IMF's Poverty Reduction and Growth Trust (PRGT) with a per-capita income below the International Development Association's (IDA) operational cutoff. Eligibility for relief requires meeting specific criteria related to the scale of impact from natural or public health disasters.

For natural disasters, eligibility criteria include direct effects on at least one-third of the population, destruction of more than a quarter of the country's productive capacity, or damage exceeding 100 percent of GDP. Public health disasters cover epidemics and pandemics, with qualifying criteria based on life-threatening epidemic effects, significant economic disruption, and the potential for the spread to other countries.

Assistance Provided:

In the event of a natural disaster, member countries receive debt flow relief on their IMF debt service for two years following the disaster. For public health disasters, countries may receive up-front grants covering debt service for up to two years, provided the CCRT has sufficient resources. Full cancellation of a country's debt to the IMF is considered in cases of substantial and long-lasting balance of payments needs.

Aid Allocation and Impact:

As of December 2021, the CCRT has approved five tranches of aid related to the COVID-19 pandemic. Thirty-one CCRT-eligible countries received SDR 690 million (US$927 million) in debt relief over the two-year period from April 14, 2020, to April 13, 2022.

40. The GOB's use of ex-ante sovereign financial instruments for disaster response and recovery is limited. Bangladesh has transitionally relied on IFI's emergency lending for disaster recovery. These include instruments such as WB's the Crisis Response Window (CRW) (e.g. Emergency 2007 Cyclone Recovery and Restoration Project) and ADB;'s emergency assistance project (e.g. 2006

Flood Damage Rehabilitation Project[38]). GOB currently avails of pre-arranged contingent components within the standard IFI lending operations, in particular the WB's Contingency Emergency Response Component, under which undisbursed resources can be reallocated for a pre-agreed list of disaster response and recovery expenditure**.** However, the amount of funding available through these ex-ante instruments is very limited.

41. The GOB could consider expanding the use of market-based risk transfer instruments to protect fiscal space. Such instruments can protect fiscal space while crowding in private capital and capacity for adaptation. Insurance mechanisms, whether covering public assets, sovereign risks, or non-life impacts, act as a safeguard for fiscal space by transferring risk, providing rapid liquidity, and reducing the immediate financial burden on governments. Appropriately designed insurance contracts can support fiscal stability and mobilize private capital for the climate adaptation agenda while facilitating efficient disaster response and recovery.

42. The GOB currently has minimal insurance of public assets. The GOB is in the process of strengthening their data on critical infrastructure (via a reform measure in the IMF RSF) a pre-requisite for comprehensive public asset insurance. By insuring such assets, the GOB can transfer part of the cost of rehabilitation and rebuilding to the private sector, effectively safeguarding fiscal space. There are onerous pre-requisites to implement public asset insurance which should be taken into account, including strong data inventories with geolocated assets as well as a well-capitalized and willing non-life insurance market. When disasters strike, the financial burden of repairing or replacing these assets is borne by insurance providers, rather than government budgets. This tool can protect the reallocation of fiscal resources earmarked for essential public services and social programs, enhancing overall fiscal stability. Insuring public assets is particularly important for large infrastructure investments, such as those advanced by the PPP authority, given their significant cost and exposure to force majeure events. Such assets can create significant contingent liabilities on the state if damaged or destroyed by natural disasters.

Disaster-Responsive Public Procurement

43. The GOB has established disaster-responsive public procurement processes in recognition of the challenges posed by natural disasters to standard procurement processes. Expedited procurement procedures support line ministries rapidly procure goods and services, critical to effective disaster response. That said, expedited procedures should ensure accountability, transparency, and overall value for money, whilst considering quality, cost, and timeliness of delivery. The GOB has developed and enacted a direct tendering which enables line ministries to expedite the procurement processes under specific scenarios, including post natural disasters. The direct process has a tiered structure to approval, with amounts below a threshold approved by the relevant line ministry, and above a threshold approved by a Cabinet Committee of Economic Affairs, consisting of membership from ministries active in disaster response. The mission team heard very positive feedback from Ministries which successfully used the direct procurement process during eligible disaster scenarios, including the Ministry of Water Resources. One challenge discussed was the fact that the threshold levels do not increase over time. With inflation at approximately 10% per annum, this can rapidly become a constraint

[38] https://www.oecd.org/countries/bangladesh/38044316.pdf

to effective use of the expedited procurement method. In addition, it is important that transparency and accountability are well managed as part of the direct procurement process.

44. Building on the direct procurement process, the GOB plans to expand their toolkit for disaster responsive public procurement. The Bangladesh Public Procurement Authority (BPPA) acknowledged some challenges with disaster responsive public procurement in Bangladesh. First, Line Ministries which are not used to the direct procurement process tend not to use it, and instead rely on the familiar standard procurement processes. Second, the Auditor General would benefit from capacity strengthening on the direct procurement processes, to better understand how it differs from standard procurement, the need for a direct procurement method given Bangladesh's vulnerability to disasters, and the impact of the expedited method. Finally, the BPPA is interested to explore additional ways to expand disaster responsive public procurement beyond the direct process. To address some of these issues, the BPPA has requested the ADB to support them to draft and implement guidelines covering disaster-responsive public procurement.

B. Assessment of Policy Gap

Budgetary Instruments

45. As mentioned in the Financing Gap Analysis, the GOB has access to fiscal buffers of US$1,502 million, or 0.32 percent of GDP, approximately equating to the average cost of disaster response. Establishing fiscal buffers incur an opportunity cost as setting aside the funds the GOB is not programming the resources as part of the capital or recurrent expenditure. With this in mind, it is important to 'right size' fiscal buffers such that that are neither too small nor large. In the case of Bangladesh, the MOF has struck the right balance in sizing their fiscal buffers in setting them at a level approximately equal to the average cost of disaster response. It should be noted that this number could potentially increase in severe disaster years if the MOF tops up the contingency reserve via reallocating budget within the Ministry. This upward flexibility is a useful feature of the fiscal buffers which the MOF has established, enabling the rapid mobilization of surge resources during moderate shocks.

46. There are limits to the flexibility of the fiscal buffers, which could constrain the ability of the GOB to respond to moderate disasters. Based on data analyzed from past disaster years, it is noted that when severe disasters occur, the GOB has faced limits on its ability to rapidly scale up funding for disaster response. This was the case for the catastrophic floods in 2004 and cyclone Sidr in 2007 where there was not a significant increase in the budget allocation to MODMR. The limited capacity of the MOF to rapidly mobilize funds for disaster response will likely constrain GOB's ability to respond to moderate disasters.

47. The MOF can use the Medium-Term Fiscal Plan (MTFP) as an exercise to deliberately set their fiscal buffers. With the financing gap analysis in this report, the MOF now have data on cost of response for average, moderate, severe, and catastrophic disasters. With this data in mind, the MOF can maintain their fiscal buffers at a level where they are comfortable. Based on international experience, the current size of the fiscal buffer is broadly in line with best practice, setting around the medium / average cost of disaster response. With that said, it is important that the MOF expands its access to additional risk

financing instruments to enable them to mobilize additional resources when its fiscal buffers are exhausted (next section).

Contingent Credit

48. Contingent credit instruments can enhance flexibility of fiscal buffers, creating fiscal space immediately post disasters. For moderate disaster events, contingent credit instruments can add significant value to the disaster risk financing approach in Bangladesh through enabling the MOF to rapidly mobilize additional resources to complement its fiscal buffers. Based on the financing gap analysis, if the GOB was to maximize its access to contingent lines of credit, it would be able to finance disaster response and recovery up to the 1-in-5-year event. Both policy-based lending instruments as well as CDRCs can create critical fiscal space post disasters enabling the GOB to mobilize and implement a more effective response. The GOB should build on their successful experience utilizing the IMF's RCF/RFI to expand their suite of contingent credit instruments.

Insurance of Public Assets

49. The lack of insurance of public assets likely represents a significant contingent liability to the GOB. Based on discussions with the MOF and other relevant Line Ministries, there is no standardized approach or guidance within the GOB on how public assets should be insured against the impact of natural disasters. In absence of such an approach, when public assets are damaged or destroyed by disasters, it falls on the fiscal balance to finance the repairs / reconstruction. It is difficult to assess the fiscal burden of these losses given the process by which the budget is prepared and executed in Bangladesh, and the lack of tagging of disaster relief, recovery, and reconstruction expenditure. With the high frequency of floods and cyclones in Bangladesh, it is likely that this cost represents a significant contingent liability to the Government. For example, the Bangladesh Water Development Baord informed the mission that most of their budget for capital expenditure goes towards repair and reconstruction of assets damaged by floods.

50. Insurance of public assets against the impact of natural disasters should be explored as part of a National Disaster Risk Finance strategy. Building on the work already underway by the authorities to strengthen public asset databases, the GOB should aim to expand the insurance of key public assets, starting with those representing the largest contingent liability to the state (i.e. major infrastructure that are highly exposed to floods/cyclones and large PPP assets). An immediate action which the GOB could consider is to mandate the inclusion in all future PPP contracts of insurance against *force majeure* disaster related events, during both the construction and implementation phase. In addition, the GOB could utilize the public asset database under compilation to gain an understanding of which Line Ministries public assets represents the largest contingent liability to the GOB. The GOB could then pilot an insurance of public assets scheme focusing on assets within a Line Ministry. Building on successful implementation of the pilot, the GOB could then consider scaling the insurance scheme to other relevant Ministries. These actions would help close the reconstruction financing gap, which as discussed in the Financing Gap Analysis, can be as high as 3.2% of GDP for catastrophic disaster events.

Expenditure Tracking

51. It is challenging to understand the true fiscal cost of natural disasters in Bangladesh. This is primarily driven by the fact that most of the fiscal costs of disaster response are not directly tracked in the budget. Disaster affected Line Ministries spend sizable proportions of both their operating and capital budgets on relief, recovery and reconstruction activities which are not directly tracked by the MOF. To strengthening the understanding of the actual fiscal costs of disasters, the MOF should conduct an expenditure analysis of disaster related expenditure of both the recurrent and capital budgets, focusing on past incidence of natural disasters. The MoF could select two years, one in which a major disaster occurred and one in which a minor disaster occurred, and request line ministries in that year to define which capital projects and recurrent expenditures executed were focused on responding to the disaster. This analysis will support the MOF in understanding the extent to which Line Ministries allocate resources (and incur opportunity costs) to respond to disasters. This recommendation is aligned with the recommendation from the IMF TA report on Improving the Fiscal Risk Statement delivered in September 2023. In addition, the MOF could expand the current climate budget tagging methodology to separate out 'disaster risk management' tagged expenditures into sub-categories, one of which being disaster relief, recovery, and reconstruction, to track the fiscal impacts of disasters more precisely.

Disaster-Responsive Public Procurement

52. In addition to the guidelines which the BPPA plan to develop, there are additional areas to explore regarding strengthening disaster responsive public procurement. Beyond the direct method approach, the BPPA could explore additional methods to expedite procurement immediately post natural disaster scenarios including creating benchmarks of key items based on market research, the preparation of disaster procurement plans by the most affected line ministries, sourcing strategies during disaster scenarios, framework agreements, memoranda of understanding, and other strategic initiatives to optimize purchases for disaster response and recovery. In addition, a targeted capacity development plan to strengthen capacity in key Line Ministries as well as the Auditor General would support uptake of disaster-responsive procurement methods. Finally, given the current level of inflation in Bangladesh, the BPPA could consider indexing the thresholds for the direct procurement method to ensure they remain relevant over the medium term, and prevent the need to engage in the lengthy process of reapproving threshold levels.

Recommendations

Enhance and Strengthen Fiscal Buffers

- Actively manage fiscal buffers as part of the MTBF.
- Establish ex-ante contingent lines of credit at concessional lending rates from IFIs and development partners.
- Advocate with IFIs and development partners the potential to include CDRCs in their financing arrangements.
- Maintain eligibility for ex-post contingent lines of credit (such as the IMF's Rapid Credit Facility).

- Prioritize mobilization to create fiscal space to enhance fiscal buffers for disaster expenditures over the medium term.

Increase Clarity of Disaster Expenditures

- Conduct an expenditure analysis of disaster related expenditure for past disaster events to estimate the natural disaster-related expenditure from the budget.

Strengthen Insurance of Public Assets

- Mandate the inclusion of insurance against damage from *force majeure from natural disaster events* events in all PPP contracts during the construction and implementation phase.
- By Line Ministry, assess the exposure and vulnerability of key public assets to natural disasters.
- Pilot an insurance of public assets scheme, focusing on the Ministry which represents the largest contingent liability to the GOB.

Enhance Disaster Responsive Public Procurement

- Expand the scope of the disaster responsive public procurement guidelines to include relevant methods (for example market research, the preparation of disaster procurement plans by the most affected line ministries, sourcing strategies during disaster scenarios, framework agreements, memoranda of understanding and the indexing of thresholds) which will improve the speed and efficacy of relief resources.
- Implementing a comprehensive capacity development strategy for relevant organs of state on disaster responsive procurement methods.

IV. Shock-Responsive Social Protection

A. Landscape of Social Programs for Disaster Response

This section analyses the extent to which the Government of Bangladesh (GoB) has incorporated DRF mechanisms into the social protection system (SPS) and how DRF can improve the social safety net's ability to respond to shocks. It summarizes the definition of a shock responsive social protection (SRSP) system, explains current relief-oriented safety net channels, and identifies scalable SPS financing mechanisms established by the MOF for emergencies. Policy gaps are assessed and recommendations to strengthen DRF and establish more cost-efficient SRSP are provided. While Bangladesh includes microcredit programs as part of their social safety net scheme, these will be covered in the next chapter.

53. In the event of a disaster, leveraging the social protection system (SPS) can be a key element to protecting livelihoods, ensuring food security and improving resilience. Traditional SPSs focus exclusively on poverty alleviation with limited flexibility to scale during a crisis. These actions still help reduce harm to poor households during shock periods by improving resilience. However, nearly anyone can be impacted by a shock and positioning SPSs to be informed by risk analysis and maintain sufficient flexibility to provide scaled-up relief can enhance the speed and cost-effectiveness of support. Incorporating these elements into SPSs is broadly defined as shock-responsive (or adaptive) social protection. A secured DRF approach to SRSP means (1) improved timeliness of benefit transfer, reducing potential negative coping strategies of households which often have longer term effects on the social safety net budget,[39] (2) wider scalability of social programs that can be leveraged to provide longer term relief support, and (3) easier identification of potential beneficiaries.

