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**Government of the People's Republic of Bangladesh**

# National Plan for Disaster Management (2021-2025)

***Action for Disaster Risk Management***
***Towards Resilient Nation***

November 2020

**Ministry of Disaster Management and Relief**

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# Executive Summary

Over the past few decades, Bangladesh is experiencing rapid development. As a result, many of the cities and towns have developed haphazardly. Many of the urban centers are developing on the areas that are vulnerable to natural hazards. Geographically the country is located on flood plain, closer to one of the active seismic zones in the world, exposed to a large coast with frequent cyclone and storm surge etc. Particularly large cities and towns are most vulnerable to different hazards and in some cases exposed to multi hazards.

Fast growing urban centers became the economic hubs of the country with high population density. Although there was no major earthquake in the recent past, but due to geographical location and historical events, the country is highly vulnerable to large earthquake. A strong earthquake affecting a major urban center may result in damage and destructions of massive proportions and may have disastrous consequences for the entire nation. Intensity of flood and cyclone have increased over the decade and Bangladesh has experienced multiple hazards within a calendar year, bit unusual trend that the country ever experienced. In the year 2020 there was four conjugative floods devastated thousands of settlements, outbreak of COVID-19 and cyclone Amphan. Climate Change has battered the coastal zone of the country severely accelerating numerous natural disasters.

National Plan for Disaster Management (NPDM) 2021-25 is the revised version of NPDM 2015-2020 implemented by the Ministry of Disaster Management and Relief (MoDMR), relevant other ministries and departments coordinated. NMDP 2021-25 is prepared based on wider consultations with the relevant ministries, departments, donors, academic institutions, NGOs, research organizations, private sector and development partners.

NPDM 2021-25 is prepared based on the four key principles of Disaster Risk Management, adopted from Sendai Framework for Disaster Risk Reduction (SFDRR) and Standing Order on Disaster (SOD) as follows,

**Preparedness** to ensure that adequate arrangements are made at national, regional and at community levels to combat adverse situation.

**Early warning and Alert** to prepare effective preparation in order to save life, property, valuables from the emerging hazards.

**Emergency Response** in order to attend the requirements in the areas affected by any natural hazard.

**Rehabilitation, Reconstruction and Recovery** to ensure that the adverse situation can be addressed in order to return back to normal situation.

This plan provides context, legal background, implementation status of previous plans and likely situation of Bangladesh in the changing disaster risk context. Overall document is presented in to two broad parts respectively on planning context and Targets for Implementation and five specific sections. Section 1 provides the background, legal ground and preparation process of the document. Multi-sectoral engagement is presented in section 2. Changing risk context is described in section 3. Vision, mission, goals are presented in section 4 and implementation strategy, financial mechanism, investment priorities are described in section 5 of the document.

A number of activities are identified based on the above principles to be implemented during next five years. Inclusion of women, children, senior citizen, persons with disability, ethnic minorities are given high priority for all proposed activities.

National Plan for Disaster Management 2021-25 will be implemented under the technical guidance and coordination of the Ministry of Disaster Management and Relief (MoDMR). Funding for the Activity/program identified under this plan will be from the concerned ministries and agencies as appropriate. Non-government agencies, donor and private sectors will also fund for program implementation.

Total 48 activities are listed in the Annex-1. The lead ministry/ department to undertake the responsibilities for activity implementation respectively are also listed in the annex. The activities/programs will be detailed out further during implementation stage. The programs identified can be adjusted with the requirements by the respective sector or community need as applicable on the situation.

# Acronyms

| | |
|---|---|
| ADB | Asian Development Bank |
| BCCSAP | Bangladesh Climate Change Strategic Action Plan |
| BNBC | Bangladesh National Building Code |
| BWDB | Bangladesh Water Development Board |
| CCA | Climate Change Adaptation |
| COVID-19 | Corona Virus Disease - 19 |
| CRI | Climate Risk Index |
| DAE | Department of Agricultural Extension |
| DC | Deputy Commissioner |
| DDM | Department of Disaster Management |
| DDMC | District Disaster Management Committee |
| DRM | Disaster Risk Management |
| DWA | Department of Women Affairs |
| EPAC | Earthquake Preparedness and Awareness Committee |
| FPOCG | Focal Point Operation Coordination Group of Disaster Management |
| FSCD | Fire Service Civil Defence |
| GAR | Global Assessment Report |
| HBRI | House Building Research Institute |
| ILO | International Labour Organization |
| IMDMCC | Inter-Ministerial Disaster Management Coordination Committee |
| JICA | Japan International Cooperation Agency |
| JMREMP | Jamuna-Meghna River Erosion Mitigation Project |
| MoDMR | Ministry of Disaster Management and Relief |
| NDMAC | National Disaster Management Advisory Committee |
| NDMC | National Disaster Management Council |
| NOC | No Objection Certificates |
| NPDM | National Plan of Disaster Management |
| NPDRR | National Platform for Disaster Risk Reduction |
| NRP | National Resilience Programme |
| OSHE | Occupational Safety, Health and Environment Foundation |
| RMG | Ready Made Garment |
| SDG | Sustainable Development Goals |
| SFA | SAARC Framework for Action |
| SFDRR | Sendai Framework for Disaster Risk Reduction |
| SOD | Standing Orders on Disasters |
| UNDP | United Nations Development Programme |
| UNFCCC | United Nations Framework Convention on Climate Change |
| UZDMC | Upazila Disaster Management Committee |
| WDMC | Ward Disaster Management Committee |
| WB | World Bank |
| WFP | World Food Programme |

# PART – I: Planning Context

# 1. Progress with National Planning for Disaster Risk Management

## 1.1 Bangladesh towards a Middle-Income Country: Disaster Management Context

Bangladesh is ranked as one of the most disaster-prone countries in the world. The World Risk Report 2018 identified Bangladesh as the sixth most natural disaster-prone country among 171 countries in the world. According to the Zerman Watch on Global Climate Risk Index 2019 Bangladesh is ranked as seventh most affected and vulnarable country due to climatic disasters. People in Bangladesh are often affected by number of natural disasters, including floods, drought, salinity intrusion, cold wave, riverbank erosion and thunderstorm. Bangladesh is a global hotspot for tropical cyclones and the country faces it once or more in each year. In recent time cyclone and storm surge has changed its direction and moving towards to south-western direction and causing substantial damage to the assets and the ecosystem, the Sunderbans in particular.

An increase in sea surface temperature is strongly evident at all altitude and in all oceans. The scientific evidence indicates that increased sea surface temperature will intensify cyclone activity and heighten storm surges. These surges will, in turn, create more damaging flood conditions in coastal zones and adjoining low-lying areas. The destructive impact will generally be greater when storm surges are accompanied by strong winds and large onshore waves. Tropical cyclone Sidr in Bangladesh (November 2007) and cyclone Nargis in the Irrawady delta of Myanmar (May 2008) provide recent examples of devastating storm-surge impacts in developing countries.

According to the IPCCAR5, storm surges and related floods are likely to become more severe with increases in intense tropical cyclones in future (IPCC, 2007). For the Bay of Bengal, a study using dynamical models driven by RCM simulations of current and future climates have shown large increases in the frequency of highest storm surges despite no significant change in the frequency of cyclones (Unnikrishnanetal, 2006). Hence, from a practical perspective vulnerability of Bangladesh to cyclones/storm surges may increase even more as a result of climate change.

The Ganges-Brahmaputra-Meghna (GBM) Delta at the north of the Bay of Bengal, characterized by a number of livelihood opportunities resulting from high population density, as well as a number of biophysical and socio-economic challenges (flooding, erosion, cyclones, salinization, water logging, etc.) which are increasing alongside the changing climate and anthropogenic activities/developments. Freshwater flooding is a common occurrence in the delta during the monsoon reflecting the strong seasonal regional climate and monsoon river flows of the Ganges, Brahmaputra and Meghna Rivers, its low-lying nature and its position at the north of the Bay of Bengal.

Floods have been the most devastating natural disasters to affect poor people at the global level. In 2016, 3,250 lives were lost and more than 13 million people were affected by floods. In particular, floods in transboundary river basins have led to severe damage and loss in the Asia- Pacific region. Between 2000 and 2010, floods in the Indus, Ganges and Brahmaputra-Meghna river basins, among others, resulted in more than 20,000 fatalities with combined damage of about $30 billion. In this regard, it is critical to improve regional cooperation for operational flood forecasting and early warning systems in shared river basins.

Bangladesh is possibly one of the countries, most vulnerable to potential earthquake threat and damage and given its geographical location in the seismically active region. An earthquake of even medium magnitude on Richter scale can produce a mass graveyard in major cities of the country, particularly Dhaka, Sylhet and Chattogram. Rapid and unplanned urbanization increases the risks for earthquake as well as other man-made disasters like fire, building collapse, industrial hazards etc.

The adverse impacts of all the natural and man-made hazard/disasters affecting socio-economic condition need to be reduced for sustainable development. Between1996 to 2015 there were 185 disaster events occurred in Bangladesh which incurred an averaging 0.732% of GDP loss per annum and total economic loss was $2.283 billion. In the advent of the natural and other disasters, the Government of Bangladesh has undertaken a lot of plans and programs for disaster risk reduction and disaster response management. Bangladesh has played, over the years, an increasingly influential role both at regional and global levels on disaster and climate risk management strategies and plans and also contributed to shape related global policies and commitments.

The Government of Bangladesh (GoB) has been maintaining a strong pace in its development efforts towards the middle income and also developed country by the year 2041. However, GoB's continual efforts and aspiration articulated in the Vision 2021 and Vision 2041 are challenged by the increased frequency of disasters and again by the recent Covid-19 global pandemic. The long-term aspiration of the development of GoB is dependent on its growth and social development in harmony with the nature, climate, policy and institutions system which reduce the risk from climate change and disaster. The broad objective of all long-term and medium-term plans is to accelerate growth and maintain its momentum in order to maintain macroeconomic stability, also to improve the institutions and governance. In line with the previous plans the Eighth Five Year Plan (8th FYP) is getting prepared to maintain this focused approach to improve institutional performance with a view to develop a resilient Bangladesh.

Globally Bangladesh is widely regarded as the 'Role Model' for disaster and climate risk management. Since the independence of the country and with able leadership of the government, the institutional structure and policy instruments are well-established to support the country's efforts in disaster management. The long, medium and short term plans and programs of the Government of Bangladesh (GoB) have considered disaster management well and included in the plans as a priority area with other agendas. Existing institutional structure and policy frameworks are in place to guide the national efforts to achieve key disaster management priorities. The role of GoB is primarily to continue providing required supports

and ensuring that disaster management for resilience is a focus of national policy, plans and programs. Alongside, the country embraces the global and regional protocols and procedures in order to prepare for and respond to the recurrent and anticipated hazards and disasters in Bangladesh.

The National Plan for Disaster Management (NPDM) 2021-2025 is the Government of Bangladesh's document for the management of disaster and associated events. The plan abides by the institutional and policy regimes in disaster management of the country. The Sendai Framework for Disaster Risk Reduction (SFDRR) is fundamental to the vision and ambition of the Government of Bangladesh in the areas of disaster management and the NPDM 2021 – 2025, accordingly, complies with the objectives, priories and major activities of the SFDRR. The NPDM 2021 – 2025 also is guided by the mission and disaster management focus of the Perspective Plan of the Government of Bangladesh (Vision 2021 and 2041). Following the current and upcoming investment scenario of the country and potential engagement of the private sector, NPDM 2021 – 2025 covers all investment areas where risk-informed planning and implementation is highly appreciated.