54. The Government of Bangladesh widely recognizes the social protection systems' responsibility to deliver shock-responsive relief and mainstreams adaptive social protection across strategies. The country's Delta Plan, National Social Development Plan, Perspective Plans, and Five-Year Plan recommend aligning shock-responsiveness with the national social security system (Table 4). The National Social Security Strategy (NSSS) from 2015 aims to establish life-cycle support that integrates covariate shocks. To support implementation of the NSSS, the Social Security Policy Support (SSPS) Programme was designed. Meanwhile, the NSSS Action Plan 2015- 2021 and the NSSS Action Plan 2021-2026 provides implementation steps and agendas to do so. Most recently, the Cabinet Division published Guidelines on Adaptive Social Protection. A National Social Protection Strategy is planned to be developed by 2026 and is expected to include adaptive features. Additionally, a shock responsive framework on social protection is being created by a partnering university with expectation to be completed this year.

[39] Negative coping mechanisms include taking out unfavorable loans, migration, removing children from school to support household chores and selling productive assets, which can increase poverty levels of households in the long-run.

Table 4. Evidence of Mainstreaming of Adaptive Social Protection in Major Strategic Plans

Strategic Plan	Evidence of mainstreaming
National Adaptation Programme of Action (NAPA)	The 2009 NAPA highlights the importance of social protection programs for improving resilience of climate affected vulnerable individuals.
Bangladesh Climate Change Strategy and Action Plan	The Food security, social protection and health pillar recognized the need to mainstream requirements of vulnerable households in all activities. Although, it does not explicitly define the integration of shock-response into social protection as an activity.
National Plan for Disaster Management (NPDM)	The 2021-2025 plan has 50 key targets and enforces risk informed planning and investment. It aims to include DRR into the social protection system to address poverty, vulnerability, and improve resilience.
Five Year Plan	The 8th Five Year Plan (2021-2025) chapter 14 aims to leverage the social protection system to address vulnerability to shocks and stressors.
National Sustainable Development Strategy (NSDS)	The NSDS highlight the need to develop a national social protection strategy that understands and incorporates vulnerabilities.
Prospective Plan of Bangladesh (2010-2021)	The plan calls for integrating the national social protection strategy to be based on vulnerability mapping.
Delta Plan 2100	The plan highlights the need to leverage the social protection system to respond to flood and cyclones.
National Social Security Strategy (NSSS)	The 2015 strategy emphasizes the need to strengthen the social protection system to better incorporate covariate risks, including floods and cyclones. Actions it suggests are expanding coverage, emergency payments, and vulnerability mapping.

Source: IMF staff extractions and Kundo et al. 2023.

55. Bangladesh's social protection system is fragmented across line ministries, leading to inefficient use of public funds. Meanwhile, disaster related social protection programs are perceived as the responsibility of MODMR. There are 39 ministries operating 125 social safety net programs in Bangladesh with various targeting criteria and benefits.[40] Only 55 schemes are financed under the operating budget and the remainder are funded under the development budget.[41] Most programs are small in nature, with inefficiencies resulting from the duplication of systems and beneficiaries as well as challenges with coordination. The top 10 programs account for 70 percent of total social protection spending while the top 31 programs make up 90 percent.[42] Consolidation of programs is a key objective of the NSSS, subsequent plans, and of development partners who have assessed the

[40] https://socialprotection.gov.bd/programmes/
[41] https://socialprotection.gov.bd/wp-content/uploads/2022/04/A-Brief-Analysis-of-Social-Protection-Program-Response-to-Covid-19-Pandemic-in-Bangladesh.pdf
[42] WB Public Expenditure Review There are three different citations for the WB PER – I assume there is one PER ? Bangladesh Social Protection Public Expenditure Review? Would this be it?

SPS,[43] but progress has been slow. Around 32 to 34 percent of the population is covered by at least one scheme.[44] Meanwhile, the average benefit remains at US$6.5 per month (just 29 percent of the upper poverty line).[45] Programs generally focus on rural areas and non-relief focus programs do not explicitly incorporate disaster relief into their strategies. Instead, line ministries leading poverty and marginalized group programs generally view disaster response as the responsibility of MODMR. However, as reflected later in the chapter, non-relief-oriented programs can (and have been) scaled up during times of disaster.

56. The MODMR and some other ministries have defined social programs designated for relief. There are thirteen relief focused MODMR programs, and three additional relief programs offered by the Local Government Division (LGD), Ministry of Land, and Ministry of Water Resources (Table 5). These programs provide in-kind support including food (Vulnerable Group Feeding and Gratuitous Relief (GR) programs), supplies (Relief Works), and water (LGD program), as well as cash (Test Relief (TR)) and housing grants (Housing Support for Homeless/Grant). Relief programs are focused on ex-post relief and generally deliver up-to two weeks of support.[46] There is no current anticipatory support mechanism, and each relief program uses its own MIS.

57. Once a disaster occurs, social support needs are identified at the local level. Within 24 hours of a disaster, the Upazila Nirbahi Officer/Chairman of the Municipality provides the District Deputy Commissioners with a needs assessment. The Deputy Commissioner compiles this information from all impacted Upazilas and submits a request for additional funding from the MODMR. MODMR responses by providing relief funding directly to the Deputy Commissioner who then determines the allocation of this support across Upazilas.

58. Meanwhile MODMR's role in the social protection system goes beyond disaster relief. The NSSS establishes five thematic clusters: (1) Social Allowance; (2) Food Security and Disaster Assistance; (3) Social Insurance; (4) Labour & Livelihood Interventions, and (5) Human Development and Social Empowerment. The Ministry of Food (MOFOOD) is responsible for coordinating cluster (2), although the MOFOOD programs are poverty, rather than disaster, focused. Meanwhile, MODMR coordinates cluster (4) and offers three livelihood programs focused on employment generation that are not specific to relief agendas (see Table 5). Regarding preparedness, shelter related programming is disaggregated across three different ministries: MODMR, the Prime Minister's Office (PMO) and LGD. Bangladesh has more than 14,000 shelters, which have the capacity to accommodate 2.4 million people.[47] Over the last 25 years, these shelters, along with robust early warning, have reduced deaths from cyclones by 75 percent.[48] While livelihood and preparedness are important features of building resilience, and should be praised for their role in DRR, the NDRFS should be place a greater emphasis on relief mechanisms which require unique risk financing mechanisms for uncertain events.

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[43] For example, the WB's Public Expenditure Review on Social Security
[44] This figure is for FY21 (https://socialprotection.gov.bd/wp-content/uploads/2022/04/A-Brief-Analysis-of-Social-Protection-Program-Response-to-Covid-19-Pandemic-in-Bangladesh.pdf)
[45] GOB, A Brief Analysis of Social Protection Program Response to Covid-19 Pandemic in Bangladesh
[46] As described by MoDMR colleagues
[47] ICCCAD (2022)
[48] ICCCAD (2022)

59. Defined budget allocations are already provided for relief-specific programs, offering a good foundation for DRF. The government of Bangladesh spent 2.65 percent of GDP on social assistance programs in FY22-23, with only 4 percent of funding coming from development partners[49] (none of which is explicitly directed to relief programs). This figure exceeds the expenditure target set out in the NSSS (2.5 percent of GDP).[50] A large share of social spending represented in the World Bank (WB)'s social protection expenditure review (1 percent of GDP) finances civil service pensions.[51] Meanwhile, around 3.4 percent of the current social expenditure budget is allocated to relief programming (Table 5). The use of relief-focused programs spiked during Covid-19 and initial budget allocations are similar to budget utilization (Figure 10, Panel A). Most of these programs are funded through the operating budget with the exception of the Gucchagram (Climate Victims Rehabilitation) Project which is funded through the development budget. These defined allocations for relief provide secure, predictable financing that social programs can access and rapidly disburse to beneficiaries.

Table 5. Shock Responsive, Preparedness, and MODMR Livelihood Program Expenditure

Program	Implementing Ministry	Purpose	Beneficiaries (Millions persons)			Budget (US$ million)		
			Budget (2022-23)	Revised (2022-23)	Budget (2023-24)	Budget (2022-23)	Revised (2022-23)	Budget (2023-24)
Vulnerable Group Feeding (VGF)	MoDMR	Shock Responsive	18.00	25.71	18.00	90.10	140.20	99.07
Gratuitous Relief (Food)	MoDMR	Shock Responsive	3.30	3.30	3.30	53.63	56.53	58.97
Test Relief (TR) (Cash)	MoDMR	Shock Responsive	0.37	0.37	0.37	131.82	131.82	131.82
Relief Goods	MoDMR	Shock Responsive	8.29	8.29	8.00	17.27	17.27	16.36
Disaster Grant	MoDMR	Shock Responsive	n/a	n/a	n/a	9.09	1.82	3.64
Relief Works (Flood, Drought, Cyclone, Others	MoDMR	Shock Responsive	0.48	0.48	0.48	7.36	7.36	7.29
Housing Support for Homeless/Grant	MoDMR	Shock Responsive	0.18	0.18	0.18	2.50	2.50	2.50
Emergency assistance in water supply and sanitation activities at the Upazila level	LGD	Shock Responsive	0.90	1.10	1.60	9.67	11.71	26.36
Gucchagram (Climate Victims Rehabilitation) Project	MoLand	Shock Responsive	0.002	0.002	0.002	8.55	2.73	5.40
Flood Management and Livelihood Improvement Project in Char/Haor Area	Water Resources	Shock Responsive	0.01	0.01	0.01	7.84	7.68	4.01
PM's rehabilitation assistance to the people of river erosion affected areas	Finance Division	Shock Responsive	n/a	n/a	n/a	9.09	9.09	9.09
Shock Responsive Total			**31.537**	**39.451**	**31.947**	**346.9182**	**388.7182**	**364.5082**
Shock Responsive Percent of SSP spending							**3.8%**	**3.4%**
Shock Responsive Percent of GDP							**0.1%**	**0.1%**
Urban Resilience Project	LGD and MODMR	Preparedness	20	7	12.5	4.76	2.06	3.23
Construction of Flood Shelter in the Flood and River Erosion Prone Area	MoDMR	Preparedness	0.18	0.18	0.18	26.36	26.36	22.73
Khurushkul Special Shelter Project	PMO	Preparedness	0.007	0.006	0.007	54.55	54.55	32.69
Construction of the Multiple Disaster Shelters	LGD	Preparedness	50	43	47	57.13	36.36	38.06
Preparedness Total			**70.187**	**50.186**	**59.687**	**142.7973**	**119.3364**	**96.70909**
Preparedness Percent of SSP spending							**1.2%**	**0.9%**
Preparedness Percent of GDP							**0.03%**	**0.02%**
Food For Work (FFW))	MoDMR	Livelihood	0.98	0.98	0.98	79.66	89.98	90.18
Work For Money (WFM)	MoDMR	Livelihood	1.82	1.82	1.82	136.36	136.36	136.36
Employment Generation for the Poor Population (ECPP)	MoDMR	Livelihood	0.518	0.597	0.518	166.36	191.60	161.82
Livelihood Total (MoDMR)			3.318	3.397	3.318	382.39	417.94	388.36
Preparedness Percent of SSP spending							**4.0%**	**3.6%**
Preparedness Percent of GDP							**0.1%**	**0.1%**

Source: IMF staff calculations using MoF social safety net expenditure reports. Note: n/a= Not available.

[49] World Bank (2021), Bangladesh Social Protection Public Expenditure Review

[50] NSSS (2015)

[51] World Bank (2021), Bangladesh Social Protection Public Expenditure Review

60. Additionally, the MOF's Finance Division (FD) has an operating budget line which provides significant flexibility to scale up line ministries' social programs during times of crisis. In FY2021-22, the MOF added a budget line to their social safety net expenditure sheet labelled 'Funds to deal with economic and natural shocks'. The fund is designed to provide scaled up support to laborers, farmers, domestic workers, and victims of natural calamities. In FY2021-22, US$2.23 million was budgeted. This number increased to US$454 million in FY2022-23 (although only US$181 million was spent) and jumped to US$727 million for FY23-24 (0.3 percent of GDP) (Table 6), topping-up funding to address disasters significantly (Figure 10, Panel B). Creating flexibility to scale social programs during crisis means that capacities of line ministries can quickly contribute to relief efforts and can help extend the response efforts beyond regular programming. Although it is worth noting that overbudgeting for emergencies can institute lost opportunity costs.

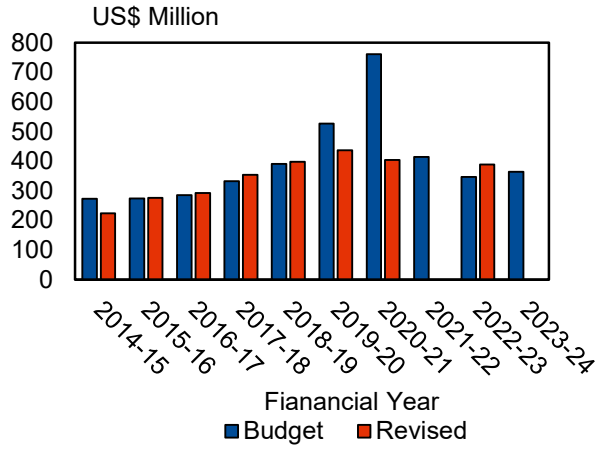
Table 6. Funds to Deal with Economic and Natural Shocks Expenditure

Program	Implementing Ministry	Purpose	Beneficiaries (Million persons)				Budget (US$ millions)			
			Revised (2021-22)	Budget (2022-23)	Revised (2022-23)	Budget (2023-24)	Revised (2021-22)	Budget (2022-23)	Revised (2022-23)	Budget (2023-24)
Funds to deal with economic and natural shocks	Finance Division	Shock Responsive	0.098	1.85	2.2	2.2	2.23	454.5	181.8	727.3

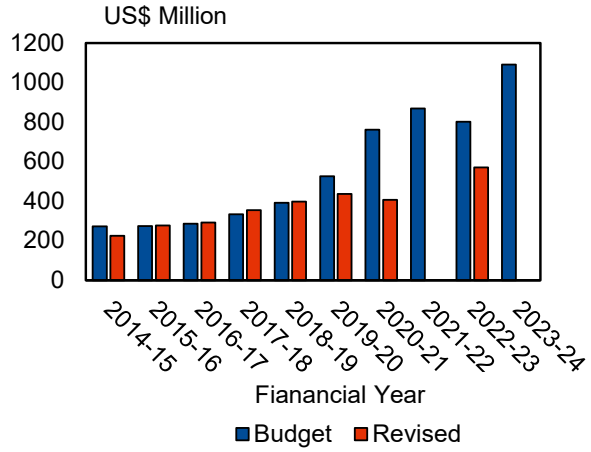
Source: IMF staff calculations using MOF social safety net expenditure reports.

Figure 10. Historic Expenditures on Relief-Oriented Programs and Budget Line to Scale Programs

A. Relief-oriented Social Protection Programs



B. Relief-oriented Social Protection Programs and Additional Budget Line to Scale Programs during Shocks



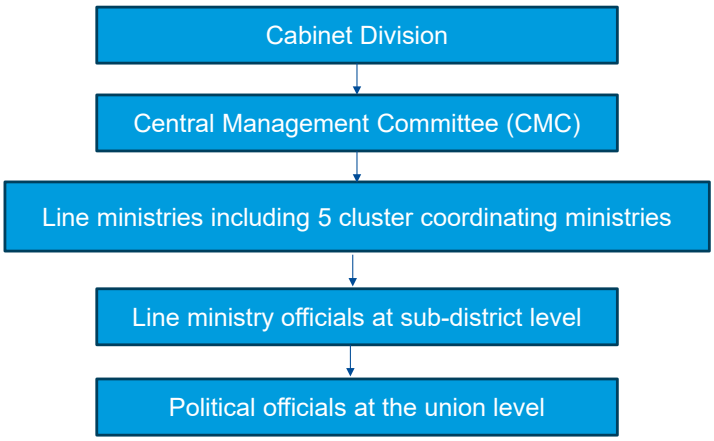
Source: IMF staff calculations based annual social safety net MoF expenditure reports.
Notes: Data is nominal. Data from FY2021-22 revise budget was unavailable.

61. Performance assessments for relief-oriented-social protection system are outside the scope of current evaluations. The Cabinet Committee on Safety Nets (chaired by MoF) provides the

binding budget and annual performance review of 15 non-relief-oriented programs.[52] Meanwhile, under the NSSS, the Planning Commission's Implementation Monitoring and Evaluating Division (IMED) is responsible for developing performance assessments for social protection programs under the development budget. Operating budget social protection programs, which makes up the majority of relief efforts, are therefore not included under the mandate. Instead, MODMR performs audits after financing is deployed. These audits are limited to examining expenditure flows and do not assess the impact these flows have on relief efforts.

62. High-level coordination responsibilities of the social safety net are expected to change in upcoming years, risking progress on establishing adaptive social protection. At the moment. social protection reforms are coordinated by the Central Management Committee (CMC), which is chaired by the Cabinet Secretary, and is composed of Secretaries and Additional Secretaries of all relevant line ministries, including MODMR (Figure 11). The NSSS plans to alter the structure so that the Ministry of Social Welfare replaces the CMC and coordinates all life-cycle systems by 2026. Given the narrow scope of social welfare programs (i.e. the focus on only marginalized groups) and lack of training on adaptive social protection, the transition of coordinating roles may make the implementation of shock-responsive social protection more challenging.

Figure 11. Simplified Institutional Framework for Social Protection in Bangladesh

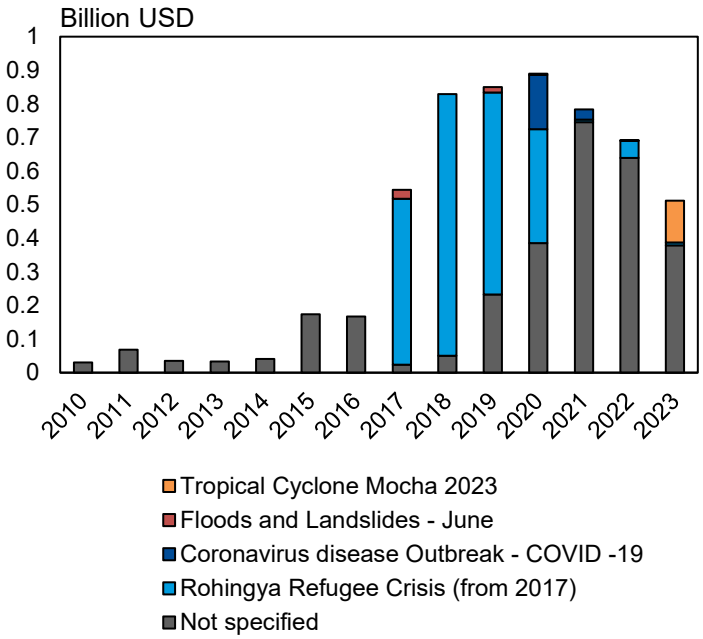


Source: Kundo et al. 2023.

63. Additional to providing public social protection programs during disaster, Bangladesh is a large recipient of humanitarian aid. Between 2010 and 2016, Bangladesh received annual average aid of US$78.5 million.[53] However, there was a significant increase in funding in 2017 to support Rohingya refugees migrating from Myanmar (Figure 12). In 2023, Bangladesh received over US$500 million, making it the 17th largest recipient of humanitarian aid in the world.[54] Around a quarter of the funds were directed to relief efforts for the tropical cyclone Mocha. Most aid is allocated to food security (27.3 percent in 2023) with bilateral support, multilateral/NGO funding, and private funding making up 72, 25 and 3 percent of aid respectively.[55]

[52] World Bank Social Protection Public Expenditure Review, 2021
[53] Home | Financial Tracking Service (unocha.org)
[54] Home | Financial Tracking Service (unocha.org)
[55] Home | Financial Tracking Service (unocha.org)

Figure 12. Humanitarian Aid Contributions to Bangladesh



Source: Financial Tracking Service, 2024.

64. Aid is coordinated through the Humanitarian Coordination Task Team (HCTT), co-chaired by MODMR and the United Nations Resident Coordinator Office (UNRCO). The HCTT consists of 11 government approved clusters – including child protection, displacement management, education, early recovery, food security, gender-based violence, health, logistics, nutrition, shelter and wash - and 8 technical working groups – including cash, community engagement, anticipatory action, gender in humanitarian action, information management, localization, needs assessment and private sector. Localization efforts – i.e. a greater involvement of localized NGOs in humanitarian response – is an important global agenda relevant for Bangladesh. The review of 2020 Cyclone Amphan response revealed that only 5 percent of mobilized funding went directly to local NGOs. Given operational and overhead costs of external entities – International Committee of the Red Cross (31%), United Nations (24%), International NGOs (17%) are considerably larger than that of an average local NGO (9%), this leads to less expenditure available to support response and recovery of affected communities.[56]

65. Humanitarian financing can play an important role in supporting disaster response, however, comes with several drawbacks. Humanitarian financing is often mobilized with the objective of providing immediate relief. It offers a lifeline for saving lives, providing emergency services, and supporting affected populations. However, humanitarian financing can be unreliable. Governments often face uncertainty regarding the availability and consistency of such funding. This unreliability can hinder long-term planning and preparedness efforts, making it challenging to build sustained disaster resilience. Timing is another significant concern. Humanitarian financing may arrive late, causing delays in disaster response and recovery efforts. The lag in funding can exacerbate the impact of the disaster. Donor-driven priorities can also pose a complex issue. Only a negligible amount of humanitarian aid was provided

[56] Review Report: 2020 Cyclone & floods in Bangladesh - Ongoing Emergency Response & Recovery - Bangladesh | ReliefWeb

directly to the Government of Bangladesh last year, while the majority of aid was provided through multilateral and NGO projects.[57] As a result, humanitarian financing is frequently tied to specific international organization and donors' agendas, which may not always align with the government's immediate and long-term priorities. This misalignment can lead to inefficiencies and disagreements in resource allocation. As a result, international experience suggests that governments should prioritize on their own risk layering approach and use humanitarian assistance if needed as a last resort.

66. The country may also have more difficulty accessing aid as it achieves growth goals, enhancing the importance of SRSP. Bangladesh is now on track for graduating from the Least Developed Country (LDC) status and aims to transition to an upper middle-income country by 2031 and a high-income country by 2041. Moving up the income curve can reduce access to humanitarian aid. This means Bangladesh should continue to integrate relief efforts in social protection programs and develop a robust DRF strategy to reduce aid requirements.

B. Assessment of Policy Gap

67. Establishing a well-maintained social registry before a crisis that incorporates a large proportion of the population can reduce duplication, increase alignment, and allow for a better use of public funds. Relief oriented social protection programs in Bangladesh all use different MIS systems, typically at the Upazila level, causing a lack of centralization. Not only are MIS systems fragmented between programs, but most, like the Vulnerable Group Feeding (VGF) and Test Relief (TR) programs, are paper-based. United information systems are a key priority of the NSSS and the new Guidelines on Adaptive Social Protection.[58] So far, the WB has supported leveraging the National Household Database to produce a social registry that covers a large segment of the population and includes relevant information for cash transfers. The creation of a unified MIS is slow and pushing forward this agenda could help provide quicker scalability and reduce fiscal costs associated with duplication. Brazil did this through an elective registry (see Box 4).

Box 4. Brazil's Social Registry

Under Brazil's Cadastro Univo administrative registry, individuals can elect to register at any time. The information is updated every two years creating opportunities to capture changes in individual and household conditions. Included households are those with per capita income below half the national minimum wage, which is a higher threshold than the eligibility criteria for social transfer programs. The registry also includes households that are not currently serviced under the social protection system but could fall into eligibility criteria should a disaster occurs. When a shock occurs, the registry expedites the inclusion of new candidates for the Bolsa Familia cash transfer.

Source: World Bank, DRF Emerging Lessons in Financing Adaptive Social Protection.

68. Conducting an analysis to identify the most efficient scalable programs and consolidate inefficient programs could help use the existing envelope of resources more effectively. In

[57] Home | Financial Tracking Service (unocha.org)

[58] NSSS-3rd-Version-Web-version.pdf (portal.gov.bd) and Guidelines-on-Adaptive-Social-Protection.pdf (socialprotection.gov.bd)

response to Covid-19, disaster relief programs, like the Gratuitous Relief program, were activated to provide food and cash support. Additionally, the GOB scaled up poverty focused programs by (1) allocating an additional US$109 million for the old age and widow allowance and expanding the program horizontally to cover 112 of the poorest sub-districts, (2) providing US$84.5 million for those who lost their jobs, (3) subsidizing rice prices through MOFOOD's Open Market Sale program, and (4) expanding the Food Friendly Programme to 5 million families.[59] Identifying which programs would be best to scale depending on the hazard and identifying inefficient programs the GOB can consolidate can get more impact for the same (or even less) resources.

69. After identifying key scalable programs, the MoF could work towards establishing evidence-based scalability frameworks that would determine the rules around program expansion due to shocks. Currently, to scale programs, line ministries must either reallocate resources internally or request for additional funds from the MOF (provided either from the pre-determined operating fund in the social safety net or the wider contingency fund). This can reduce the predictability of financing for program agencies and delay response. However, some countries have imposed triggers that allow programs to easily scale with disasters. For example, Kenya, a drought prone country, imposed a drought scalability framework for its Hunger Safety Net Program (HSNP) (see Box 5). Ideally, scalability can be coordinated with hazard vulnerability maps for better targeting. A first step towards building scalable frameworks could be to produce these maps. Under the updated NSSS Action plan, MODMR was supposed to produce these maps by January 2024 and progress has been delayed. However, for countries like Bangladesh which do not currently have a vulnerability map, other strategies can be used to determine scalability features. Kenya, another country that lacks a hazard-based vulnerability map, leveraged bi-annual post-rain assessments for scale up criteria (see Box 5, Figure A). Modelling can help to underpin potential costs of scalability rules. For example, applying selected rules to historical shocks over the past 10 to 20 years, and ensuring modeling of extreme cases, can provide a clear picture of potential program needs (see Box 5, Figure B for Kenya's modelling). By adopting clear and transparent scalability frameworks for relevant social programs, the GOB can move towards rapid, automatic evidence-based scale-ups to the social security system when faced with disaster.

[59] GOB, A Brief Analysis of Social Protection Program Response to Covid-19 Pandemic in Bangladesh

Box 5. Kenya's Hunger Safety Net Program (HSNP) Scalability Framework

Kenya's HSNP has a defined scalability framework that automatically triggers program expansion and transfer quantity. Many of the features were consistent with its regular programming, however, in the case of a moderate, severe or extreme drought, support (both coverage and quantity) is increased. Due to a lack of vulnerability data, Kenya based its 75 percent max coverage indicator on bi-annual post-rain assessments. The maximum historical coverage needs of high intensity droughts in these surveys was 77 percent, and on average 50 percent of households required food aid during drought years. These findings providing the basis of the support provision. The process of establishing a scalability framework is iterative, as was the case in Kenya. Modelling shows that the scalability framework would lead to annual increases in payments during severe droughts, but costs of scale up for extreme events would be less frequent.