NPDM 2021-2025 reaffirms GoB's commitment to strategic planning for disaster management and serves as a transformational instrument to build the resilience of the vulnerable people of the country. The NPDM is prepared to deal with and achieve the DM aspects of the country's long-term plan. Building on the achievements from the previous plans, focus of the NPDM 2021-2025 is continuation of disaster risk reduction for achieving resilience.

The NPDM 2021-2025 aims to strengthen and follow through the implementation of the SFDRR priorities through different ministries/divisions/departments. In complete coherence with the Disaster Management Act 2012, the plan also counts on and recapitulates the SOD 2019 while implementing activities of the respective ministries/divisions/departments and other agencies.

## 1.2 Legal context

Disaster Management (DM) in Bangladesh is guided by a number of national, regional and global drivers, which, among others includes a) the Disaster Management Act 2012; b) the Disaster Management Policy 2015; c) the Standing Orders on Disasters (SOD) 2019; d) the National Plan for Disaster Management; e) the SAARC Framework for Action (SFA); and f) the Sendai Framework for Disaster Risk Reduction (SFDRR) 2016-2030. The disaster management policies, plans and programs are also prepared in alignment with the national medium-term and long-term plans like the Five Year Plan (8th) and Perspective Plan 2021 and 2041. The Sustainable Development Goals (SDG) provides the over arching guidance in the development and implementation of national disaster management plans and programs.

The National Disaster Management Council (NDMC), headed by the Prime Minister, is the supreme body for providing overall direction for DM in Bangladesh, which includes disaster risk reduction, mitigation, preparedness, response and recovery. As DM is a multi-sectoral and multi-functional discipline, one single agency or sector is not enough to plan and

implement everything everywhere, neither it should be responsible to supervise and monitor all of the activities. Need based sectoral planning and its execution responsibilities are vested with the specific sectors and their ministries, with the MoDMR having an overall coordinating and facilitating role as "Secretariat" to NDMC.

Disaster Risk Reduction (DRR) and Emergency Response Management (ERM) Programmes of Bangladesh are being implemented under legal framework, which is constituted with relevant laws, policies, rules, orders and guidelines. Following policy documents and plans provide the legal foundation as well as strategic guidance for the NPDM 2020-2025 in disaster management in Bangladesh.

**Disaster Management (DM) Act 2012:** The Disaster Management (DM) Act 2012 is the principal legal document and provides the institutional framework for DM in Bangladesh. The Act delineates the roles, responsibilities of Disaster Management and Relief (MoDMR) and its affiliated department and agencies. DM Act 2012 provides the legal premises and authority has how MoDMR is expected to work and also provides supports and services to others.

**Disaster Management Policy 2015:** The Disaster Management (DM) Policy 2015 has been approved by the Government of Bangladesh in 2015. The policy ensures the governance in the disaster management in all levels of the country. Overall, it is expected that the policy will be an effective instrument to make DM efficient in Bangladesh.

**Standing Orders on Disaster (SOD) 2019:** The Standing Orders on Disaster (SOD) outlines and informs all concerned about their roles and responsibilities at every stage of disaster risk management. According to the SOD each ministry, division, department and agency prepares its own detailed work plan to perform its responsibilities and functions efficiently and takes necessary measures accordingly.

**National Plan for Disaster Management (NPDM):** The National Plan for Disaster Management (NPDM) is the strategic plan to guide the implementation of disaster management in the light of the government's vision, mission and national and international approaches plans and programs on disaster risk management. The plan includes areas of investment for disaster risk management through a Risk Informed Development Plan and emphasized its implementation with participation of all concerned.

**Perspective Plan 2021 and 2041:** The Perspective Plans of the GoB (Vision 2021 and 2041) while progressing with the development efforts, also focus on the integration of environment and climate change considerations in the growth strategy. Specifically, the plan includes strategies to reduce vulnerability and build resilience through the formulation and implementation of various plans and programs in line the Delta Plan 2100.

**Eighth (8th) Five Year Plan:** The multi-year work plan of the government like the Eighth (8th) Five Year Plan reflects essence of the international disaster drivers and other instruments. The long-term plan is translated into the sectoral plans to take care of the sectoral issues those are impacted by disaster in one way or rather.

**Bangladesh Delta Plan (BDP) 2100:** The Delta plan is country's long-term plan that encompasses the GoB's vision for the developed country by 2041. According to BDP 2100

the country is divided into six hydrological regions which are called 'Hotspots' and the risks of the regions are determined accordingly. The disaster-prone districts of the country grouped and classified as per the hotspots. The hotspots are i) Flood-prone River and Estuaries, ii) Cyclone-prone Coastal area, iii) Drought-prone Barind area, iv) Flash Flood-prone Haor area, v) Landslide-prone Hilly area and vi) Water Logging and Earthquake-prone Urban area.

Apart from the legal, policy and programs there are quite a good number of guidelines to guide the implementation of activities like cyclone shelter management guideline, incident command system guideline, dead body management guideline and others.

## 1.3 NPDM 2016-2020: Progress Review

NPDM 2021–2025 is a successor to the previous NPDM 2016–2020 prepared by MoDMR in partnership with the sectoral ministries/divisions/departments and other agencies. The plan aimed to address the disaster risks faced by vulnerable communities in the disaster-prone areas of Bangladesh. The planning process led the way for the ministries and others agencies to produce their sectoral disaster management plans in order to implement the Disaster Management Act, other policies and programs of the country. The purpose of the plan was to guide implementation of the Disaster Management Act, allowing GoB ministries and other agencies to use it to produce their Annual Work Plans.

NPDM 2016-2020 aimed to promote risk informed planning and implementation of investment initiatives for business continuity in disasters. The plan embodies eight key strategic directions for achieving resilience (i) Upgrading existing DM programs and policies (ii) DM governance (iii) Investments for building resilience against chronic disasters (iv) Social protection (v) Inclusive development (vi) Private sector engagement (vii) Resilient post-disaster response and recovery and (viii) Emerging risks.

The plan operationalized its objectives through identifying priority actions, providing a roadmap for implementation of the core investment areas, incorporating DM aspects in sectoral plans, exploring public-private investments and ensuring inclusiveness. It also addresses emerging risks, promote risk governance and illustrate how the work of various stakeholders can contribute to GoB's DM vision. The plan promotes risk informed planning and implementation of investment initiatives for business continuity in disasters.

NPDM 2016-2020 reflected a paradigm shift from relief-based disaster response to proactive disaster risk reduction. NPDM 2016-2020 was drawn from regional and global frameworks including the Sendai Framework for Disaster Risk Reduction (SFDRR) and SDGs. It was recognized the national strategy for addressing global and regional targets. The NPDM 2016–2020 included 34 targets for the sectoral ministries and other agencies and a review of NPDM 2016-2020 indicated substantial achievements have made against most of the 34 targets like in the areas of reduction of the number of disaster victims, early warning for all and response mechanism, earthquake preparedness in place, disability and gender inclusive disaster risk management and provision of safety nets, strengthening civil-military coordination for humanitarian response etc. However, it did not articulate how it would seek to implement

gender and disability mainstreaming across the 34 indicators. It also lacked to identify concrete indicators on gender and disability inclusion and an M&E framework to ascertain the progress made under gender-related commitments.

Following accomplishments and achievements have been made over the course of five years of NPDM 2016-2020:

Countrywide weather observation and prediction system established – BMD produces warnings and disseminates information more especially on cyclone through the media and institutions at the local level. The lead time of flood early warning has increased up to 3- 5 days compared to 24 - 48 hours during 2005. This enhanced response time and preparedness that contributed to reduce loss of lives and agricultural farming and other assets. An Interactive Voice Response (IVR) system using mobile phone technology provides regularly updated weather forecasts and warnings on flood and cyclones which is accessible to by dialing 1090 on any mobile phone for 24/7 hours. This is critical for saving the lives of thousands of fisherman in the sea by providing early warning services.

Improvement in early warning system – Bangladesh Meteorological Department, Flood Forecasting and Warning Centre, CEGIS and other relevant actors. Expanded the scope of the Flood early warning from 2-3 days to 10-15 days' time frame; which will help government, development partners, communities and stakeholders to prepare and when needed ensure effective and timely response. Expanded the dissemination network of cyclone early warning in the south-west Bangladesh. Scale up the riverbank erosion forecasting system, innovate warning systems for lightning and landslide hazards. Using the lead time of the forecasts/early warnings, humanitarian actors are supporting people with necessary aids which is critical for saving lives and properties.

Implementation and expansion of the earthquake program – Urban resilience program have been initiated for major cities like the Urban Resilience Programme (URP) is the initiative by the Government of Bangladesh and the World Bank in order to develop resilient and livable cities. The National Resilience Programme (NRP) of the Department of Disaster Management (DDM) part is implementing a piloting in 4 cities1in view to strengthen the entire chain of earthquake science, policy and practice to develop a minimum preparedness package.

Development of Community Volunteers - Over 38,000 out of 62,000 Urban Community Volunteers through FSCD across the country. In addition, through NRP : DDM 2,000 volunteers were developed in Rangpur, Tangail, Rangamati and Sunamganj municipalities. These UDVs are closely linked to both WDMCs and adjacent fire stations of the FSCD.

Development of a strong civil-military coordination - A mechanism for disaster response has been initiated for tackling recurring natural and human induced disasters such as cyclone, floods, landslides, fire and earthquakes particularly on search and rescue, dead body management, debris management or the restoration of bridges/roads activities. In addition,

[1] Rangpur City Corporation and Tangail, Rangamati & Sunamganj Municipality.

Ministry of Disaster Management and Relief (MoDMR) and Armed Forces Division (AFD), jointly organized regional/international Disaster Response Exercise and Exchange (DREE) for improving its preparedness level to respond to urban mega disasters since 2010.

However, the NPDM 2016-20 did not reflect the multiple and intersecting identities of women and girls and treats them as one single homogenous group.

National Emergency Operation Centre (NEOC) - It is being established with a view to effectively deal with the effects of and damage by large scale disasters. To enhance technical capacity on research and training an institute called National Disaster Management Research and Training Institute is being established at Department of Disaster Management (DDM). A research guideline has also been developed by the MoDMR.

Weather and Climate Services Regional Project – It established to strengthen hydro-meteorological monitoring and forecasting, and improve early warning systems. The project provides develop agro-meteorological services to farmers and provide tailored weather and climate data, and services.

National Earthquake Contingency Plan reviewed and updated - Ward level contingency plans have been developed for Rangpur CC, Tangail/Rangamati and Sunamganj pourashavas. Besides, a guidelines for harmonized ward-level contingency plan with municipality level contingency plan will be prepared.

An Earthquake Contingency Plan for Tangail and Rangpur – The plan is developed through a collaborative effort among city-level disaster management and first responder agencies as well as other relevant agencies, departments and organizations under the Comprehensive Disaster Management Programme, Phase II, in 2014.

Trainings of DMCs conducted – At least five batches of training completed with at least 100 DMC leaders at National Resilience Programme in Rangpur, Tangail, Rangamati, Sunamganj, Manikganj, Kurigram and Jamalpur. Besides, lots more DMC trainings conducted through different other programs.