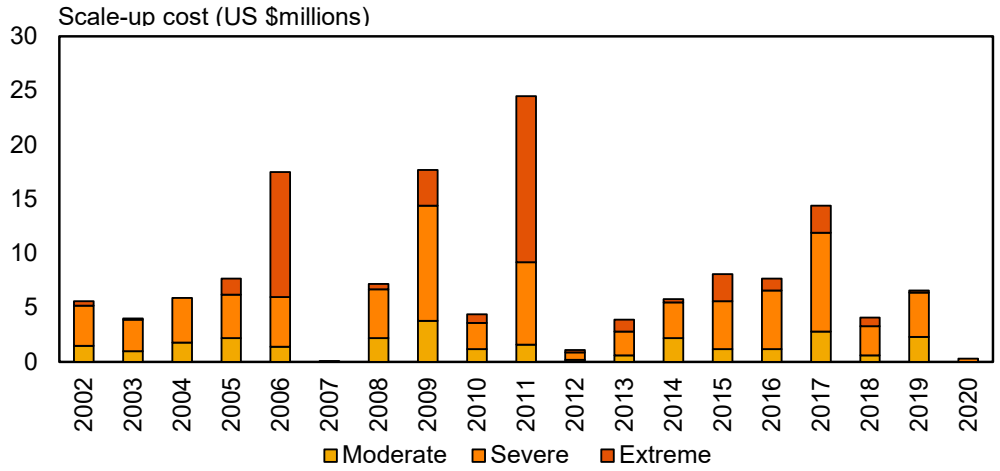
Figure A. Scalability Framework for Kenya's Hunger Safety Net Program (HSNP)

Geographic Location	Trigger Vegetation Condition Index (VCI)		Drought Phase Equivalent	Maximum Coverage HHs to Receive Cash	Amount of Transfer	Frequency	Duration of Transfer
Sub-Country	≥ 50 and 35 to 50	Wet or No Drought	1: Normal	Rountine HSNP HHs	Standard payment	Every 2 months	On-going
	20 to 35	Moderate Drought	2: Alert	Rountine HSNP HHs	Standard payment	Every 2 months	On-going
				HHs beyond routine % only if another Sub-County in the County is has hit the severe or extreme VCI threshold	Emergency payment	Every month	For each month VCI at severe drought status
	10 to 20	Severy Drought	3: Alarm	Rountine HSNP HHs	Standard payment	Every 2 months	On-going
				HHs beyond routine up to approximately 50%*Coverage in each Sub-County	Emergency payment	Every month	For each month VCI at severe drought status
	<10	Extreme Drought	4: Emergency	Rountine HSNP HHs	Standard payment	On-going	On-going
				HHs beyond routine up to 75% Coverage in each Sub-location	Emergency payment	Every month	For each month VCI at severe drought status

Source: World Bank, DRF Emerging Lessons in Financing Adaptive Social Protection.
Note: HH=Households.

Box 5. Kenya's Hunger Safety Net Program (HSNP) Scalability Framework (cont.)

Figure B. Modeling Costs of Scaling the HSNP



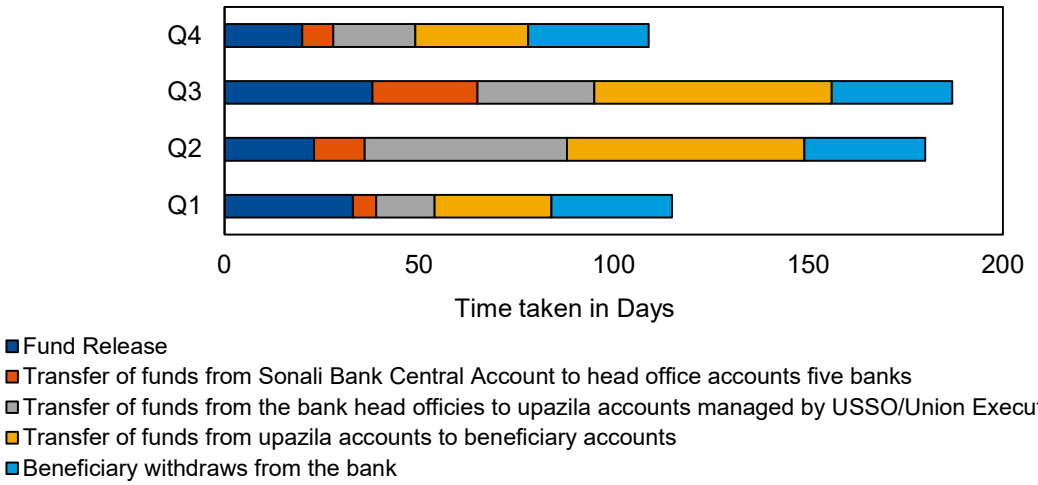
Source: Taken from: World Bank, DRF Emerging Lessons in Financing Adaptive Social Protection.

70. To improve efficiency, the GOB could look to the private sector to play a supportive role. For example, the Ministry of Agriculture is incorporating the private sector in some of their seed programming schemes. Instead of providing in-kind support, which is more costly to distribute, the Ministry is looking to establish e-vouchers. Beneficiaries will be able to claim the e-voucher from local vendors, reducing the cost of administering the program. Cash transfers have a similar role in leveraging private sector distribution, however, can only be used when markets are functioning (which may not be the case for every disaster). The GOB could look for ways in which the private sector can be utilized for more efficient delivery of resources during scaling up periods.

71. Continuing the transition towards digitalized cash payment can improve transfer timelines and reduce fiscal costs. On average, it takes at least two months to transfer funds from the MOF to beneficiaries for wider safety net programs (Figure 13). When funds remain idle between MOF transfers and receipts from beneficiaries, lost interest could represent 2 percent of the total program budget (Table 7). The NSSS highlights digitalization as a key SPS priority and the GOB established the Government to Person (G2P) scheme during Covid-19 to provide cash support through mobile banking. These transfers took as little as 10 days. So far, the MIS of 13 programs are linked to G2P, covering 68 percent of cash transfers in FY2019-20. Other cash transfer programs use agent banking. These programs can help to transition individuals into the banking sector. However, financial inclusion challenges remain an important barrier to address as only 53 percent of adults in Bangladesh currently have access to mobile or traditional banking.[60]

[60] https://bigd.bracu.ac.bd/financial-inclusion-in-bangladesh-scope-and-progress/

Figure 13. Quarterly Payment Processing Time (FY2018-19)



Source: World Bank (2021), Bangladesh Social Protection Public Expenditure Review.

72. The recent Adaptive Social Protection Guidelines aim to establish an Inter-ministerial Committee on Adaptive Social Protection, formulated under the CMC, and add capacity training. This stakeholder will be essential to mainstream adaptive features across the wider safety net and can provide performance reviews on relief and scalable support programs that can be leveraged for better policy making and budget setting. This committee should collaborate with the wider DRM institutions (identified in Chapter 6) to help mainstream adaptive social protection features in DRM delivery. At the highest level, this collaboration would occur with the National Disaster Management Council.

73. Over the long term, the GOB may want to look at anticipatory relief as this can create concerns if implemented prematurely. An anticipatory action model has been pioneered by the Bangladesh Red Crescent Society (BDRCS) since 2015 with the development of Early Action Protocol (EAP) and specified triggers. Based on the lessons learned of past disasters, the GOB's Needs Assessment Working Group (NAWG) now produces anticipatory analyses. Instead of waiting for the impact to occur, the HCTT, for example, prepared a contingency and humanitarian response plan within 2-3 days following the anticipatory analysis of 2020 Cyclone Amphan. Responding to flood forecast in June 2020, the UNRC pre-approved an anticipatory framework and United Nations Central Emergency Response Fund (CERF) projects. On July 4 2020, a sever flood forecast activated the anticipatory framework with CERP funding agreed within four hours. By mid-July 2020, when the flood reached critical levels, over 220,000 people had already received assistance including unconditional cash transfers, animal feed, hygiene kits, etc. The post humanitarian response review further revealed that the anticipatory action-based response in 2020 costed on average US$13 per person as opposed to US$26 per person needed for 2019 disaster response. Cost savings were made possible through factors such as off-peak procurement and transport of relief goods. Anticipatory features can be leveraged by the NDRFS. However, an important feature of robust anticipatory relief mechanisms is forecasting capability, to which the government has expressed has limitations.

Table 7. Loss to Treasury from Cash Transfer Time Lag of Selected Programs

	Budget FY2019 (US$ Million)	Lag in months	Lost interest (US$ million) at 7% per annum	Loss as a percentage of total budget
OAA	218	2 to 6	4.91	2.25%
EGPP	149	2 to 4	2.64	1.77%
DSF-MHVS	2	3 to 13	0.36	1.82%
Total			**7.91**	

Source: World Bank (2021), Bangladesh Social Protection Public Expenditure Review.
Notes: OOA= Old Age Security, EGPP= Employment Generation Programme for the Poorest, DSF-MHVS= Diagnostic Study of Demand Side Financing – Maternal Voucher Scheme.

Recommendations

- Establish an actionable plan to harmonize MIS for relief and scalable programs and ensure it can be used to quickly scale up and identify beneficiaries during times of disaster.
- Identify key scalable programs available for relief support and design a plan on how to leverage them during times of crisis.
- Conduct an assessment to identify inefficient social programs and establish a consolidation plan.
- Develop a hazard vulnerability map under the purview of the MODMR (as stated in the NSSS), in consultation with the Bangladesh Water Development Board, to inform scalable programs.
- Continue to expand the digitalization agenda and leverage private sector distribution through cash transfers when possible.
- Establish a monitoring and evaluation framework of relief-oriented and scalable programs that can be used for better budgeting.
- Support and leverage the establishment of an inter-ministerial committee on adaptive social protection as expressed in the new guidelines for adaptive social protection to help drive the NDRFS agenda among key DRM policy makers (like the National Disaster Management Council).

V. Financial Sector Instruments

A. Landscape of Financial Policy Response to Disaster Risks

74. Providing greater access to financial protection to a broader segment of society is a key priority of Bangladesh's climate adaptation and DRM policy. As Bangladesh aims to graduate from Least Developed Country (LDC) status by 2026 and upper middle-income status by 2031, Bangladesh's is in a transition to move from the primarily solidarity (needs) based approach to financial protection to a greater use of mutuality (risk) based mechanisms. This greater differentiation of financial protection approach is visible in policy documents such as the NAP 2023-2050, which aims for the provision of (a) solidarity based financial protection for the most vulnerable (e.g. priority code-CDM 8 climate insurance for small shrimp cultivators, forest resource users, slum dwellers, farmers and women) and (b) mutuality-based financial protection involving the private sector (e.g. priority code-CDM 11 financial protection of critical coastal infrastructure through risk transfer or insurance mechanisms based on discussion with banks, financial institutions, NBR and Public Private Partnership Authority (PPPA)).

75. GOB is cognizant of the need for a systematic approach to navigate this transition. With LDC graduation, Bangladesh will gradually lose access to concessional financing. With limited fiscal space, better targeting and increased delivery efficiently are key to the success of solidarity based financial protection. Likewise, fostering of mutuality-based financial protection will require both cultural shifts on the demand side and greater financial, technical, and institutional capacity on the supply side. The existing policy priorities *within* relevant sectors are well aligned to such needs. Bangladesh's National Financial Inclusion Strategy 2021-2026, for example, emphasizes the use of digital means to reach marginalized population while the 8th Five Year Plan fosters the demand-side shift through the introduction of mandatory insurance for high-rise government and private buildings and the supply-side shifts through the provision of meritorious scholarship for actuarial science.

76. At the same time, GOB is yet to achieve a greater alignment of policy priorities *across* relevant sectors. A transition towards a hybrid solidarity-mutually based system will require careful balancing of public, private and civil society sector interventions. In-kind provision of goods such as agricultural seeds and inputs may be warranted in the extraordinary circumstances of temporary post-disaster market failure. However, when in excess, such an approach could hamper the growth of mutuality-based self-protection against future risks. Frequent use of post-disaster loan deferral may likewise erode the willingness of the private sector to lend to at-risk sectors. The existing policy fragmentation across disaster preparedness, social protection and financial sector development could pose greater impediments amid the move towards hybrid solidarity-mutuality system. At the same time, strategic alignment of domestic policy priorities could unlock the differentiated strengths of public, private and civil society sector actors. The DRFS has a role to play in fostering such strategic thinking. This section reviews Bangladesh's state of the play regarding (a) sovereign (and sub-sovereign) risk instruments and (b) the role of the domestic financial sector actors in facilitating disaster risk finance.

Sovereign Risk Retention and Transfer Instruments

77. Bangladesh is taking a proactive approach to experiment with sovereign risk financing instruments. As reviewed in Chapter 3, disaster response recovery and reconstruction has traditionally relied on ex-ante resources, however, GoB is beginning to experiment with alternative ex-ante instruments to manage sovereign (and sub-sovereign) disaster risk (Table 8).

Table 8. Ex-Post and Ex-Ante Sovereign Instruments Used in Bangladesh

Ex-Post Instruments	Timeliness	Cost	Past/Ongoing Access in Bangladesh
Grants			
- Trust Funds Resources - e.g. Asia Pacific Disaster Response Fund (ADB)	***/**	***	Y
Loan			
- Emergency lending for rehabilitation (e.g. Crisis Response Window (WB) Emergency Assistance Projects (ADB))	**	**	Y
- Standard project lending (e.g. rehabilitation and reconstruction investment projects).	*	**	Y
- Emerging lending for BOP needs (e.g. Rapid Financing Instrument (RFI) and Rapid Credit Facility (RCF) (IMF))	**	**	Y
Ex-Ante Instruments			
Loan			
- Pre-arranged reallocation - e.g. Contingency Emergency Response Component (WB)	***	**	Y
- Contingent credits -e.g. Cat-DDO (WB), Credit and Development Forum ((CDF) (ADB)), Stand-by Loan ((Japan International Cooperation Agency) JICA))	***	**	N
Sovereign (incl. sub-sovereign) Insurance			
- Parametric sovereign insurance	***	*	Y/N
- Critical infrastructure insurance	***/**	*	Y/N
Insurance-linked security			
CAT Bond	***/**	*	N

Note: (a) indicative timeliness: *** within days to weeks, ** within six months, * beyond six months, (b) cost: ***grant, ** loan, * prices above expected loss; Y/N indicates either pilot or partial implementation.
Sources: ADB; WB.

78. Bangladesh is piloting a parametric sovereign insurance as part of the WB-financed Jamuna River Sustainable Management Project. Under this project, the GOB will design and procure a sovereign insurance product whose payouts upon triggering will be used to provide cash payments to the communities impacted by flood events. US$7.3 million is available under the project for insurance premiums, of which US$5 million is grant from the Global Shield Financing Facility. Based on indicative staff calculations, this sovereign insurance could trigger payouts of c. $30 million or 0.01 percent of GDP. The project aims to support 1.2 million people, 30 percent of which are women. Should this pilot prove successful, there may be scope to expand the use of sovereign insurance, as done by the Philippines, which effectively leverages international bond markets to mobilize disaster response funding is given in Box 6 below.