Disaster Impact Assessment strategy paper produced - DIA tool is being developed through NRP project to use in DPP formulation to reduce the impact of disaster

Construction of fire stations initiated in all the district headquarter – Model firestations constructed which are functional.

At least one demonstrated improvement of flood and cyclone management each. Building on existing capacity, the NRP of DDM is implementing a piloting aiming towards improving community resilience by creating replicable, cost-effective model for local flood risk reduction and management through Flood Preparedness Programme.

Preparedness and emergency response guidelines produced for at least one prioritized sector. Dead body management guideline developed, debris management guideline drafted. A guideline also been developed for urban volunteers

Continuation and planned expansion of earthquake program (e.g. EPAC) - In 2019, Singapore and Bangladesh jointly organized Exercise on Coordinated Response (ExCOORES) in Singapore to exchange experiences and improve skills. Bangladesh's leadership in organizing this event has further brightened the image of the country in the external world.

R&D projects initiated with balance between scientific and socio-economic - Students from IDMVS, Dhaka University gets intern since 2017 through a MOU with Ministry of Disaster Management and Relief.

Agrometeorological advisory service has been established - With the support of World Bank (WB) Department of Agricultural Extension (DAE) has been implementing the Agrometeorological Advisory Service to provide early warning services to the farmers. A mechanism is established to make location based, incorporating the climate, crop and land attributes available at the appropriate scale address the agriculture production and management in 64 districts of the country.

Published a National Strategy on Displacement - MoDMR with support from RMMRU has published a national strategy on the management of disaster and Climate induced internal displacement. Besides a cluster has also been launched about displacement.

Concept paper produced for recovery and rehabilitation strategy - A concept paper has been developed to devise a recovery and rehabilitation strategy for the country. NRP: DDM part/UNDP is supporting in the initiative. The strategy will be primarily developed based on the loss and damage, and failure analysis of Cyclone Amphan and Floods 2020.

Social protection for disaster resilience agency established - DRR integrated SSNP (EGGP) has established under the DDM, MoDMR. A guideline on DRR inclusive social safety net has been prepared through the National Resilience Programme of DDM/MoDMR. The guideline has prepared to support and contribute to the execution of the safety net programmes of MoDMR with particular focus on disaster risk reduction.

Guidelines for risk-informed private sector investments produced - A guideline for Supply chain resilience of RMG sector is being developed through the National Resilience Programme of Programming Division part.

Pilot recovery and rehabilitation strategy programme initiated - MoDMR, with technical assistance from NRP/UNDP initiated to devise a Strategy for Cyclone Amphan and flood 2020.

Capacity raising program for CPP demonstrated - Ministry of Disaster Management and Relief has expanded the Cyclone Preparedness Program (CPP) to a total of 10 districts in the south-west, including Khulna, Satkhira and Bagerhat. Besides, as part of promoting women's leadership in disaster management a total 18,400 women volunteers have been developed.

Despite the Plan timeline ending in 2020, there is provision to continue implementing the targets until 2030. There is thus opportunity for flexibility and having an incremental and gradual approach to implementation, which could prove to be a practical approach to implementing an ambitious set of action plans. NGOs and Private Sector in Bangladesh can be valuable partners of the plan. The greatest hurdle for progressing in the implementation process was persistent barrage of disasters continuously distracting institutional attention and action to focus on emergency response.

The experiences from NPDM 2016-2020 offered valuable lessons for the next plan. A review undertaken by a group of independent consultants pointed to several disadvantages in the plan and its implementation, and noted that the following in particular needed to be addressed in the next plan:

- *Urban disasters pose a particular challenge:* A clearly defined pre-established coordination mechanism and incident command system for urban disasters is needed. The cadres of urban volunteers with appropriate representation of women being developed can be effective in dealing with risk assessment and risk reduction, as well as crisis response, but this will require an institutional mechanism to manage and keep the volunteers motivated and engaged.
- *Retraining and 're-tooling' district and Upazila administration:* At the district and Upazila level, the local officials may be generally aware of the SOD, but often require further capacity building on emerging concepts of disaster preparedness, DRR and resilience, as well as on coordination systems involving international and national agencies in times of major disasters.
- *Resourcing the plan:* The safety net and social protection program provides an excellent opportunity to strengthen risk management and risk reduction in Upazilas and Unions and enhance resilience of the women, physically challenged, poor and vulnerable to shocks and stresses.

- *Less integration of gender in the plan:* Despite evidence that disasters affect men, women, children and disable persons differently, the plan – and the actions emanating from it – were weak on addressing the gendered nature of vulnerability and impacts of disasters.

- *Coherent information management is the key to good disaster response:* The current system of information generation and dissemination by multiple agencies (DMIC, NDRCC and AFD) requires more coordination. The Government needs to develop a vision for the more appropriate system and then move forward towards it so that all future investments in this area clearly contribute to the achievement of the agreed vision.

- *Synergy between CCA and DRR plans:* There is an increasing convergence between elements of CCA and DRR agendas in so far as climate related stress directly affect vulnerability and exacerbate disaster risks. Greater emphasis will be needed in the future on bringing about coherence and synergy between the two plans (CCA and DM) as well as in monitoring their implementation.

- *Monitoring mechanism:* The plan needs to be accompanied by an inter-ministerial mechanism for monitoring and for ensuring that rules of allocation of business within different departments/ministries incorporated the activities identified in the plan.

- *The concept of integrated DM is complex:* There is a need to build leadership and technical capacity on in the Department of Disaster Management (DDM) to provide assistance on multi-faceted DM and undertake advocacy to facilitate a GoB-wide process. With the changing nature of disaster risk, multi-disciplinary and multi-stakeholder DM needs to be an adaptive field with regular learning.

- *Coordination and command system to manage disaster response:* The country's capacity to provide efficient and timely disaster response in times of major disasters is overwhelmed as coordination and incident command system for such 'non-routine' disasters are not well established. It will also be critical to define the relative DM responsibilities of military and civilian organizations.

- *User-friendliness of the plan:* For a plan to be useful, it needs to be practical, concise and ought to clearly spell out how implementation of it would be monitored and resourced.

- *Inadequate socialization of NPDM 2016-2020:* A proactive communication and dissemination strategy need to be in place to ensure ownership of the plan by various stakeholders.

## 1.4 NPDM 2021-2025: Addressing Changing Risk Context

The discourse of disaster management has undergone significant changes in recent decades and their effects have been profoundly felt in the developing world, particularly in terms of reduction in the loss of human lives and increase of damage of asset and infrastructures on the other hand. The geographical location of Bangladesh in South Asia, at the confluence of three large river systems – the Brahmaputra, the Ganges, and the Meghna – and north of the Bay of Bengal, renders it one of the most vulnerable places to monsoon floods and tropical cyclones. Human-induced climate change exacerbates the problem, with its already manifested effects and the predicted rise in temperature, rainfall and sea level. In this backdrop Bangladesh has become a leader in transforming and setting its institutional framework for disaster risk reduction and sustainable development with the core government policies and programs have incorporated risk reduction elements well ahead.

During the timeframe of NPDM 2016-2020 Bangladesh faced a good number of natural disasters and many localized hazard events, with economic losses ranging from 0.8 to 1.1 per cent of GDP. A number of cyclones hit the coastal areas of the country during this period, among them, Roano (May 2016), Mora (May 2017), Fani (May 2019), Bulbul (November 2019) and Amphan (May 2020). The most recent monsoon floods in 2020 has an overall impact on the Northern, North Eastern and South Eastern region of Bangladesh which engulfed more than 36 percent of the country and impacted 30 districts including15 moderately to severely (CARE, 2020). Incidence of few newer hazards like landslides and lighting are causing both damage to infrastructures and claiming lives in some pockets of the country and increasing the threat to the common people.

Increasing urbanization and industrialization, together with climate change, Bangladesh is set to experience newer and dynamic risks, necessitating NPDM 2021-2025 to be more flexible and adaptive. This is a reminder of the necessity to continual improvement of disaster management in the country to safeguard sustainable development efforts undertaken in various sectors and areas. Rapid urbanization has induced increase of Urban Population at a fast pace resulted large number of settlements on the lands vulnerable to natural hazards. Especially in the major urban centres of the country millions of people, infrastructures are exposed to flood, cyclone and landslide. Following is the state of social and physical exposure to flood, cyclone and landslide (DDM, 2016).

The NPDM 2021-2025 reaffirms GoB's commitment to strategic planning for disaster management for resilience as demonstrated in the preceding NPDM 2016-2020. As clearly articulated, the focus in the new plan is similarly on disaster risk reduction for achieving resilience, but also as clearly emphasized, humanitarian response. In particular, post-disaster response and recovery is considered as an essential part of the new plan in alignment with the mandate of MoDMR for "Humanitarian Assistance" management. Provision of enhanced social safety net programmes serves as government's continued effort in resilience development for the most vulnerable communities.

Bangladesh is now taking disaster risk management to the next level focusing the shifting from prevention to resilience. On the endeavour towards vision 2021, the country has taken

initiatives to mainstream Disaster Risk Management through the 7th Five Year Plan (7FYP), the medium-term national development plan of the country. Now DRR is a shared responsibility of all ministries. Medium Term Budgetary Framework (MTBF) has also been prioritised Disaster Risk Management considering the country's vulnerability to multiple hazards.

Bangladesh has taken initiative to ensure access of the person with disability, elderly people and pregnant women to the shelters and market places. With the sense of ensuring build back better concept we are also implementing a rural infrastructure project for better local navigation and water drainage. We have engaged NGO's in the DRR activities to address the issues of people with special needs as a mandatory provision.

Early warning is a key component of effective disaster risk management. One of the seven targets of the Sendai Framework calls for substantial increase in the availability of and access to multi-hazard early warning systems and disaster risk information and assessment by 2030. The Asia Regional Plan for Implementation of the Sendai Framework for DRR 2015-2030 was adopted in seventh Asian Ministerial Conference on Disaster Risk Reduction held in 2 to 5 November in New Delhi, India. This is articulated in developing regional strategies for the warning systems.

The NPDM planning process recounts and reconciles the recurrent hazards and new, emerging hazards with their changing nature including frequency, intensity and the impacts. The plan is clearly concerned with all aspects of disasters with the aim of building resilience. While NPDM 2021-2025 takes national, regional and local priorities into consideration, it recognizes the critical importance of emerging issues and opportunities in the areas of urban disasters, land slide, lightning hazards and involvement of the private sector in the disaster management arena.

The country has been facing the global pandemic COVID-19 it also successfully managed the super cyclone 'Amphan' in May 2020 and also a long lasting flood from June to September this year. In order to overcome the pandemic situation GoB follows whole of society approach and regain people's confidence through several disaster risk management activities. On behalf of GoB the MoDMR has followed a different strategy and taken special measures. More cyclone/flood shelters, schools and community building/structures were arranged where the affected population live during the disaster emergency period and able to maintain health safety and security protocols. Same health safety and security protocols were ensured during the evacuation, transfer relief distribution and humanitarian supports as much as possible. Updated and affordable technologies and online platforms were used, as much as possible, for meeting, workshop, consultation and communication for the health safety ground.

Following areas are considered for future disaster risk reduction in Bangladesh -

**Policy Shift to "Build Back Better" Recovery Approach** - It is necessary for Bangladesh to applying "Build Back Better" recovery strategies from only reducing the health impact approach to increase socio-economic resilience approach. Recovery policies also should include not only livelihood generation and restarting industries, but also regenerating human/natural capital as well as resuming infrastructure investments for physical resilience.