79. A parametric sovereign insurance has the advantage of rapid insurance payouts while transferring risk to the international insurance market. The price of sovereign insurance is determined as a function of expected loss, variance, and administrative costs, with an insurance multiple being around 1.2-3.2 times the expected loss. The economic rationale for purchasing of such instrument is therefore government's risk-aversion towards catastrophe loss. A key challenge however with sovereign insurance is basis risk, the risk a disaster occurs but no payout is triggered. It is important that Governments interrogate and understand the parameters of parametric insurance contracts to ensure expectations of when the insurance will payout are aligned with the design. For low- and middle-income countries, the use of sovereign insurance is typically mediated by the IFIs, which provide necessary technical guidance on the choice of sovereign insurance design as well as improvement in the post-disaster assistance delivery mechanism, as is experimented in the Jamuna River Sustainable Management Project (JRSMP).

Box 6. Sovereign Catastrophe Risk Management Instruments in Philippines

In Asia, the government of the Philippines (GoP) was among the first to develop the National Disaster Risk Financing and Insurance Strategy (NDRFIS) in 2015. Philippine's DRFS is aimed at (i) maintain the sound fiscal health of the national government; (ii) develop sustainable financing mechanisms for Local Government Units (LGUs), and (iii) reduce the impact of disasters on poor and vulnerable households while also shielding the near- poor from falling back into poverty.

In order to provide financial resources needed to accelerate DRFS implementation, the Philippines has received a series of support from the World Bank on the development of sovereign risk financing options including the technical assistance for the first Catastrophe Deferred Drawdown Option (CATDDO) in 2011, second CATDDO in 2015, first sovereign insurance transaction in 2017, second sovereign risk insurance renewal in 2018 and third CATDDO in 2021.

In addition to these instruments, the Philippines also received support to issue first CAT Bond in 2019. Two tranches of protection were issued. The first tranche provided financial protection of up to US$75 million for earthquake-related losses, while the second tranche offered US$150 million coverage against losses from tropical cyclones. Payouts were designed to triggered based on predefined criteria, set at the level similar to Cyclone Yolanda of 2013 with the return period of approximately 19 years.

Source: WB 2019.

B. Role of the Domestic Financial Sector Including Private Actors

80. Bangladesh's efforts to strengthen financial inclusion offers opportunities to enhance the resilience of vulnerable communities to disasters. Bangladesh's National Financial Inclusion Strategy 2021-2026 is aimed at financial inclusion through digitization and innovation, addressing sector bottlenecks including (i) coverage within difficult-to-access localities such as haor, char and others (ii) demand-induced impediments such as low income, lack of financial awareness and social exclusion and (iii) supply-led bottlenecks such as distant location of bank branches, unsuitable products and administrative burdens among others. The Bangladesh's financial sector includes (a) regulated institutions such as Banks, NBFIs, Microfinance Institutions, Insurance Companies, etc., (b) semi-formal specialized financial institutions such as Palli Karma Sahayak Foundation (PKSF), Samabay Bank, Grameen Bank, and other NGOs, and (b) informal sector intermediaries, all playing vital roles in provision

of finance to broader population. The Bangladesh financial sector is regulated by five agencies namely: (a) Bangladesh Bank, (b) Microcredit Regulatory Authority, (c) Department of Cooperatives (d)Insurance Development Regulatory Authority and (e) Security and Exchange Commission.

Banks and Micro-Finance Institutions

81. BB's Strategic Plan 2020-2024 emphasizes sustainability and risk management of financial institutions and use of innovative products in under-served sectors.[61] The banking sector in Bangladesh includes (a) 61 schedule banks consisting of 6 state owned commercial banks, 3 specialized banks, 43 private commercial banks (PCBs), 33 conventional PCBs, 10 Islami Sharia bank-based PCBs and 9 foreign commercial banks); (b) 5 non-scheduled banks including Grameen Bank). Table 9 provide basic statistics of the country's microfinance sector. According to the Global Financial Inclusion Database 2021, an estimated 52.8 % of adults in Bangladesh have formal accounts with banks and similar financial institutions. The disparity in access among urban to rural is generally low, with 53.7% of urban population having accounts versus 50% of rural population. There is a higher disparity across genders, with 62.9% of male population having access to accounts as opposed to 43.5 % for female population.[62]

82. BB promotes the establishment of climate risk fund to support post-disaster response and recovery as part of corporate social responsibility (CSR). [63]While CSR contribution by scheduled banks and financial companies remains voluntary in Bangladesh, BB in 2013 issued GBCSRD Circular No- 04, instructing the development of climate risk fund, which provide disaster-related support including interest rate subsidies, grants, and in-kind.[64] BB further issued the Sustainable Finance Policy for Banks and Financial Institutions in 2020. It advises 10% of CSR budget be allocated to disaster activities[65], though such ceiling may be exceeded in case of a catastrophic disaster. In 2023 Jan-June, an estimated 1.04 billion BDT has been spent as part of disaster risk management within the CSR budget.[66] In case of disasters CSR budgets are often donated to the Prime Ministers Relief Fund or used for relief expenditures.[67] In addition to promotion of CSR, international experiences show that there are a variety of ways that the private sector can contribute to disaster resilience (Box 7)

83. BB operates nation-wide partial credit guarantee schemes (PCG) for Cottage, Micro, Small and Medium-size Enterprise (CMSME) sector and other vulnerable groups. BB in 2020 issued SMESPD Circular No. 03 which established a partial credit guarantee scheme for the CMSME sector, covering up to 70 percent of their loans.[68] Through SMESPD Circular No. 01 issued in 2022, PCG facility for financial inclusion was further extended for marginal/landless farmers, low-income professionals, school banking account holders and small traders covering up to 50 percent of their loans. The total

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[61] BB Strategic Plan 2020-2024
[62] Global Financial Inclusion | DataBank (worldbank.org)

[63] In case Bangladesh Bank considers providing the climate risk fund with central bank's resources, this should be carefully reexamined and discouraged. BB remains committed to further reducing the non-monetary use of FX reserves and not initiating any new non-monetary operations under the current ongoing IMF-supported program.
[64] Microsoft Word - GBCSRD Circular No. 04-2013.doc (bb.org.bd)
[65] BB circular - December 2020
[66] BB's CSR activities January - June 2023

[67] Banks overspend by 73% on disaster management, bypassing CSR directives | The Business Standard (tbsnews.net)
[68] BB circular - July 2020

grantee issued as of March 7, 2024 is 2.1 billion BDT (CMS sector facility) and 132 million BDT (financial inclusion credit guarantee facility). There is currently no specific clauses allowing for the scale up of credit guarantee scheme coverage following disasters. Upon inter-ministerial decisions, BB in the past issued a circular on loan deferral following major disasters but such practice in general is infrequent.

Table 9. Basic Statistics of the Microfinance Sector

Description	Clients (million)	Borrowers (million)	Loan Outstanding (billion BDT)	Savings (billion BDT)	Loan Disbursement (billion BDT)
MRA licensed MFIs	40.86	31.53	1504.18	620.55	2493.02
Grameen Bank	10.36	7.16	161.5	226.82	247.57
Government Department	13,3	6.21	121.9	39.21	84.57
Schedule and Non-Scheduled and Specialized Banks.	2.30	0.4	73.75	15.18	36.40
Total	66.82	45.3	1861.33	901.76	2861.74

Source: MRA (2023) Microfinance in Bangladesh.

Box 7. Private Sector Engagement in Disaster Preparedness and Relief in Japan

Japan's Basic Act for National Resilience Contributing to Preventing and Mitigating Disasters for Developing Resilience in the Lives of the Citizenry in 2023 defines the role of private firms to contribute to the country's disaster building through information sharing, preparation, and use of innovative technology. To facilitate ex-ante collaboration between private sector actors and municipalities regarding disaster response and recovery, the Cabinet Office issues guidelines for municipalities outlining common approaches for private sector engagement and shares a compilation of good practice cases.

According to the Cabinet Office, as of 2019, a total of 1,741 municipalities throughout Japan has agreed on 29,218 memorandums of understanding (MoUs) with local private companies, which may provide support in wide range of preparedness and response activities in case of a disaster. The largest share of MoUs (32%) is agreed between municipalities with the retail and wholesale industry, including 7,861 MoUs on relief goods provision, 2,331 on logistical support, 1,739 regarding post-disaster rehabilitation. 9.6% of the total MoUs are agreed with critical infrastructure industry, with 1,792 MoUs agreed on post-disaster rehabilitation. Other sectors include construction (8.9%) which may support activities such as rescue and rehabilitation, provision of drones, transport and other equipment, communication industry (6.1%), which may provide free access to local area network, and private social services facilities (4%) which may provide specialized care for the most vulnerable including elderly and those with disabilities.

Source: Torayashiki (2021).

84. BB is engaged in a variety of efforts to strengthen financial resilience against disasters. BB in 2023 issued Gazette Notification BRPD(D-1)/UBPS/761/2023-10722 establishing Bancassurance as a permissible activity in Bangladesh. The Bancassurance Guidelines for Banks was further issued the same year, allowing banks to distribute insurance products using their networks.[69] Under the Bancassurance guideline, interested banks and insurance must come into Bancassurance Agency Agreement and banks must receive prior approval from the BB along corporate agent licenses from the

[69] BB circular - December 2020

Insurance Development and Regulatory Authority (IDRA). BB also has a priority action on insurance-linked agricultural loan provision under its strategic plan.

85. MFIs provide a variety of support to foster clients' finance resilience against disaster shocks. MRA licensed MFIs is allowed to allocate up to 20% of their net income in a year for the social development activities. According to the CDF survey 2021-2022, 4.5% of social service financing by MFI's was extended to disaster risk management activities. In addition, when facing severe disaster shocks, MFIs take a number of ex-post measures to support the clients' liquidity. MRA in response to covid has also issued a circular encouraging MFI's provision of post-disaster support loans. The MRA following the 2008 Cyclone Sidr, issued a circular advising MFIs to offer clients an option to defer loan payments for several months as a way to support their livelihood recovery, though such instruction is infrequent.

86. GOB is well aware of the potential role of MFIs in microinsurance services provision. Microcredit Regulatory Authority Act of 2006 allows for MFI provision of insurance services. MFIs currently offer a quasi-insurance mechanism linked to crop loan known as member welfare funds, where a small proportion (0.5-1%) of loan is collected as a premium to cover the risk of potential death of a borrower. According to the CDF survey, a crop loan with such quasi-insurance mechanism is offered by 96.17% of MFIs. However, MFI's provision of other types of insurance product is still limited: only 1.91% offer life insurance, 0.85% offer livestock insurance, and 0.43% health and accidental insurance respectively. Against this backdrop, MFI and insurance regulators are participating in a joint study to evaluate potential for MFI and insurance alignment under climate change.

87. Palli Karma-Sahayak Foundation is a publicly-owned company providing a variety of disaster related support. These include but are not limited to: (a) SAHOS disaster recovery loan, which provides funding for their partnering organizations (i.e. MFIs) offering temporary subsidized loans to disaster affected communities. SAHOS provides funds with the interest rate of 0.5% per annum with a repayment period of 24 months to MFIs which may then lend at rates between 0 to 8 percent; (b) Risk Mitigation Funds – quasi-insurance, fee-based pooling of support to cover potential livestock mortality. Under the risk mitigation funds the PKSF also provides technical assistance for improved management of livestock to reduce mortality rates. Risk mitigation funds fees are not determined on an actuarial basis nor the fund is reinsured against potential catastrophic losses.

Box 8. Bundling of Agricultural Credit and Insurance in India

The government of India began piloting weather-based crop index insurance (WBCIS) since 2007, when India's national agricultural insurance scheme was experiencing implementation challenges including (a) low coverage, (b) delay in indemnity payments and (c) poor financial performance. Since then, 19 states have adopted the WBCIS with an estimate 25 million (or 20% of) farmers receiving insurance coverage over 23% of cropped area in the country.

In India, WBCIS is bundled with agricultural loan provision. For those states adopting WBCIS, farmers applying for agricultural loans must purchase those covered under the WBCIS scheme. The mandatory sum insured is determined based on the per unit input costs and is pre-declared before each growing season by the insurer in collaboration with the state governments. The WBCIS premium first is determined at the actuarial rates, then is subsidized by the central and state governments up to 75%. WBCIS is also offered on a voluntary basis for non-loan taking farmers.

WBCIS schemes offer a variety of benefits to farmers, insures and governments. Farmers receive greater access to credit where all claim processes are performed automatically with independently measured and verified triggers. For insurers, WBCIS service can be offered at actuarial areas, where additional cost of on-farm inspection is eliminated. For governments, subsidy bills offer a more predicable basis for fiscal planning as opposed to ex-post response to disaster events.

Source: ILO (2017) Bundling to make agriculture insurance work.

Non-Life Insurance Options

88. Non-life insurance market is fragmented with limited penetration in Bangladesh. In addition to state owned non-life insurance company – Sadharan Bima Corporation (SBC), there are 46 non-life insurance companies registered with the IDRA as of 2024. IDRA is the insurance regulatory authority in Bangladesh which determine premiums for non-life insurance policy. According to the Axco report in 2024, only 11 non-life insurers collected more than US$10 million in premium in 2021 with the remainders having each less than 2% of market share. Non-life insurance for housing and commercial sectors is voluntary in Bangladesh while some banks may require borrowers to take insurance as a prerequisite for loan agreement. Non-life insurance policy for housing and commercial sectors generally bundle fire with other natural hazards including floods, cyclones and earthquake. Currently, a draft law is under development with the Ministry of Housing and Public Works to mandate public and private high-rise buildings in Bangladesh and effective regulatory supervision is needed to ensure that the insurance industry has sufficient financial and technical capacities to underwrite and manage these risks. .

89. GOB's regulatory capacity of the non-life insurance sector is deemed weak so are consumer awareness and trust in the insurance products. Non-life premium per percentage of GDP stood at 0.2% in 2019, similar to that of Pakistan (0.2 percent of GDP in 2019) and lower than India (0.7 percent of GDP in 2018).[70] GOB is currently receiving WB's support to strengthen its insurance regulatory capacity.