Natural hazard and climate change never wait until the end of the pandemic. It requires careful examination about the magnitude and depth of the impacts and losses across sectors and vulnerable communities, to take most appropriate recovery measures as well as prevention measures for next crisis immediately even the present Pandemic situation. The urgent focus on short-term needs does not always meet the needs for achieving long-term goals.

**Importance in Disaster Risk Governance and Institutional Enhancement** - The effective recovery process depends on strong disaster risk governance and capacity of coordination mechanism within the government institutions. The recovery process from the present pandemic situation provides opportunities to strengthen institutional capacity as well as internal processes within governments and provide avenues to benefit from the private sector and civil society. Though the response of pandemic was excluded from the original concept of SFDRR, Implementation of the SFDRR can cover health sector and can integrate the pandemic response as a disaster recovery planning though "Build Back Better" approach. Indeed, over the years, MoDMR has sought to strengthen institutional capacities and disaster risk governance in order to build disaster resilience. For this, we need to go back to mainstreaming line of disaster risk reduction and try to enhance institutional capacity as before.

**Data Management and Information System towards Disaster Risk Reduction** - The response of COVID-19 cleared that the data openness and transparency are one of the key aspects for bringing quick solution in a crisis moment. Data management and sharing information are essential to create trust among people, and to implement smooth recovery operations as proven in previous disasters. The use of open and standardized data and sharing information system help quick implementation of damage and loss assessments as well as preparing next disasters. Instituting digitization of data management can improve real time access to social protection services, and can ensure no one is left behind in the crisis situation. Building effective data management and sharing information system can help to reduce the digital divide at every disaster cycle, and can contribute towards both social inclusion and building resilience to future disasters.

**More Investment to Resilient Infrastructures for Disaster Risk Reduction -** As SFDRR stress the increasing disaster related investment, it is obvious that investment of infrastructure contributes to the economic growth and improve the people's life as well. The current global investment of infrastructure gap is around 15 trillion USD. It is expected to be further widened by COVID-19 situation because fiscal pressure of government will be increased, and the risk aversion of private sector will be promoted. However, the COVID-19 crisis cleared that the importance and necessity of resilient infrastructures that can be effectively working during the present crisis situation. From the past experiences of disasters, infrastructure projects have been worked effectively as the typical labor-intensive projects as well as improve disaster risk reduction in the region. And more, infrastructure projects have been greatly contributed cash back into local economies. Therefore, even we are facing financial pressure, increasing investment of infrastructure is vital for the country's future. However, some issues should

be considered in these projects like quality, complying the rules, sustainability, technologically advanced and future disaster risk reduction.

**Put Importance No One Left Behind Policy and Implement Psycho-Social Care in DRR**
**It is observed-** that the present pandemic affects more vulnerable people and societies. Therefore, we again recall the SDG's main philosophy of "no one is left behind" policy and try to contribute the effective recovery process utilizing the experiences of tackling recurrent natural disasters. However, it is unfortunate that social trust and unity sometimes broken by the pandemic and it goes beyond the economic losses. In this point, the COVID-19 recovery process is somehow different from the normal disaster response situation. It requires an effort for restore society with psychosocial support and long-term rehabilitation towards strong communities. Intensive support[2] from the Advocacy Group on Disability inclusive Disaster Risk Management (DiDRM), Bangladesh and National Task Force on Disability inclusive Disaster Risk Management, MoDMR has developed psycho-social care system related to Disaster Risk Reduction (DRR) since 2017. Government have trained more than 100 officials for psycho-social care in DRR, and we hope they can also contribute the COVID-19 recovery process in the country. For the response of COVID-19, specific attention is given to the frontline medical and health personnel, but the recovery process from the COVID-19, vulnerable people and communities should be considered for building resilient nation.

**Strengthen Regional and International Cooperation** - The COVID-19 gives great economic impact to the country, tightened national budget and reducing future investment for disaster risk reduction. Therefore, international and regional financial cooperation mechanism and coordination of fiscal policies are sought to stable economies and quick recovery from the Pandemic.

## 1.5 Scope of NPDM 2021-2025

The National Plan for Disaster Management (NPDM) 2021-2025 is the Government of Bangladesh's document for the management of disaster and associated events. The plan abides by the institutional and policy regimes in disaster management of the country. The Sendai Framework is fundamental to the vision and ambition of the Government of Bangladesh in the areas of disaster management and the NPDM 2021 – 2025 complies with the objectives, priories and major activities of the framework. The NPDM 2021 – 2025 is guided by the mission and disaster management focus of the Perspective Plan of the Government of Bangladesh (Vision 2021 and 2041).

**Policy Premises for NPDM 2021-2025**

Disaster management (DM) in Bangladesh is guided by a number of national drivers, for examples, National Plan for Disaster Management (NPDM) that strategize the management of both risks and consequences of disasters, community involvement and integration of structural and non-structural

[2] Advocacy group on Disability inclusive Disaster Risk Management (DiDRM) has taken number of initiatives towards disability inclusion for disaster risk reduction.

measures; Disaster Management (DM) Policy (2015), which places importance on the DM fund as a dedicated financial resource for DM activities at all levels; DM Act 2012, which endorses the Standing Orders on Disaster (SOD) and provides a legal basis. The purpose of NPDM 2021-2025 is to guide implementation of the Disaster Management Act 2012 and Standing Orders on Disaster 2019.

Considering Bangladesh's continued commitment as a global partner, NPDM 2020-2025 needs to be aligned with the regional and global frameworks, directives and accords including the Sendai Framework for Disaster Risk Reduction (SFDRR) and also to be in line with the Asia Regional Plan for Implementation of Sendai Framework for Disaster Risk Reduction 2015-2030. The UN Sustainable Development Goals (SDGs) and the Paris Climate Change Agreement are the overall global guidance for NPDM which allow synergies between international drivers, the country context and priorities.

In its five years term NPDM is expected to be in line with and achieve the objectives as set out in the medium term plan of the country i.e. 8th Five Year Plan and seeks to contribute to achieve GoB's vision 2021 and thus 2041 through DM. Many of the longer and medium term targets of NPDM may coincide with and implement alongside the NAP (in preparation), Delta Plan 2100 etc.

**Institutional Participation in NPDM 2021-2025**

Disasters are often the outcome of inadequate development choices and can eradicate years of development effort where disaster risk and poverty are closely linked. Since poverty, vulnerability, sustainable development, disasters and climate change are interlinked, it is crucial to integrate DM measures in all development initiatives. On the other hand, DM is not only the business of the government, but involves every part of society because DM for resilience contributes to sustainable development across the agencies, institutions and communities. Given this, the plan takes a 'whole-of-Society' approach for effective implementation and includes the sectoral ministries, their executive agencies/departments, civil societies, NGOs, research, academia, private sector and the community themselves.

As per the DM Act 2012 the MoDMR has the responsibility for coordinating national DM efforts and NDMC is the supreme body for providing overall direction, functional and hazard-specific planning and execution responsibilities are vested in sectoral ministries and agencies. The directives are clearly spelled out in the SOD as how the sectoral ministries and other agencies are expected to perform and deliver for risk reduction, disaster preparedness, response, recovery and related activities. However, as per the SOD, the MoDMR provides technical supports for capacity development of the sectoral ministries and other agencies what so ever required for the smooth implementation of the NPDM. While the sectoral ministries and agencies are responsible and accountable for the DM activities they plan for 2021-2025, monitoring of the implementation may be undertaken by a committee led by MoDMR as agreed and as planned.

**Time Horizon for the NPDM 2021-2025**

In general compliance with the national planning horizon in Bangladesh and considering the timeline of the global plans, accords and decision, the next phase of NPDM for Bangladesh may be prepared for five years i.e. for a period from 2021 to 2025. However, there are few other considerations like the Vision 2021 of Bangladesh ends in year 2021 and on the other hand Vision 2041 is coming along the way and may warrant longer-term sectoral plans and processes. Sustainable Development Goal (SDG) and Sendai Framework for Disaster Risk Reduction (SFDRR) complete their term in 2030. Therefore, the NPDM 2021-2025 is prepared for the period of five years and some of the targets may be accomplished in alignment with the national and global targets till the end of 2030.

Accordingly, the timeline for the 5-year NPDM 2021-2025 has three program periods: 2021 - preparatory year with continuation of existing programs; 2021-2022 - initiation of new actions plus actions continuing from the previous period; and 2023-2025 - more initiatives and an activity peak relating to expected growth in institutional capacity. Many of the core targets will continue to be implemented as per the action plans over the longer term until 2030, in conjunction with the other short, middle, long term plans and programmes like the 8th Five Year Plan 2021-2015, Delta Plan 2100 etc.

**Hazards Coverage**

Bangladesh has faced a good number of natural hazards and human induced hazard events during the timeframe of NPDM 2016-2020. On the other hand, with increasing urbanization and industrialization, together with climate change, Bangladesh is on the edge to experience newer and dynamic risks. Global pandemic 'COVID-19' adds a new dimension in the disaster landscape in Bangladesh like other parts of the world with it's potential for assuming significant risks for Bangladesh. All these recurrent, frequent disasters and potential risks from the newer hazards are necessitating NPDM 2021-2025 to be flexible and adaptive. Therefore, NPDM 2016-2020 embodies both rapid and slow onset disasters and it also includes recurrent, anticipated, climate induced and biological disasters.

The increased frequency of geological hazard like earthquake, urban hazard like the fire, building collapse, urban flooding, chemical spill over etc. attaches greater attention for the DM. Climate induced hazards and projected/predicted scenario also pose potential risks for the ongoing and future development initiatives the Bangladesh is undertaking. The list of the hazards may include, but not limited to, flood, cyclone and surge, drought, salinity intrusion, earthquake, riverbank erosion, landslide, lightning, arsenic contamination, tsunami, human-induced hazards and health hazards.

**Geographical Coverage and Other Agendas**

The NPDM 2021-2025 for Bangladesh is prepared based on the disaster hotspots of the country and thus cover the entire country and the vulnerable people.

Nonetheless, there are other aspects of the country/society, which have direct bearing with the disaster and its impact. The areas are brought into the plan with due attention and necessary communication and coordination with the concerned authority and people.

Gender, ethnic minority community, disable persons, inclusion, social safety nets and other cross-cutting agenda/issues like marketing are considered for the NPDM.

**Thematic Areas and Structure of the Plan**

The disaster cycle, as structured in Standing Orders on Disaster (SOD), will be covered through the targets of the plan linking SFDRR priorities. Resilience framework covering absorptive, adaptive, anticipatory and transformative capacities will also be used in identifying/assembling the activities.

The NPDM will have four inter-related thematic areas for building resilience, namely:

- Disaster risk reduction – Activities related to mainstreaming DRR into national and local plans, hazard analysis & risk profiling, early warning etc.;
- Disaster preparedness- Activities related to ensuring – people are prepared and response will be carried out efficiently and effectively;
- Humanitarian/Emergency response – Activities that help restoring lives and livelihoods and basic infrastructure, early recovery; and
- Rehabilitation, reconstruction and recovery – Activities related to long-term recovery – build back better.