[70] WB Global Financial Development | DataBank (worldbank.org)

Box 9. Public-Private Partnership for Disaster Insurance

International experience shows that there a variety of approaches that governments take in supporting the availability and affordability of disaster insurance.

In the United States, several states have developed insurance pools where households may not have access to private insurance. In California, the California Earthquake Authority (CEA) provides residential earthquake insurance and private insurance has an option to offer either their own product or a CEA policy as a participating member. In Florida, the Citizens Property Insurance Corporation (CPIC) likewise provides storm-related policy. Both CEA and CPIC transfer risks via the issuance of catastrophe bonds.

In the United Kingdom, the longer-term collaboration between public and private sector on flood insurance began in 2002 with "Statement of Principles". This agreement stated the private insurance sector would offer flood insurance coverage for homes up to 1 in 75 years on condition that the government implements satisfactory flood risk reduction investment, and they have an option to charge risk-based premium. Shortly after the expiry of this agreement in 2013, a non-profit reinsurance scheme known as Flood Re has been set up under the Water Act of 2014 as a joint initiative of the government and private insurance sector, Flood Re is funded by the levy on the insurance sector to increase the affordability of flood insurance while the government agrees to offer relief support in case floods above 200 years occur. Flood Re is a temporary scheme with a clear exist strategy to transit to risk-based pricing of flood insurance by 2039.

In Thailand, responding to 2011 floods and subsequent impact on the affordability of flood insurance, the government established public reinsurance mechanism called the National Catastrophe Insurance Fund, which operated until 2017. Local insurance companies retained part of the risk and transfer the remain to the NCIF, which then accessed the global reinsurance market.

All of these partnerships must be designed carefully taking into account potential unintended consequences including moral hazard and time-inconsistency problems.

Source: OCED 2015 Flood Re 2019.

90. The GOB has for many years supported the development of non-life insurance programs, especially in agricultural sectors, some of which have proved promising in the recent years. As shown in Table 10, past efforts to scale indemnity-based insurance proved challenges due to technical and financial reasons. However, the recent years have seen promising efforts to expand index-based insurances such as the Surokkha project (2018-2022) which protected around 422,000 farmers in 2022 along with the 'Boosting Agriculture Risk Mitigation in Bangladesh which focuses on crop insurance and the development of an 'insurtech' platform. As international experiences show, there are many ways in which governments may foster non-life insurance options and financial inclusion (Box 8, 9). There are currently a limited capacity of domestic non-life insurance and state-owned reinsurance companies to design index-based insurance products and premium is deemed too high for the vulnerable populations.

Table 10. Selected Disaster Insurance Pilot Initiatives

Initiative	Entity	Policy	Outcome
Sadharan Bima Corporation agricultural crop	State-Owned Insurance	Individual grower, multi-period crop insurance covering rice, wheat, sugar cane, jute,	Limited scale and sustainability achieved (annual average of 989 insured farmers). Discontinued due

insurance pilot between (1977-1995)		against floods, droughts winds, pests and disease.	to poor financial performance (no external reinsurance protection and no premium subsidy from the government).
SBC livestock insurance (1980 - 2008)	State-Owned Insurance	Indemnity-insurance against accidental mortality and disease, excluding catastrophe and epidemic disease.	Limited scale and sustainability achieved (annual sale of 45 livestock policies). Loss ratio on average was below 60% except in 2002 the loss ratio was 1200% and the underwriting was discontinued.
SBC Shrimp insurance (1990s to 2004)	State-Owned Insurance	Named-period cover against floods and cyclones, excluding tidal surges and diseases	Limited scale and sustainability achieved (fixed premium was below sum insured. Policy was exposed to first loss given the lack of conventional deductible)/
Oxfam-Pragati Flood Index Insurance (2013-2015)	Private Insurance	Local NGO (Manab Mukti Sangstha) was insured to provide cash relief to local beneficiaries in case of flood. Premium was paid by Oxfam Swiss Development Corporation and reinsured by Swiss Re.	Challenges to scale up include: need for detailed flood data and conducting the necessary risk modelling; basis risk for aman paddy crops, need for alternating financing of premium subsidies.
SBC-ADB Weather Index-Based Crop Insurance (WIBCI) (2013-2018)	State-Owned Insurance	Index-based crop insurance covering rice, potato, chilies and pointed gourd. Direct selling and selling through NGOs/MFIs were tested.	A total of 9,641 farm households were enrolled during the seven rounds of pilots. WIBCI Regulations drafted.
Green Delta Insurance in Haor Area (2020)	Private Insurance	Index-based crop insurance against excess rainfall and floods in Haor Area. Public-private partnership model was tested.	Needs for scaling up including improvement in hydromet capacities; need for strengthening of public private partnership, etc.
Surokkha (2018-2022)	State-own and private insurance	Index-based crop insurance for major crops such as Aman Boro maize and beans.	The program protected around 422,000 farmers in 2022 as compared mere 1,526 in FY 2019.

Source: WB Situational Analysis[71] ADB[72] CCAFS.[73]

C. Assessment of Policy Gap

91. A variety of avenues exist to foster financial sector engagement for disaster risk financing in Bangladesh. It is important that the DRFS strategy is built upon a greater differentiation of target population segments to be covered by both solidarity- (needs) based and mutuality- (market) based instruments. In addition to the most vulnerable segments of the population which are currently covered by

[71] World Bank Document
[72] Pilot Project on Weather Index-Based Crop Insurance: Implementation Completion Memorandum (adb.org)
[73] "Project completion report-2020" of index-based agriculture insurance in Haor area: A report on the completion of the pilot project of index-based agriculture insurance in Haor area and a guidance to move forward for replication throughout Bangladesh - Bangladesh

social protection schemes reviewed in Chapter IV, public-private-civil society partnership will be beneficial to target beneficiaries such as:

- ***Vulnerable population served by Microfinance Institutions, Cooperatives and other NGOs-*** Discussions are ongoing on the potential to expand instruments such as quasi-insurance-linked loans offered in member welfare funds by MFIs and risk mitigation funds by PKSF. These instruments could be strengthened by means such as by the use of actuarial-based pricing and the use of meso-level insurance to cover for the potential catastrophic losses. Existing mechanisms for post-disaster credit support such as MFI's support loans and PKFS' SAHOS schemes could also be strengthened to ensure liquidity following disasters. Overall, MFIs/NGOs are better placed to serve vulnerable population, yet guidance will be needed to strengthen their capacity to offer risk financing instruments.
- ***Cottage, micro, small, and medium sized enterprises and other vulnerable segments with access to formal banks –*** building on existing schemes such as partial credit guarantee scheme, GOB could consider setting up a mechanism to top-up PCG coverage through post-disaster PCG window. Insurance-linked agricultural loans extended by formal banks, currently being tested under the BB strategy could be a promising avenue to explore. In order to encourage the use of mutuality-based risk financing instruments, GOB should also examine the existing broad-based post-disaster support provided and identify areas where improved targeting and scaling down can be implemented.
- ***Emerging middle-class households and large businesses –*** discussions are ongoing to mandate non-life insurance for public and private high-rise buildings. At the same time, some financial institutions are already mandating the use of non-life insurance as pre-requisite to loan access. GOB could strengthen such efforts through enactment of draft law on mandatory building insurance currently under discussions and formal guidance to banks encouraging the mainstream of compulsory insurance practice. In the medium to longer-term, GOB could aim to foster the capacity of domestic insurance sector to design appropriate non-life insurance policies and move towards more market-based approach to price setting and distribution.
- ***Sovereign coverage -*** building on the experience of the pilot sovereign insurance program could be a promoting avenue to explore. Sovereign insurance, when well designed, can provided critical fiscal support in the immediate aftermath of severe disasters enabling a more rapid and effective response. Careful attention should be paid to the design of the index for parametric insurance products with the objective of minimizing basis risk.

92. For all of the above segments, greater financial/insurance literacy as well as continued institutional, technical and regulatory capacity building of financial institutions will be key to fostering DRF. GOB should select priority channels according to the overall development objectives and access appropriate climate and development financing to support capacity building of the domestic financial sector.

Recommendations

- Evaluate alternative channels to foster disaster-related insurance, insurance linked loans and post-disaster credit access (such as through MFIs, cooperatives, banks, insurance companies, etc) and identify promising programs for scaling.

- Foster greater alignment of licensed activities/supervision of banks, insurance, microfinance, and other institutions such as cooperatives regarding insurance-related services provision.
- Complete enactment of mandatory insurance by public- and private high-rise buildings.
- Mainstream banks' compulsory insurance requirements for loan provision via guidance.
- Strengthen the financial, regulatory, and technical capacities of the domestic insurance sector through targeted capacity-building programs, leveraging development partner support.
- Building on existing pilot experience, consider adopting a sovereign insurance scheme.
- Improve the targeting of needs-based support to the most vulnerable, while evaluating options to reduce broad-based provision of post-disaster assistance, as a way to encourage private sector participation and market-based risk sharing arrangements.
- Expand existing efforts to strengthen financial and insurance awareness in vulnerable segments of the population.

VI. Institutional Framework

A. Landscape of Institutional and Legal Framework

Bangladesh has established an extensive institutional and legal DRM framework which the NDRFS can leverage. This section summarizes the current legal, institutional and policy establishments that support DRM in the country. It then assesses how these structures can be leveraged to implement, monitor and mainstream the NDRFS.

Current DRM Legal Framework

93. All Disaster Risk Reduction (DRR) and Emergency Response Management (ERM) programmes are implemented under the legal directive of the Disaster Management Act of 2012 (Law no. 34 of 2012). The law intends to make disaster management activities coordinated, object oriented and strengthened as well as to formulate rules that build up infrastructure to withstand disasters. This Act consists of five main chapters which codify institutional and policy frameworks, while also establishing a funding vehicle and an early procurement request mechanism:

- **Institutional Framework Legislation**: The Organizational Structure of Disaster Management (Chap. II) establishes the legal bases for the National Disaster Management Council (NDMC), the highest-level policy body on DRM, with MODMR holding the secretariat role. The Act also establishes the National Disaster Response Coordination Group, the National Level Disaster Management Committee, and the Local Level Disaster Management Committee discussed in the institutional framework section.
- **Policy Framework Legislation:** Chapter two also determines the formulation of the National Disaster Management Policy and the National and Local Disaster Management Plan. It provides the government the authority to determine the responsibility of ministries and agencies. The DRFS can leverage this plan to mainstream the DRF agenda (described below).
- **Funds and Procurement Legislation:** Chapter four forms the legal basis for the National Disaster Management Fund and District Disaster Management Fund, financed by government grants and donations, and supervised by the MODMR. While, these funds have not been established, there is legal purview to do so, which could be incorporated into the DRFS if the GOB so desired. Furthermore, the Act established that should early purchase for emergency resources be required for one or more years, the National Disaster Response Coordination Group could request that the Disaster Management and Relief Division gains consent from Cabinet Committee for the relevant economic issue to approve procurement. The Director General, Deputy Commissioner, and Upazilla Executive Officer may acquire the necessary purchase under Public Procurement Act, 2006 and Public Procurement Rules, 2008. These are laws in which the NDRFS must consider with when procuring resources during disaster periods.

94. Additionally, key aspects for the operationalization of DRF rest upon public finance, social protection and financial sector legislations, to which the NDRFS will also need to consider. These include but are not limited to those represented in Table 11.

Table 11. Examples of Legal Frameworks in Bangladesh that Interact with DRF

Legislation	Description
Budget Management Act (2009)	Key legislation includes Article 14 which restricts fund transfer and re-appropriation from one grant to another or from charged expenditure to other expenditure without approval of the Parliament.
General Financial Rules (1998)	A compilation of rules and orders to be followed while dealing with matters involving public finances.
Public-Private Partnership Act (2015)	Legal framework for establishing public-private partnerships.
Insurance Act (2010)	Legal framework covering instances where a party is liable for pecuniary indemnification for damage caused by unforeseeable events at the expense of a premium.
Micro-credit Regulatory Act (2006)	Legal framework for micro-credit lending which established the Microcredit Regulatory Authority that can provide licensing.

Source: IMF staff extractions.

Current Institutional Framework

95. Bangladesh has an extensive multi-level institutional structure to deliver relief, recovery and reconstruction support to disaster- stricken communities (Annex III). The Standing Order on Disaster defines specific responsibilities and duties by all relevant agencies (committees, ministries, and local agencies). It was originally established in 1997 but has been updated as recently as 2019. Roles and responsibilities include specific mandates for DRF relevant aspects such as damage assessment, preparation of assets, prepositioning and distribution of relief goods, and implementation of social safety-net programs. These are summarized in Annex IV.

96. The national level coordination, in case of a disaster, is led by the NDMC, providing strategic direction to the concerned committees and individuals, supported by the MODMR serving as a secretariat. In general, national level bodies – including National Disaster Management Advisory Committee (NDMAC), National Disaster Response Coordinating Group (NDRCG) and Focal Point Operation Coordination Group (FPOCG) - are responsible for the overall policy and response coordination. Local relief and recovery activities are led by sub-national committees of affected areas including Divisional Disaster Management Committee, District Disaster Management Committee, Upazila Disaster Management Committee, Union Disaster Management Committee and Ward Disaster Management Committee.

97. Establishing how the NDRFS can be positioned within the wider DRM and institutional environment can help to increase adoptability among relevant stakeholders. An implementation plan can help to define how the DRFS will be adopted more broadly among the GOB and incorporated into their policy agendas.

Current Policy Framework

98. Effective implementation of the DRFS requires explicit articulation of its priorities within Bangladesh's main DRM policy frameworks. The National Disaster Management Policy 2015 was

formulated as per section 19 of the Disaster Management Act, 2012. The policy ensures good governance for disaster risk management, participation, and accountability of all concerned stakeholders. The main purpose of this policy is to formulate and implement hazard-specific strategies based on assessments of major disaster risks in Bangladesh. The second framework is the National Plan for Disaster Management designed over 5-year periods, with the current plan established for 2021-2025. The NPDM is required to be updated next year and it is essential that the NDRFS priorities identified by the GOB are mainstreamed in the upcoming plan. That way a whole-of-government approach can be taken to make progress on key pillars including improved fiscal preparedness, strengthening of adaptive social protection and enhanced engagement of private and financial institutions.