## 1.6 NPDM 2021-2025 Development Process

NPDM 2021-2025 was prepared under the leadership of Ministry of Disaster Management and Relief (MoDMR), GoB. The entire preparation process followed a participatory and inclusive approach through an extensive stakeholder and expert consultation process. The methodology for the development of NPDM 2021-2025 consisted of a preliminary desktop review which included a review of publicly available documentation on disaster and climate risk management, all national and international frameworks including, laws, rules, policies, strategies, plans available reports of assessment as well as findings from the review of the NPDM 2016-2020. A series of meeting, consultation, validation followed thereafter with all stakeholders including sectoral ministries, agencies, academia, NGO/CSOs, development partners, private sectors and policy makers at all level.

The present plan was built on the preceding National Plan for Disaster Management (NPDM 2016-2020). An intensive review of the Sendai Framework for Disaster Risk Reduction (SFDRR), Sustainable Development Goals (SDGs), Paris Climate Change Agreement,

SAARC DM Plan, other plans and strategies was done to draw the important directives and also to make necessary alignment with the country context and priorities for the NPDM 2021-2025. Establishing alignment with the outcomes of AMCDR, ARPDRR, Dhaka Declaration on Disaster and Disability, others was done to make important collaboration with the global, regional and national initiatives, networks and authorities.

A committee consisting of 7members was formed to guide the drafting committee including drafting the contents of NPDM 2021-2025 and also a review panel was formed to review and finalize the plan. A team of national level experts was responsible to undertake the review, meeting, consultation and validation of the NPDM 2021-2025 with the required logistic and management supports from the NRP, UNDP, DDM and MoDMR.

At the outset of the process a national level workshop was organized with the all-out participation of the stakeholder ministries, agencies, NGOs, development partners, academia, research institutions, private sectors and others to inform about the preparation of the NPDM 2021-2025 and also gather their insights and suggestions. A follow-up preparatory workshop was conducted to draw the outline of the NPDM 2021-2025 and also to distribute responsibilities among the experts to prepare the thematic working papers and draft plan.

A number of national level virtual consultation workshops were followed to gather feedback on the working papers from the stakeholder ministries, agencies, NGOs, development partners, academia, research institutions, private sectors and others. The thematic working papers were shared with and made available online for all concerned which allowed drawing insights from specific important sectors and areas. Validation of the NPDM 2021-2025 was completed through a final national level workshop with the participation and contribution of all concerned.

# 2. Multi-Sectoral Engagement and International Frameworks

## 2.1 Institutional Structure and Multi-Sectoral Engagement

**Institutional Structure**

The Ministry of Disaster Management and Relief (MoDMR) of the Government of Bangladesh has the responsibility for coordinating national disaster management efforts across all agencies. The National Disaster Management Council (NDMC), headed by the Prime Minister, is the supreme body for providing overall direction for DRM which includes disaster risk reduction, mitigation, preparedness, response and recovery. As DRM is a multi-sectoral and multi-functional discipline, functional and hazard-specific planning and execution responsibilities are vested in agencies with primary technical /management focus related to specific sectors, with MoDMR having an overall coordinating and facilitating role as "Secretariat" to NDMC.

The Standing Orders on Disaster (SOD) issued by the ministry in 1997 was an important milestone towards guiding and monitoring DRM activities in Bangladesh. However, the primary and principal legal document in disaster management in Bangladesh is the Disaster Management (DM) Act 2012 which delineates the roles, responsibilities of MoDMR and its affiliated department and agencies.

The National Disaster Management Council (NDMC) and Inter-Ministerial Disaster Management Coordination Committee (IMDMCC) coordinate disaster-related activities at the National level. Coordination at District, City Corporation/Municipality, Upazila (Sub-district) and Union levels is done by the respective local level Disaster Management Committees (DMCs). A series of inter-related institutions, at both national and sub-national levels, function to ensure effective planning and coordination of disaster risk reduction and emergency response management.

Key national level DM institutions include:

a) National Disaster Management Council (NDMC) headed by the Honourable Prime Minister to formulate and review DRM policies and issue relevant directives;
b) Inter-Ministerial Disaster Management Coordination Committee (IMDMCC) headed by the Honourable Minister in charge of the Disaster Management and Relief Division (DM&RD) to implement disaster management policies and decisions of NDMC/ GoB;
c) National Disaster Management Advisory Committee (NDMAC) headed Chairman of Standing Committee, MoDMR;
d) National Platform for Disaster Risk Reduction (NPDRR) headed by Secretary of MoDMR;
e) Earthquake Preparedness and Awareness Committee (EPAC) headed by Honourable Minister for MoDMR;
f) Focal Point Operation Coordination Group of Disaster Management (FPOCG) headed by the Director General of DDM.
g) Chemical Disaster Management and Awareness Committee headed by Secretary MoDMR
h) Forecast based Financing/Action (FbF/A) headed by an Additional Secretary, MoDMR

At sub-national levels:

a) Divisional Disaster Management Committee (Div.DMC) headed by divisional Commissioner;
b) District Disaster Management Committee (DDMC) headed by the Deputy Commissioner (DC);
c) City Corporation/Municipality Disaster Management Committee at City and ward levels
d) Upazila Disaster Management Committee (UZDMC)s at upazila, union and ward levels.

**Multi-Sectoral Engagement**

The MoDMR is primarily responsible to provide technical supports to the sectoral ministries/departments/agencies, NGOs, private sectors, others to include/mainstream disaster risk reduction/management issues in the policies, plans and programmes. Specifically, MoDMR undertakes, has completed/achieved the followings while works with different ministries, sectors, departments and other:

Ensure regular communication and coordination with the Bangladesh Meteorological Department (BMD) to collect and quickly disseminate weather alert and emergency messages through various media like radio, television, fax, telephone and email communications as fast and as effectively as possible. Supports BMD on the innovation in forecasting with on rainfall intensity, agronomy forecast and others.

MoDMR works with the Bangladesh Water Development Board (BWDB) and the Flood Forecasting and Warning Center (FFWC) who maintains regular communications to obtain real time data, collect all necessary information on emergency rehabilitation, provide long; mid and short-term flood forecasting information to the DDM and BMD for ensuring better preparedness at all levels.

MoDMR provides the Fire Service and Civil Defence (FSCD) all sorts of institutional, policy, technical and financial supports to develop their overall capacity to fight urban disaster in particular. They train urban volunteers including male and female members periodically in coordination with the MoDMR, DDM, Directorate of Explosives, city corporations and municipalities to face earthquakes, fire breakouts, hazardous chemical material and chemical weapon related disasters.

MoDMR supports Ministry of Health and Family Planning (MoHFP) to conduct preparedness programmes (training on first aid and lifesaving, deadbody and debris management as part of earthquake and other disaster) on identified disaster prone areas and also supports to construct temporary hospitals if the health centres and hospitals are damaged in an earthquake.

MoDMR provides technical supports to the Ministries of Agriculture, Fisheries, Livestock and Environment (MoA, MoFL and MoEFCC) and their executives agencies like DAE, DoF, DLS and DoE so that they are able to include Disaster Impact Assessment (DIA) in the process of preparing development plans.

Ministry of Women and Child Affairs (MoWCA) includes risk mitigation and risk reduction issues in the light of inclusion of women, children, the elderly and persons with disabilities in the all ministry's development programmes and plans with the technical supports of MoDMR.

Local Government Division (LGD), in close coordination with and supports from MoDMR, ensures to consider disaster risk when preparing all development plans and infrastructure by including women, children, the elderly, and persons with disabilities; construct helipads in coastal areas for disaster response and formulate a construction blueprint considering all present and future hazards, especially earthquakes and the local context, prepares contingency plans with the City Corporation and Pourashava.

In case of disaster and emergency Ministry of Information (MoInfo) publicizes awareness materials containing disaster preparedness messages (leaflets/booklets) and survival techniques before, during and after disaster supplied by the MoDMR/DDM and concerned ministries through television, radio and other telecasting sources. Also arranges wide publicity of the necessity of warning messages for cyclones, landslides, flash floods and warning signals for floods through the mass media as per the guidance from MoDMR.

MoDMR provide support to the DM Education in public and private Universities i.e. funds, technical and knowledge supports to academic/educational institutions like Dhaka University, Rokeya University, Patuakhali Science and Technology University, North South University and others.

Also provides institutional capacity development supports like curriculum and module development and training to the professional cadres of the NILG, PATC, Planning Academy, others. Undertakes and formulates MoU between MoDMR and Dhaka University on Research Guideline 2020.

Development and Implementation of Resilience Project: Earthquake resilience projects: URP, NRP, NGO projects, DREE, Equipments UCV etc.

Nonetheless MoDMR undertakes the followings:

a) Develops DM capacity and arrange Training for PIO/DRRO is done regularly at NDMRTI, CPM-MH training etc.
b) Flood and cyclone management activities, for examples FPP in progress, Inclusion of 18,500 women volunteer and expansion of CPP in south-west.
c) Recovery and rehabilitation strategy: Initiated for Cyclone Amphan and Flood.
d) Social protection for disaster resilience: DRR integrated SSNP (EGGP).
e) Private sector: Supply chain resilience.
f) DM financing: FbF/A, Weather index-based insurance.
g) Institutional development: NEOC and NDMRTI are being established.

## 2.2 Multi-Sectoral Policies

Disaster Management is a cross-cutting issue involving different sectors of governance. A large number of policies of these sectors have implications in disaster management. A list of these multi-sectoral policies is tabulated below.

| Ministry | Policy | Year |
|---|---|---|
| **Ministry of Water Resources (MoWR)** | National Water Policy 1999 | 1999 |
| | National Water Management Plan 1995 | 1995 |
| | Guideline of Participatory Water Management 2001 | 2001 |
| | Coastal Zone Policy 2005 | 2005 |
| **Ministry of Food** | National Food Policy 2006 | 2006 |
| | Food for Works Program | |
| **Ministry of Power, Energy and Mineral resources** | National Energy Policy 1996 | 1996 |
| | Energy Policy 2004 | 2004 |
| **Ministry of Local Government, Rural Development and Co-operatives** | Water Supply and Sewerage Authority Act 1996 | 1996 |
| | National Policy for Safe Water Supply and Sanitation 1998 | 1998 |
| | National Policy for Arsenic Mitigation 2004 | 2004 |
| | National Strategy for Water Supply and Sanitation 2014 | 2014 |
| **Ministry of Agriculture** | National Agricultural Policy 2013 | 2013 |
| | New Agricultural Extension Policy 1996 | 1996 |
| | National Seed policy 1998 | 1998 |
| **Ministry of Industries** | National Industrial Policy 2016 | 2016 |
| **Ministry of Fisheries and Livestock** | The National Fisheries Policy 1998 | 1998 |
| | National Livestock Development Policy 2007 | 2007 |
| | National Poultry Development Policy 2008 | 2008 |
| | National Breeding Policy 2007 | 2007 |
| | National Livestock Extension Policy 2013 | 2013 |
| | New Fisheries Management Policy 1986 | 1986 |
| | Livestock Policy and Action Plan 2005 | 2005 |
| **Ministry of Land** | National Land Use Policy 2001 | 2001 |
| | Khas Land Settlement Policy 1997 | 1997 |
| | Non-agricultural khas Land Settlement Policy 1995 | 1995 |
| | Balu Mohal and Sand Management Rules 2011 | 2011 |
| | Chringri Mohal Management Policy 1998 | 1998 |
| | Jal Mohal Management Policy 2009 | 2009 |
| | Salt Mohal Management Policy 1992 | 1992 |
| **Ministry of Environment, Forest and Climate Change** | National Climate Change Strategy and Action Plan 2009 | 2009 |
| | National Environmental Policy 2013 | 2013 |
| | National Forestry Policy 2016 | 2016 |
| | Bangladesh Forestry Master Plan 1994 | 1994 |
| | Bangladesh Climate Change Strategy and Action Plan 2009 | 2009 |
| **Ministry of Health and Family** | National Health Policy 2011 | 2011 |

| Ministry | Policy | Year |
|---|---|---|
| **Welfare** | National population policy 2004 | 2004 |
| **Ministry of Disaster Management and Relief** | Standing Orders on Disaster 2019 | 2019 |
| | Urban Volunteer Management Guideline 2019 | 2019 |
| | Guidelines for Construction of Disaster Resilience Houses | 2019 |
| | Guidelines for Flood Management at HAOR | 2019 |
| | National Plan for Disaster Management (2016-2020) | 2016 |
| | Dead Body Management Guideline 2016 | 2016 |
| | National Disaster Management Policy 2015 | 2015 |
| | Cyclone Shelter Construction, Maintenance and Management Policy-2011 | 2011 |
| | Guideline for Humanitarian Assistance Program | 2014 |

## 2.3 Disaster-Development linkages – national and international frameworks

### Vision 2021

The vision of the perspective plan is to take effective measures to protect Bangladesh from the adverse effects of climate change and global warming. The plan targets to take all possible steps to protect vulnerable people from natural calamities and human induced, to take actions for the prevention of industry and transport related air pollution and to ensure disposal of waste in a scientific manner. Steps will also be taken to make Bangladesh an ecologically attractive place and to promote tourism.

### 8th Five-Year Plan

The overall goal of DRM in the Bangladesh context is to build resilience of the poor and reduce their exposure and vulnerability to geo-hydro-meteorological hazards, environmental shocks, human induced disasters, emerging hazards and climate-related extreme events to make cities, human settlements and resources safe, resilient and sustainable.

Under the 8th FYP, the Disaster Management Act of 2012 will be institutionalized and implemented to achieve adequate decentralization throughout the Government and accountability for delivery. Adequate national resources will be identified to finance risk reduction and enable appropriate allocation of resources for disaster resilience through local and national level mechanisms. Regional cooperation will be further strengthened for DRM and resilience.

## Sendai Framework for Disaster Risk Reduction (SFDRR)

SFDRR is fundamental to the vision and ambition of GoB and thus requires full implementation. It is integrated into the objectives, goals and activities described below and serves as a template for translation to the Bangladesh context. The Government's disaster resilience strategy is in line with the SFDRR, which it has adopted. The framework aims to achieve the following in the coming 15 years:

a) "Substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries."

b) This outcome will be realized by the achievement of the following goal, drawing on the "strong commitment and involvement of political leadership in every country at all levels in the… creation of the necessary conducive and enabling environment."

c) "Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience."

The framework is built on four priority areas of action which are integrated into the goals and activities for DM of the 8th Five Year Plan:

a) Understanding disaster risk;

b) Strengthening disaster risk governance to manage disaster risk;

c) Investing in disaster risk reduction for resilience;

d) Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction.

## Sustainable Development Goals (SDGs)

Officially known as 'Transforming our World: The 2030 Agenda for Sustainable Development', the Sustainable Development Goals (SDGs), is a set of 17 aspirational "Global Goals" with 169 targets between them. The SDGs were adopted at the UN Sustainable Development Summit in 2015, USA. The Sustainable Development Goals (SDGs) aim to place countries and the planet on a more sustainable path by 2030. These goals are the foundation of an ambitious new development agenda that seeks to end poverty, help the vulnerable, transform lives and protect the planet. The 17 SDGs are expected to guide policy and funding for the next 15 years. The SDGs build on the success of the Millennium Development Goals (MDGs). The MDGs helped establish measurable, universally approved objectives for eradicating extreme poverty and hunger, preventing deadly but treatable disease, and expanding educational opportunities for all.

Disaster risk reduction for resilience is the foundation for achieving the SDGs. Each of the SDGs rely on reduced disaster impacts to meet its targets. NPDM 2021-2025 articulates the

disaster-development linkages as relating to the broader national development agenda. Resilience allows safeguarding development efforts and investments from the negative impact of disasters and provides opportunity for socio-economic development through maximizing return on risk-informed investments, revenue, and private and public sector budgets.

## Bangladesh Climate Change Strategy and Action Plan (BCCSAP)

GoB's Vision is to eradicate poverty and achieve economic and social wellbeing for all the people. This will be addressed through a pro-poor Climate Change Strategy, which prioritizes adaptation and disaster risk reduction, and also addresses low carbon development, mitigation, technology transfer and the provision of adequate finance. Accordingly, GoB has developed and enacted the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) in 2009. It also includes a 10-year program to build the capacity and resilience of the country to meet the challenge of climate change over the next 20-25 years based on the following thematic areas with full cognizance of the link between climate change and disasters:

a) Food security, social protection and health targeted for the poorest and most vulnerable in society;

b) Comprehensive disaster management to further strengthen the country's already proven disaster management systems;

c) Infrastructure to ensure that existing assets (e.g. coastal and river embankments) are well-maintained and fit-for-purpose;

d) Research and knowledge management to predict the likely scale and timing of climate change impacts on different sectors;

e) Mitigation and low carbon development to evolve low carbon options;

f) Capacity building and institutional strengthening to enhance the capacity of government ministries and agencies.

## Paris Agreement on Climate Change

The Paris Agreement is an agreement within the United Nations Framework Convention on Climate Change (UNFCCC) dealing with greenhouse gases emissions mitigation, adaptation and finance starting in the year 2025. Adopted by consensus in December 2020, it was opened for signature in April 2021. As of October 2021, 192 UNFCCC members have signed the treaty, 89 of which have ratified it. Being one of the least industrial polluting countries, Bangladesh has the opportunity to benefit from this agreement to leapfrog into a sustainable future by investing more on renewable energy.

The agreement aims to mobilize $100 billion annually by 2025 to address the needs of developing countries and help mitigate climate-related disasters. Strengthening the resilience and adaptive capacity of more vulnerable regions such as Bangladesh are emphasized to go with efforts to raise awareness and integrate measures into national policies and strategies. Addressing climate change is one of the 17 Global Goals of the 2030 Agenda for Sustainable Development. An integrated approach is crucial for progress across the multiple frameworks.

Coherence between SDG, SFDRR and Climate Change Agreement

Reducing disaster risk and building resilience are interrelated thrusts of the 2030 Agenda for Sustainable Development and the Sendai Framework for Disaster Risk Reduction 2015-2030. This convergence offers unprecedented opportunities towards building resilience.

The framework for the implementation of the 2030 Agenda and its linkages with the Sendai Framework for Disaster Risk Reduction 2015-2030 can help ensure that disaster risk reduction is mainstreamed across all sectors of sustainable development and climate change adaptation (table 1). In particular, disaster risk reduction and resilience-building are targets in the following Sustainable Development Goals: Goal 1 (poverty); Goal 2 (hunger); Goal 11 (sustainable cities and communities); and Goal 13 (climate action).

Bangladesh is now taking disaster risk management to the next level focusing the shifting from prevention to resilience. On the endeavour towards vision 2021 and thereby vision 2041, the country has taken initiatives to mainstream Disaster Risk Management through the 7th Five Year Plan (7FYP) and its has been strengthening in the 8$^{th}$ FYP. As a part of integration, the country identified specific role of different ministries to achieve the targets of Sendai Framework for Disaster Risk Reduction (SFDRR) in connection with the targets of Sustainable Development Goal and Climate Change. In light of that Bangladesh has developed a comprehensive action plan.

The drastic changes in climate and their risk patterns suggest that historical data and past experiences are insufficient for making projections. Greater attention needs to be placed on identifying potential scenarios, determining risk tolerance and considering the uncertainties associated with climate change mix of these methodologies are used.

**Bangladesh initiative to address the trends of climate change:**

- Conducted comprehensive study on the future trends of temperature, humidity rainfall and using the study findings in cropping pattern and adaption in agriculture practices;
- Developed climate modeling and scenario building with the projection of 25, 50, 100 years of return period of flood, drought and cyclone;
- Documented the cyclone route and tract change and findings are using in policy decision to construct cyclone shelter and strengthen the cyclone preparedness programme;
- Risk reduction programme used the historical data and climatic risk from the study and research to protect the investment and in building resilience; and
- Establish climate change trust fund and developed plan by incorporating disaster risk and focus at the high risk area for risk reduction programme in building resilience

**Recommendation in building resilience:**

- Sharing the technology and information in risk informed development planning and implementation
- Sharing the strategies of good practices on resilience nexus among disaster risk reduction, climate change and sustainable development goals
- Call upon the member states to implement Dhaka Declaration on disability aligned with inclusiveness concept of SFDRR. Incorporate the psycho- social and trauma management in the line with the regional and country level planning and implementation of Sendai Framework
- Inclusion of humanitarian crisis from disaster, conflict and regional cooperation for rehabilitation of displaced people arising from within and other country
- Strengthen the SAARC effort in sharing the real time data from transboundary river, climatic and rainfall information and effective information sharing
- Regional initiative to undertake research and on innovation in building resilience through application of science and technology
- Regional and international cooperation are indispensable and must be systematically addressed in terms of planned and more systematic sharing and transfer of know-how and equitable resources sharing
- There are emerging parallel tracks of DRR, CCA and sustainable development and thus the need to advocate the integrated approach
- Disaster risk reduction could refer to global frameworks such as the convention on trans-boundary industrial accidents, regional platforms such as ESCAP, national level multi- sectoral public-private partnership, as well as local level preparedness for industrial disasters. Good practices on industry-specific risk reduction measures need to be identified and calibrated to enable the development of business planning guides
- Sharing the tools and technique on risk assessment and user friendly climate risk information. Scenarios and outlooks

As sustainable development framework is related to resilience nexus. That is why, the intersections and meeting point of poverty, environment, disaster and climate change its need adequately addressed through the mainstreaming in the development planning and budgeting systems. The NPDM tried to building synergies among three dimension for risk reduction and building resilience.

# 3. Changing Risk Landscape

## 3.1 A changing risk environment

Over the past few decades, Bangladesh has experienced rapid development. However, risk informed development is absent, which is resulting haphazard development of many towns and urban centers. Geographically the country is located closer to one of the active seismic zones in the world, located on large flood plain, exposed to a large coast with frequent cyclone, and storm surge etc. Particularly large cities and towns are most vulnerable to different hazards and in some cases exposed to multi hazards.