99. Alignment of the DRF strategic priories with relevant sector-specific plans, frameworks and guidelines is also crucial. These include but are not limited to those represented in Table 12:

Table 12. Examples of Plans, Frameworks, and Guidelines Relevant to NDRFS

Strategic Plans
• Public Financial Management Reform Action Plan for 2024-2028 • National Social Security Action Plan for 2021-2026 • Bangladesh Bank Strategic Plan for 2020-2024 • Bangladesh National Financial Inclusion Strategy for 2021-2026 • National Water Management Plan
Frameworks and Guidelines
• Adaptive Social Protection Guidelines (published 2024) • Upcoming adaptive social protection framework supported by ADB • Bancassurance Guidelines for Banks • Policy Guidelines CSR for Banks and Financial Institutions

Source: IMF staff extractions.

100. NDRFS priorities should be integrated into the next round of the Five-Year Plan, Mid-term Budget and the implementation of longer-term strategic plans including the Perspective Plan, Delta Plan, Updated National Determined Contribution, Mujib Climate Prosperity Plan, and the National Adaptation Plan. Adsorption of NDRFS strategic priorities by long-term plans can help to ensure wide adoption of these priorities for administrations to come and emphasizes the commitments of the GOB.

Adapting the NDRFS into the Enabling Environment

101. Designing an effective monitoring and evaluation framework is key to ensuring the strategy's effective implementation. As climate risk and fiscal space is everchanging, gaps may emerge between expectations and implementation of the NDRFS. Therefore, a commitment to a continuous cycle of monitoring, evaluation, and adaptation of the strategy is critical. This approach ensures that scarce fiscal resources are used efficiently and judiciously while allowing for refinement of the strategy over time. By actively monitoring and assessing the effectiveness of the strategy, the GOB

can pinpoint areas for refinement, updating, improvement and success, ultimately enhancing their ability to navigate climatic challenges and safeguard their fiscal stability. This commitment to an iterative approach to fiscal resilience bolsters the government's capacity to respond dynamically to evolving risk landscapes while optimizing the allocation of scarce fiscal resources.

102. The NDRFS Monitor and Evaluation (M&E) should also incorporate a mid-term review. A mid-term review coordinates the assessment of key performance indicators (KPIs) halfway through the strategy. It establishes commitment of the government and can clearly show differences in the expectation of the strategy versus what has happened so far. Enforcing a mid-term review allows the government to dynamically respond to tracked progress and can inform ways to strengthen performance over the latter half of the strategy.

103. To gain traction and ensure an enabling environment, the GOB can consider the following measures in the NDRFS:

Recommendations

- Ensure the NDRFS complies with legislation and policies developed by the GOB.
- Mainstream the NDRFS into the upcoming 2026-2030 National Plan for Disaster Management.
- Develop a comprehensive implementation plan to ensure key stakeholders are aware of the DRFS and strategic priorities are incorporated in plans of relevant agencies.
- Conventionalize the DRFS into the wider government agenda by including DRFS implementation as part of the 9th Five-Year Plan.
- Establish a robust monitor and evaluation framework that includes KPIs.
- Establish a mid-term review to understand process at the halfway point.

Annex I. National Disaster Risk Financing Strategy: A Template

I. Introduction

- *As per the draft Bangladesh National Strategy for Disaster Risk Financing (Strategy)*

II. The Cost of Disaster and Risk Hazards in Bangladesh

- *Include discussion of the cost of disasters in Bangladesh. An analysis of the cost of disasters in As per the draft Strategy.*
- *Include discussion of the cost of disasters in Bangladesh. An analysis of the cost of disasters in Bangladesh is included in section '5.0 Disaster Risk Impact and Loss Scenarios of Bangladesh' of the Strategy, in addition to Chapter II of this report.*

III. High-Level Policy Objective:

- *Clearly articulate the government's overarching policy objectives for strengthening financial resilience to disasters in Bangladesh.*
- *Examples from international experience are given in Annex II. International Experience of DRFS.*
- *The articulation of the Policy Objective will benefit significantly from section '20. Expected Outcomes of the DRRF Strategy' of the Strategy.*

IV. Strategic Priorities

- *In this section the GOB provides a high-level summary of their strategic priorities that underpin the Policy Objective. The strategic priorities serve as organizing pillars of the strategy, used to organize, and group activities which the GOB will undertake to strengthen fiscal resilience. Based on the analysis of this technical report, the following list summarizes potential objectives which the GOB could consider:*

  A. ***Enhance and strengthen fiscal buffers:*** *How the GOB will strengthen its financing capacity to respond to future shocks of varying frequency and severity through expanding its suite of instruments. The recommendations from Chapter III could be captured here.*

  B. ***Strengthen Social Assistance efficacy:*** *How the GOB will increase the efficiency and efficacy of funds channeled as relief to disaster affected households via social assistance programs. The recommendations from Chapter IV could be captured here.*

  C. ***Fostering greater risk transfer and private sector participation:*** *How the GOB will expand the role of non-life insurance in managing the costs of disasters. How the GOB will identify effective disaster responsive programs which are operating in the private sector and seek to scale them up using fiscal incentives over time. The recommendations from Chapter V could be captured here.*

  D. ***Strengthen the institutional framework for DRF:*** *How the GOB will strengthen the alignment of the strategy with core planning documents and policies of government. How the strategy will*

strengthen alignment of the multiple organs of state involved in disaster response. The recommendations from Chapter VI could be captured here.

E. ***Risk Reduction:*** *how the GOB will strengthen risk reduction in Bangladesh. Existing activities in the draft strategy focused on risk reduction can be captured here.*

V. Implementing Ministries – MOF and the MODMR

This section will articulate the role of the primary implementing ministries, namely the MOF and the MODMR. It can briefly explain the justification for this responsibility by key legal documents and legislation, including provisions in the constitution, public financial management laws, and the designated role of MoF in preparing the national budget, managing contingent liabilities, preparing the fiscal risk statement, preparing the medium-term fiscal plan and its convening power across Line Ministries.

This section can draw from '15. Implementation Provisions of the DRRF Strategy' and sectios '6.0 National Disaster Risk Management Framework' and '7.0 International Provisions for Disaster Risk Financing' of the Strategy.

VI. Stakeholder Engagement Plan

Stakeholder Consultation Process:

This section will lay out the process by which the MOF and MODMR will consult with key stakeholders in country, including Line Ministries, District Officials, Development Partners, IFIs, NGOs and Civil Society. Key principles of the consultation process include:

- *Initiate early consultation with key stakeholders, sharing an outline of the strategy for their input.*
- *Facilitate workshops and forums to gather diverse perspectives and harness collective wisdom.*
- *Present the final strategy for extensive stakeholder comment, ensuring inclusivity in decision-making.*
- *Establish ongoing mechanisms for stakeholder engagement, fostering a sense of ownership and continuous collaboration.*

This section can draw from sections '17. Communication and Outreach' and '18. International cooperation' of the Strategy.

VII. Strategic Priorities, Importance, and Activities

This section expands on the summary of the Strategic Priorities articulated in section IV above. It states why each Strategic Priority is important in Bangladesh and lists the activities which will be carried out over the short, medium, and long term under each Strategic Priority. Below a suggested structure for the Strategic Priorities is included for reference. Activities articulated in section '14. Strategic Activities for National DRRF Financing Strategy' of the draft strategy can be included here.

Strategic Priority A: *Enhance and strengthen fiscal buffers.*

Importance of Strategic Priority for achieving the Policy Objective: [articulate why advancing the strategic priority is critical for the GOB to achieve the Policy Objective].

Activities:

1. [Can draw from recommendations of Chapter III]
2. [Can draw from recommendations of Chapter III]

3. [Can draw from recommendations of Chapter III]
4. ….

Strategic Priority B: *Strengthen Social Assistance efficacy.*

Importance of Strategic Priority for achieving the Policy Objective: [articulate why advancing the strategic priority is critical for the GOB to achieve the Policy Objective].

Activities:

1. [Can draw from recommendations of Chapter IV]
2. ….

Strategic Priority C: *Fostering greater risk transfer and private sector participation.*

Importance of Strategic Priority for achieving the Policy Objective: [articulate why advancing the strategic priority is critical for the GOB to achieve the Policy Objective].

Activities:

1. [Can draw from recommendations of Chapter V]
2. ….

Strategic Priority D: *Strengthen the institutional framework for DRF.*

Importance of Strategic Priority for achieving the Policy Objective: [articulate why advancing the strategic priority is critical for the GOB to achieve the Policy Objective].

Activities:

1. [Can draw from recommendations of Chapter VI]
2. ….

Strategic Priority E: *Risk Reduction.*

Importance of Strategic Priority for achieving the Policy Objective: [articulate why advancing the strategic priority is critical for the GOB to achieve the Policy Objective].

Activities:

1. [Can draw from current draft of strategy]

2. ….

VIII. Monitoring and Evaluation

Monitoring and Evaluation Framework:

This section can draw from section '19. Monitoring and Evaluation Mechanism' of the draft strategy.

Log Frame: [An example Log Frame is given in Table 13, with some examples of included content]

Table 13. Example Log-Frame

Strategic Priority	*Action*	*Baseline*	*Target*	*Timeline*	*Responsibility*
A - Enhance and strengthen fiscal buffers					
	Access Contingent Lines of Credit from IFIs (number)	*0*	*2*	*June 2025*	*Macroeconomic Division, MOF*
	Review size of fiscal buffers as part of MTFP	*No*	*Yes*	*June 2025*	*Macroeconomic Division, MOF*
	….				
	….				
	….				
B - Strengthen Social Assistance efficacy					
	MIS for relief welfare established	*No*	*Yes*	*June 2026*	*Min of Social Welfare*
	…				
	…				
	…				

Mid-term review: [state timing, objectives, and actions to be taken as part of a mid-term review of the strategy]

Annex II. International Experience of DRFS

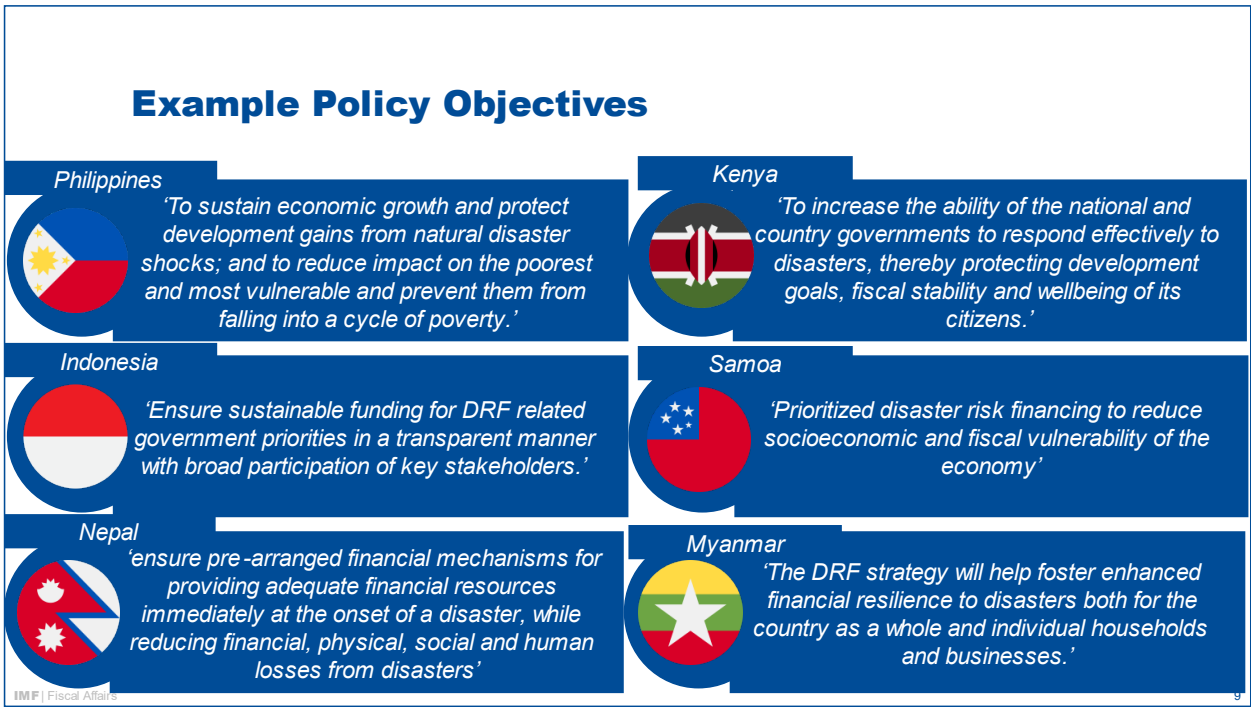
The foundation of a robust National Disaster Risk Financing Strategy (NDRFS) lies in the GOBs articulation of a clear priority for enhancing fiscal and financial resilience in the face of climate-related shocks. As with many countries, resources are finite in Bangladesh and thus trade-offs are inevitable in the pursuit of fiscal stability and disaster preparedness. To navigate this complex landscape effectively, the GOB must engage in thoughtful deliberation to determine their overarching policy priorities for fiscal and financial resilience to climatic shocks. These priorities guide decision-making, ensuring that fiscal resources are channeled strategically to safeguard the nation's fiscal health and protect against the economic impact of climatic shocks.

High-level policy priorities in disaster risk financing strategies, as articulated by various countries, generally revolve around the identification, reduction, and effective management of fiscal risks arising from natural disasters. Priorities typically include enhancing the understanding of fiscal risks associated with disasters, implementing innovative financial instruments for effective financial management, strengthening and expanding effective delivery mechanisms for relief funds and promoting risk transfer to alleviate fiscal pressures post disasters. Governments in addition focus on protecting public assets, ensuring the resilience of households and communities affected by disasters, and facilitating the recovery of livelihoods. Furthermore, strategies emphasize the involvement of subnational governments, the private sector, and communities in financing disaster risks, as well as empowering local insurance companies. Key principles guiding these strategies include collaboration between central and subnational governments, risk layering, timely and adequate fund allocation, effective disbursement, and the importance of accurate data and information.