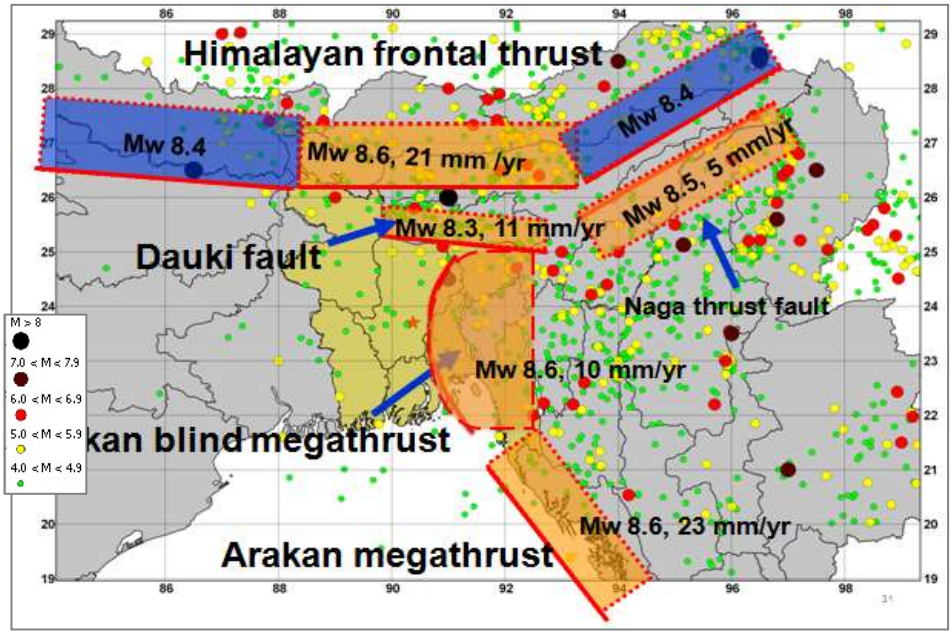



**Figure:** Mega thrust seismic sources and historical earthquake phenomena in and around Bangladesh (Source: CDMP-II, MoDMR, 2014).

Fast growing urban centers became the economic hubs of the country. Although there was no major earthquake in the recent past, but due to geographical location and historical events, the country is highly vulnerable to large earthquake. A strong earthquake affecting a major urban center may result in damage and destructions of massive proportions and may have disastrous consequences for the entire nation. Intensity of flood and cyclone have increased over the decade and Bangladesh has experienced multiple hazards within a calendar year, bit unusual trend that the country ever experienced. In the year 2020 there was four conjugative floods devastated thousands of settlements, outbreak of COVID-19 and cyclone Amphan. Climate Change has battered the coastal zone of the country severely accelerating numerous natural disasters.

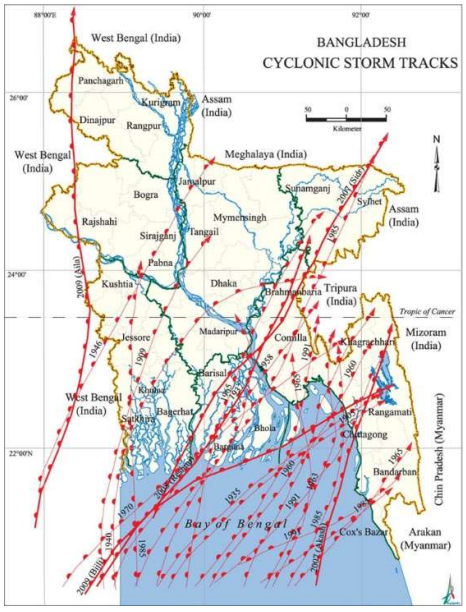
Despite these challenges, Bangladesh has made major gains in improving socio-economic conditions in recent years with positive economic trends, accelerating growth, making growth pro-poor and improving the indicators of social progress. With over 7 per cent economic

growth in the last 10 years, the country is moving towards reaching lower middle-income country status by 2021. As an ascending middle-income country, Bangladesh has entered a new development context with a growing asset base and connectedness to global markets. It is therefore essential to have a realistic understanding on the nature, severity and consequences of the exposure and vulnerability in the changing risk horizon.

## 3.2 Risk horizon

### Natural Hazards

**Flood** is the most common hazard that Bangladesh experiences being located in the world's largest delta, formed from the Ganges, Brahmaputra, and Meghna (GBM) rivers and their tributaries. Three types of flooding occur in Bangladesh, including riverine flood, flash flood (in the north-eastern part) and flood due to storm surges in coastal areas. Regular river floods affect about 20% of the country increasing up to 68% in extreme cases. About 14,892,524 male and 15,072,109 female populations is exposed to deep flood depth (1.8 to 3.6 m) in 25 years return period flood across the country. Approximately 656,984 pucca, 1,251,317 Semi-pucca and 4,481,215 Katcha houses are highly exposed to 25-year return period flood while these structures may experience upto 3.6-meter inundation depth. In the same situation aman crop of 1030.32 sq km of land will be exposed to deep flood. Apart from this, about 260 Health care centers, 1500 welfare centers, 6000 High schools, 3025 Madrasa, 24,000 primary schools, 10,000 police station, 317 cyclone shelters, 2343 km of National Highway, 7366 km of local connecting roads, 33361 bridges, 1968 km railway line, 17 power substations are exposed to different flood depth (DDM, 2016).




**Cyclone** is so far proven to be the deadliest hazards in Bangladesh. Around 10% of the world's cyclones originate in the Indian Ocean and the adjacent Bay of Bengal each year, which account for at least 85% of the cyclone damage worldwide (Choudhury, 2002). Originated from (approximately) the hot spot Nicobar and Andaman Island in the Indian Ocean, where tropical disturbances develop, and often turn to cyclones of various severities and hit Bangladesh during April-May and October-November. About 5,414,292 male and 5,555,563 female, 233,504 pucca structure, 370779 semi pucca structure, 1,712,479 katcha structure, Aman crop of 9229 sq km land, 91 food storage, 28 mills, 71 hospitals, 337 Family Welfare centres, 1273 high schools, 503 madrasa, 4117 primary schools, 1620 police stations. 2722 cyclone shelters, 369 km of national

highway, 1665 km of local connecting road, 2061 bridges, 117 km railway line are exposed to storm surge of 3 meter high (DDM, 2016).

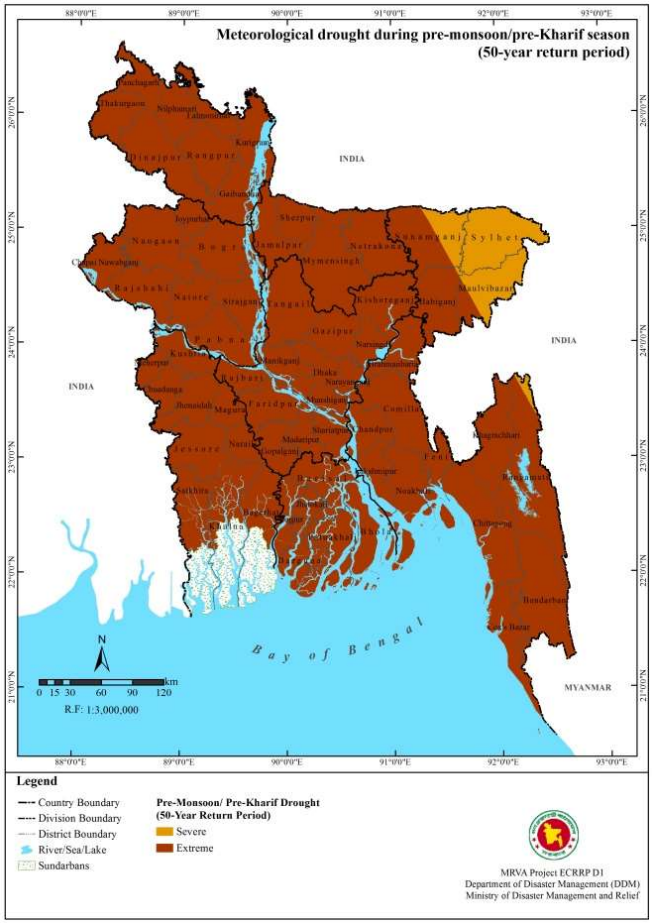
**Landslide** in the recent years became major concern in the south-eastern and north eastern part of the country. Since 1997, the regions have experienced numbers of moderate to severe landslides killed more than 1000 people and damaged property worth billion taka. The hilly parts are mainly susceptible to earthquake and rainfall induced landslide. Among the hilly districts Bandarban, Khagrachari, Rangamati and Cox's Bazar are most vulnerable to rainfall induced landslide. However, due to haphazard development and hill cutting, city of Chattogram experiences frequent landslide. Due to rainfall induced landslide, about male 59,209, female 58,532, Pucca House 4435, semi-pucca 6376, katcha 9196, food godowns 35, 28 hospitals, 50 Family Welfare Centre, 21 High schools, 22 madrasa, 133 primary school, 51 police stations, 206 cyclone shelters, 18 km national highway and 38 k of local connecting roads and about 2300 bridges/culverts are exposed in the landslide prone districts (DDM, 2016).

**Earthquake**: Bangladesh is located in one of the most seismically active regions of the world, and experienced numerous large earthquakes during past hundred years. The record of 150 years shows that Bangladesh and the surrounding regions have experienced several major earthquakes (with Mb = 7). In the recent past, a number of tremors of moderate intensity took place in and around Bangladesh. The Sylhet Earthquake (Mb = 5.6) of May 8, 1997, the Bandarban Earthquake (Mb = 6.0) of November 21, 1997, the Moheshkhali Earthquake (Mb = 5.1) of July 22, 1999, and the Barkal (Rangamati) Earthquake (Mb=5.5) of July 27, 2003 reminds the concerns for proper preparedness (Choudhury, 2005). About 30,909,837 female and 30,341,116 males are moderately exposed to 50 years return period of earthquake at PGA (0.15 - 0.35). At the same situation 1,109,262 Pucca structure, 2,124,545 semi pucca structure, 402 food godowns, 14 gas fields, 195 hospitals, 1008 Welfare centres, 2,886 high schools, 1899 Madrasas, 15192 primary schools, 6819 police stations, 1582 km national highway, 7360 km local connecting roads, 20,000 bridges, 1500 km railway lines are exposed to moderate earthquake nationwide (DDM, 2016)..


**Lightning Hazard** During the recent years, lightning hazard trends has been raising concern comparing the others natural disaster of Bangladesh. By observing the scenarios of fatalities

due to lightning hazard, the Ministry of Disaster Management and Relief of Bangladesh declared this hazard as a natural disaster on 17 May 2016. Generated statistics demonstrates that the Surma Basin, northwest Barind tract, and northern Tertiary hilly region of Bangladesh are more susceptible to lightning disaster during the time span 2015–2018. In 2015, maximum lightning death occurred at Sunamganj district which was about 19.17% of total lighting death. The lightning death in the year of 2016 was highest in Habiganj district which was about 6.06% of the total lightning death. In 2017, lightning catastrophic results disclose that almost 9% of death occurred in the Naogaon district where only 4% of the total death occurred in Sylhet, Faridpur, and Chattogram as a second highest position. During the year of 2018, topmost lightning death occurred in Sunamganj district which was 9.97% of the total death (Biswas et al., 2020).