The overarching policy objective could articulate the commitment of the GOB to maintaining a robust fiscal health at the national level, whilst protecting vulnerable communities from the impacts of disasters. The Policy Objective should be established in the context of the exposure of Bangladesh to floods and cyclones, the impacts that disasters have on the economy, fiscal balance, poverty and development objectives, ensuring the availability of financial resources, to the extent possible, for immediate response and recovery in the aftermath of climatic shocks, and reducing the adverse effects of disasters on the most vulnerable populations, particularly those experiencing the highest poverty rates due to climate change impacts. The objective could also underscore an inclusive approach, safeguarding the well-being of these populations and promoting gender considerations.

On March 2, 2024, the mission team co-hosted a workshop with the MOF in Dhaka sharing international experience of National Disaster Risk Financing Strategies (NDRFS). Part of the presentation focused on the articulation of the overarching Policy Objective by other countries, shown in Figure 14 below.

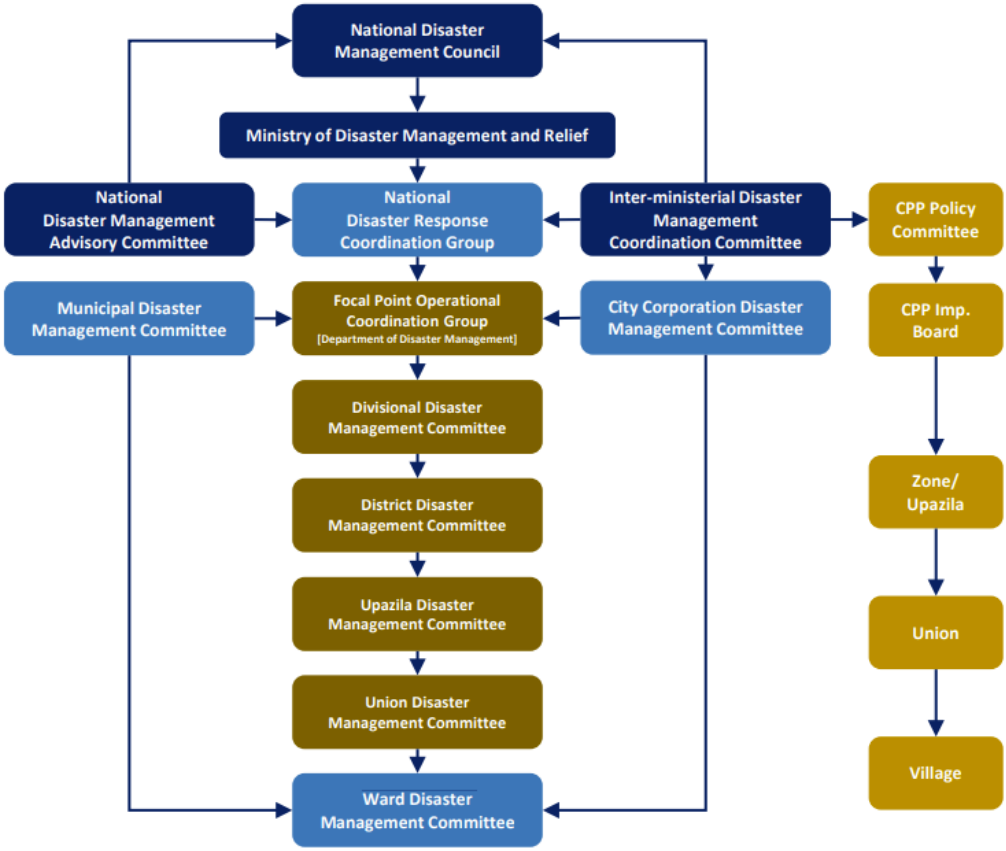
Figure 14. Policy Objectives from International Experience



Annex III. DRF Relevant Roles and Responsibilities as Codified in the SOD

Figure 15 provides an overview of Bangladesh's institutional framework for disaster management, and Table 14 summarizes roles and responsibilities of different stakeholders as specified in the SOD 2019.

Figure 15. Disaster Management Institutional Structure in Bangladesh



Source: CFE-DM (2023) Bangladesh Disaster Management Reference Handbook.

Table 14. DRFS Relevant Roles and Responsibilities as Codified in the Standing Orders on Disaster 2019

	Damage Assessment	Budget Preparation/Execution	Prepositioning & Relief	Social Safety Net Program
National Level Committees Roles and Responsibilities				
National Disaster Management Council (NDMC)				Provides strategic guidance on emergency response programmes.
Inter-Ministerial Disaster Management Coordination Committee (MDMCC)	Advise on recovery/response to plans to overcome damage and loss.	Recommend the Finance Division to increase the allocation of resources for HA and recovery.	Assist in the formation of search & rescue teams	
National Disaster Management Advisory Committee (NDMAC)		If necessary, recommend to create/increase funds for special projects and adopt strategies for extraordinary crises.		
National Disaster Response Coordination Group (NDRCG)	Evaluate the situation of earthquakes and other mega disasters.	Recommend the procurement committee to obtain content for purchases of goods and resources. Prioritize the funds for HA.	Mobilize supportive resources for disaster response; prioritize the goods, and equipment for HA.	
NGO Coordination Committee for Disaster Management (NCCDM)	Ensure collection, update and proper dissemination of disaster-related information; apply disaster impact assessment tools for proposal formulation and implementation (of DRR).	Provide necessary assistance for urgent approval of project proposals related to post-disaster HA activities.	Provide necessary assistance for urgent approval of project proposals related to post-disaster HA activities.	
Committee for Disaster Damage and Needs Assessment (CDMNA)	Coordinate collection of damage and needs information, and send it to the MoDMRR within the shortest possible duration; Review and update SOS and D-FORMs.			

Forecast-based Financing Committee (FbFC)		Provide guidance on methods and procedures of releasing funds against forecast-based response activities.	Provide guidance to prepare, determine and implement forecast based early action-related strategies.	Provide guidance to prepare, determine and implement forecast based early action-related strategies.
Sectoral Agencies Roles and Responsibilities				
General responsibility across all ministries, divisions, departments and government-owned corporations	Assess overall damage and loss and estimate the reconstruction and repair costs for damaged infrastructure and send a report to the respective authority.	Ensure the allocation of necessary resources from the respective ministries for implementation of response, HA rescue and recovery/reconstruction programmes. Where necessary, reallocate ministry resources.	Ensure participation of local staff for helping response, rescue and HA activities. Re-establish all services after a disaster and follow the build back better approach in recovery and reconstruction.	
Ministry of Disaster Management and Relief MoDMR)	Prepare a template for Disaster Impact Assessment to assess the impact of disasters on development programmes;	Estimate the requirements of additional funds and materials for HA and rehabilitation; collect funds and materials quickly for operating HA activities.	Construct and repair shelters and food warehouses; take initiatives to build a humanitarian staging area, issue orders to send HA assistance equipment; make advance arrangements to collect and stock necessary HA materials for the disaster-prone areas;	Arrange for house building grants, Test Relief and arrange livelihoods programme for the extreme poor; Implement recovery and rehabilitation programmes through social safety net programmes in disaster-affected areas;
Department of Disaster Management (DDM)		Assist local administration and keep proper accounts of the use of HA.	Construct multipurpose shelters across the country, prepare contingency plans. Compile and maintain a list of shelters, dams, Mujib killas etc.	Implement social safety net programmes based on a review of risk and poverty maps; Implement house construction grants, test relief and employment generation programs for the extreme poor.

			Assist local administration to distribute HA and monitor the progress of rescue HA and rehabilitation activities.	
Ministry of Food	Conduct a rapid assessment of the damage, loss and needs and take steps to rehabilitate the infrastructure benefits and services under the MoFd.		Take steps for the preservation of food and storage of other products in food warehouse; Ensure adequate food reserves at field level warehouses.	Ensure fair prices of food grains. Expand the food-friendly programmes/open market sales activities based on need.
Ministry of Agriculture	Conduct assessments to determine the extent of loss/damage to crop fields and see storage offices and prepare and implement supply plain and repair.		Stock appropriate seeds for disaster prone areas; arrange to prepare saplings and seedlings; distribute agri-inputs on an emergency basis.	Undertake necessary steps to initiative crop insurance; undertake necessary preparation so that the affected people may receive seed, samplings, fertilizers and agricultural machineries based on loans/grants/subsidized prices.
Ministry of Fisheries and Livestock	Provide necessary instructions to conduct quick damage and loss estimates on livestock resources and fisheries, evaluate final damage and loss.	Prepare separate emergency funds for post-disaster recovery programmes; undertake arrangements for necessary fund mobilization.	Instruct subordinate agencies to advise and assist in farmers about their duties to reduce damage and loss of fish and livestock. Arrange emergency stock of animal feed, medications and equipment, protect livestock.	Arrange loans and grant programmes for affected fisherfolk and fish farmers (D of Fisheries) Rehabilitate farmers who lost their livestock farms and undertake arrangements for permanent fund (D of livestock).
Health Services Division/Health Education and	Send daily reports on infectious diseases and other	Established a reserve and allocate from it according to the	Arrange primary healthcare	

Family Welfare Division	issues to the higher authority; collect and preserve data on deaths, injuries.	determined budget (HEFWD).	services in the disaster affected areas; provide necessary equipment, personnel and materials;	
Local Government Division	Estimate damage and loss in light of social inclusion of women children the elderly and persons with disabilities and formulate a rehabilitation plan.	Provide the allocated money at the right time to purchase search and rescue equipment and for HA.	Assist in HA at all levels; repair and maintain roads, bridges and culvers.	
Rural Development and Cooperative Division/Bangladesh Rural Development Board	Determine the loss of lives, damage and loss of assets and needs for humanitarian aid and inform the concerned ministry/department.	Create an emergency fund for quick management of (a) rural development in disaster prone areas via Upazila Central Cooperative Association and Krishak Shomobay Shomiti.	Organize the people and NGOs jointly to undertake development programmes to recovery the damage and loss. Establish nurseries to distribute seedlings.	Arrange disaster loans and fulfill the loan needs for cyclone-affected people
Ministry of Housing and Public Works	Prepare damage and loss statistics including the nature and amount of reconstruction or repair works.	Develop policies for collecting funds for repair and reconstruction of government infrastructure, installments and buildings and allocate in the ministry's budget. Ensure a budget allocation for all kinds of initiatives and response activities.	Protect government stock, materials and properties, deploy additional manpower and materials in affected areas and repair and protect government properties.	
Finance Division/Economic Relations Division	Prepare damage and loss statistics based on the situation and requirements of HA materials, in close liaison with the MDMR.	Ensure the required budget allocation on the request of the concerned ministry, department and authority. Ensure quick allocations for necessary financial assistance of HA, rapid rescue operations and rehabilitation, reconstruction and recovery. Maintain a database based on	Establish networks with multilateral and bilateral partners to receive quick international assistance. Undertake initiatives to receive HA from development partners.	

		assistance received from international agencies.		
Ministry of Women and Children Affairs	Establish data collection system and ensure security.	Coordinate with local government division, social services department and DDM to allocate fund and deploy manpower for assisting disaster affected women and children. Allocate necessary budget by considering the priority of rehabilitation of women children and elderly in the department's rehabilitation planning.	Coordinate and respond to the needs of women and children and regular monitoring service activities. Ensure separate rooms and other facilities for women, children elderly and persons with disabilities in cyclone shelters. Ensure distribution of child friendly food and prevention of violence against women and children.	Assist in disaster-affected women and children by supporting their livelihoods.
Ministry of Social Welfare	Prepare a database of persons with disabilities and orphan children and formulate protection and HA plans.		Establish Crisis Support Centre for psycho-social health services. Assist local authorities in operating HA centers and child friendly spaces.	Participate in humanitarian aid and rehabilitation activities, protect vulnerable people and take initiatives to provide livelihood assistance.
Subnational-Level Committees Roles and Responsibilities				
City Corporation Disaster Management Committee/City Corporation Disaster Response Coordination Group (assisted by City Corporation Ward Disaster Management Committee and City Corporation Ward Disaster Response	Collect damage information in SOS and D forms and sent them to the DDM and MoDMR.	Maintain accounts of humanitarian and rehabilitation aid received from government and development partners.	Prepare a check list of the emergency tasks and ensure the necessary materials and manpower, develop and maintain database of volunteers, risk and resource maps;	

Coordination Group)			distribute aid and resources that are received by MoDMR or are arranged locally.	
Municipal Disaster Management Committee /Municipal Disaster Response Coordination Group (assisted by Municipal Ward Disaster Management Committee).	Collect damage, loss and needs in SOS and D forms and send it to DDM and MoDMR.		Coordinate government and NGO HA and rehabilitation programs and ensure the transparency of delivery; undertake necessary steps for distribution of resources for HA and rehabilitation as per the direction of DDM.	
District Disaster Management Committee/District Disaster Response Coordination Group	Collect damage, loss and needs in D form and verify with Upazila DRMC and send to DDM and MoDMR.	Formulate and manage district disaster management fund; Preserve and distribute goods received and send a progress report to DDM and MoDMR.	Coordinate selection of safe shelters; take necessary steps to activate the Union, Municipal and Upazila Committees and assist in committees on HA activities. Coordinate government and NGO HA and rehabilitation programs at union, municipality, upazila and district levels and monitor distribution of allocated humanitarian assistance. Allocate resources for	Hand over allocated cash amounts to the families of persons who died and for the medical treatment of injured persons.

			rehabilitation programs to upazila and municipalities.	
Upazila Disaster Management Committee	Collect damage information in SOS and sent them to the DDM and MoDMR. Collect and send D forms to District Committee, DDM and MoDMR.	Create a fund for implementation of contingency plans or undertake measures to obtain assistance.	Develop and maintain a database on shelters and maintain rescue and response materials.	Assist productive farms and small and medium enterprises for disaster preparedness;
Union Disaster Management Committee/Union Disaster Response Coordination Group (assisted by Union Parishad Ward DMC and Disaster Response Coordination Group)	Collect damage, loss and needs in SOS and D forms and send it to Upazila DMC.		Prepare a check list of the emergency tasks and ensure the necessary materials and manpower, help people transfer valuables to the shelters/safe places. Encourage and assist transfer of livestock and poultry to Mujib Killas.	Provide assistance to adopt crop production technology that is resilient to floods/drought and salinity, with the support of DoAE.

Source: Authors extraction from the Standing Order on Disaster Management.