**Drought:** Historically a drought is recurrent phenomena in Bangladesh. Bangladesh experienced droughts in the years of 1963, 1966, 1968, 1973, 1977, 1979, 1982, 1989, 1992 and 1994–1995, 1999, and 2006. The droughts in 1973 were in part responsible for the famine in northwest Bangladesh in 1974. The 1978-1979 drought was one of the most severe resulting in widespread damage to crops (rice production was reduced by about 2 million tons) and directly affected about 42 percent of the cultivated land. Study revels extreme drought can occur in the whole country, except the north-eastern part in 50-year return period of pre-monsoon/pre-Kharif period. Extreme drought at 50-year return period is also possible during Kharif season in entire Bangladesh except coastal area (DDM, 2016),




## Climate Dynamics

Climate Change has battered the coastal zone of the country severely accelerating numerous natural catastrophes. Due to the climate change, global sea levels have risen by approximately 0.2 meter since 1990 (Rahmstorf, 2007). During last decade, sea temperature increased due to climate change impact and Bangladesh experienced an average of 1.5 tropical cyclone per

year. During this period, ten cyclones hit the coast killing more than 400 people, thousands of homes destroyed, millions of people became homeless, standing crops damaged (Chowdhury, 2018). Most recent, super cyclone Amphan (Category-5 hurricane) on May 20, 2020 made landfall in the western coast with a wind speed of about 120mph (190km/h), causing storm surges of up to 5 meters (17ft) (Ellis-Petersen and Ratcliffe,2020; Vinoj and Swain,2020; Mishra& Vanganuru,2020) in some areas. Salinity intrusion in the coastal region is hampering the food security, accessibility to drinking water, livelihood stability, cropping pattern, livestock and poultry etc. During the period of 2009-2015, different tropical hazards including cyclone, storm surge, coastal erosion and salinity intrusion caused damage of 28,385, 12,676, 36,409, 6,073 million BDT respectively in the coastal region (BBS, 2015). All these aforementioned climate change induced extreme events are fuelling the internal displacement of coastal people in Bangladesh.

## Human induced Risks

**Fire and Chemical Hazard:** Bangladesh has become a lower-middle income country with considerable progress in economic growth in recent years and overtaken India in terms of per capita GDP scoring US$ 1888. The industry sector of the country is booming which contributes to the GDP of the country. But some recent chemical disaster in the industry sector of Bangladesh took the global attention also. Use of dangerous chemicals without any protection has become very common in Bangladesh. Each month an average of 21 workers die and hundreds fall sick in Bangladesh's leather, chemical, ship-breaking, and agricultural sectors due to the indiscriminate and unprotected use of hazardous chemicals . Some of the recent major chemical hazards that occurred in Bangladesh in mentioned in the following;

In 2019, a Chemical Blaze was occurred in Chawkbazar, Dhaka which killed at least 70 people in a fire that engulfed apartment blocks in a historic Dhaka shopping district. The blaze began in a property in Chawkbazar where chemicals for household products were being stored illegally, before quickly spreading to several other buildings. It took almost 12 hours for firefighters to put out the flames. A huge explosion ripped through a chemical warehouse of a dyeing factory at Fatullah in Narayanganj, damaging the four-storey factory building and several buildings nearby as a fire broke out following the blast. No casualty was reported in the incident and four units of fire fighters doused the flame after one hour of frantic efforts.

A fire triggered by a boiler explosion at a cigarette packaging factory north of Dhaka on September 10 killed some 31 people. Chemicals stored on the ground floor of the Tongi warehouse are thought to have helped the blaze spread quickly .More than 100 people fell ill in Bangladesh after inhaling gas that leaked from a fertilizer factory in the port town of Chittagong. Hundreds of residents were also evacuated from their homes near the di-ammonia phosphate (DAP) plant in the port city where a 500-tonne capacity ammonia tank exploded.

**Building Collapse:** Due to unplanned urbanization and violation of national building code, Bangladesh is facing multiple devastating building collapse in the recent time which caused loss of lives and property. According to the Fire Service and Civil Defences (FSCD), at least 26 people were killed in building collapse in 66 incidents across the country in 2019, which is quite alarming. The building collapse in Bangladesh first got global attention in 2013

when at least 1,130 people died when Dhaka's Rana Plaza nine-storey factory complex collapsed in April 2013 — one of the world's worst industrial tragedies. Approximately 2,500 injured people were rescued from the building alive. It is considered the deadliest structural failure accident in modern human history accident since the 1984 Bhopal disaster in India and the deadliest garment-factory disaster in history. In July 4, 2017, another garments factory in Gazipur collapsed due to boiler explosion in which thirteen people were killed and up to 50 injured. In November 2019, a sixth grader was killed and seven others injured when a four-storey building collapsed in Baburail of Narayanganj city. In April 2018, a two storied building collapsed into a waterbody in in the capital's Rampura area, which caused death of at least twelve people including four of a family. In July 2019, another building collapsed in the old Dhaka in which 2 people lost their lives and three workers were killed while a portion of an under-construction building collapse in Dhanmondi area of the capital in 2020.

## Biological Hazards

Biological hazards, also known as biohazards, refer to biological substances that pose a threat to the health of living organisms, primarily that of humans. Due to the high population density, low life standard and inadequate health infrastructure and policy, Bangladesh is in high risk of any biological hazard. The country has faced more than 18 new diseases in the last 50 years including COVID-19, HIV/AIDS, dengue, chikungunya, bird flu, swine flu, nipah, zika etc. According to the ICDDRB report, 157 Nipah virus infections were reported in 2004, seven human infections and one death with bird flu have been confirmed in 2007. A massive outbreak of chikungunya virus (CHIKV) occurred in Bangladesh during the period of April-

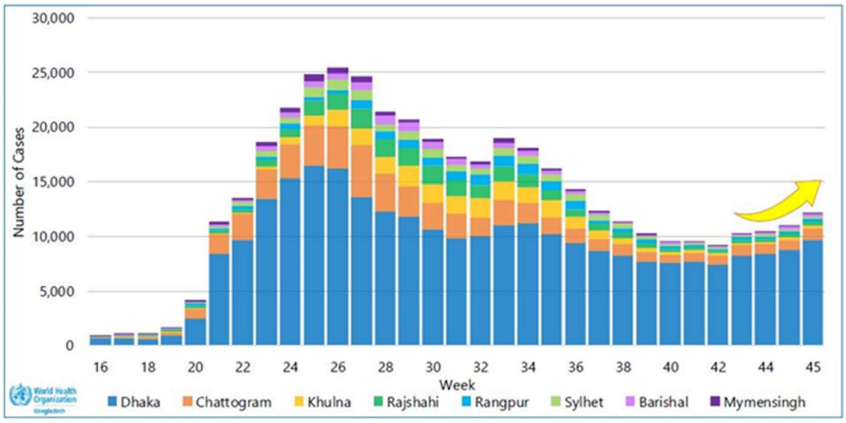



Figure: Trend of COVID-19 Cases by division, 04 May – 15 November 2020, Bangladesh

September 2017, and over two million people were at risk of getting infected by the virus. The most recent biological hazard in Bangladesh is COVID-19 and the first case of COVID-19 was detected on 8th March 2020. Between 8 March and 16 November 2020, according to the DGHS Press Release there were four hundred thirty-four thousand four hundred seventy-two (434,472) COVID-19 confirmed by rRT-PCR, including six thousand two hundred fifteen (6,215) related deaths (CFR 1.43%). Bangladesh is the top 24th country in the world and accounts for 0.8% of the COVID-19 disease burden in the world.

## Pandemic COVID 19 and Risk Landscape: A New Experiences in Managing natural hazard induced disasters

Before Cyclone Amphan (in May 2020) hit the coast, about 2.4 million people were evacuated to different cyclone shelters across the coastal zone. This is one of the successful cases of disaster management during COVID-19 pandemic situation.

Normally, 4,100 multipurpose cyclone shelters are used for evacuation. However, considering COVID19 situation and to ensure social distance, about 14,000 Cyclone shelters were arranged during cyclone Amphan. Hand wash facility installed and sanitizer were provided And, in collaboration with health department and disciplined forces, health condition of those evacuee was checked before entering each shelter for ensuring safe evacuation and disease control. As a result, much more people got enough space with social distancing and reduced damage from the Cyclone Amphan as well as prevented further infection. Same as the response of Cyclone, the country tried to take several safety measures and ensure preventing infection measures during support to flood victims at five times monsoon flood from June to September 2020.

The present pandemic situation through whole of society approach and regain people's confidence through several disaster risk management activities. However, the COVID-19 crisis might be an opportunity to consider global resilience, not just to COVID-19 but also to an uncertain future, where climate change looms large.

## Emergency risks/situation triggered humanitarian assistance or emergency response

Bangladesh has faced many disastrous events in the recent years which triggered relief or emergency response needs. In May 2020, Bangladesh was hit by the deadliest cyclone Amphan and accompanied storm surge which cause massive destruction in the coastal areas of Bangladesh. To fight back the cyclone and rehabilitate, the government of Bangladesh along with other national or International NGOs. Bangladesh Government has been provided humanitarian assistance among more than 70 million people including ultra poor, poor, women and lower income group whom income and livelihood affected by the prolong pandemic COVID 19. Despite being a lower medium income countries, Bangladesh had to arrange similar relief/humanitarian assistance and emergency response support to the other recent cyclones including Fani(2019), Roanu(2016), Komen(2015), Mahasen(2013), Aila(2009), Sidr(2007) etc. Monsoon rainfall continues to impact Bangladesh and in last five years, Bangladesh faces devastated flood in each years. The most recent monsoon floods in 2016, 2017, 2018 and 2020 respectively engulfed 33%, 42%, 23% and 36% areas of the country, in which the government of Bangladesh had to provide relief support and emergency response for the affected people. In 2017, at least 152 people including several army officers have been killed in landslides triggered by torrential rain in Rangamati, Bandarban, Chittagong, Khagrachhari and Cox's Bazar districts which created heavy emergency response need in the hilly region.

Apart from the natural disaster related events, some other unprecedented events also happened in Bangladesh which also triggered relief or emergency response needs. In 2017, about one million Rohingya people, more than half of them children, have fled violence in Myanmar to seek refuge across the border in Bangladesh, created massive humanitarian crisis. To tackle this unprecedented event, the government of Bangladesh and other organization had to provide a huge relief and emergency support to the traumatized Rohingya people which is still continuing. The government had to take an 'Achyaron Prokolpo' (Rehabilitation Project to relocate the Rohingya refugees in Vasan Char areas). Along with all these events, Bangladesh is facing the COVID-19 crisis and the country has been identified as one of the 25 most vulnerable countries to be affected by the fast-spreading virus. COVID-19 risk and subsequent lockdown created relief need for the poor and vulnerable peoples. The government has so far

announced a set of stimulus packages worth around $11.90 billion (Taka 1.011 trillion) to offset the COVID-19 shock on various sectors of the country and minimize the sufferings of the people hit hard by the nationwide shutdown enforced to fend off the deadly virus .

## Displacement Related Risk

Environmental crisis along with the increasing impacts of climate change in Bangladesh has become an important cause of internal migration and climate displacement. As the impact of climate change is being intensified, millions of people are being driven from their homes by severe hazards including sea level rise, storms, cyclones, drought, erosion, landslides, flooding and salinization. It has been estimated that by 2050, one in every seven people in Bangladesh will be displaced by climate change whereas sea level rise will dislocate up to 18 million people from the coastal area. Riverbank erosion is one of the major contributors to the inland displacement and most of the floating population in urban slums are forced to migrate after the river engulfed their home. Between 2008 and 2014, Internal Displacement Monitoring Centre (IDMC) estimates that more than 4.7 million people were newly displaced by rapid-onset, weather-related disasters in Bangladesh. According to the Internal Displacement Monitoring Centre (IDMC) estimation, about 7.8 million peoples of Bangladesh were internally displaced within the country by more frequent and severe hazards during 2013 to 2019. Projections shows about 16 to 26 million people might be displaced due to climate induced hazards by 2050 (RMMRU 2013)

# 4. Goals and Priorities of NPDM 2021-2025

## 4.1 Vision: Specifying Targets and Achieving Milestones

NPDM 2021-2025 is broadly based on SOD 2019 and aligned with the four priorities of SFDRR. This alignment also relates to the Asian Regional Plan for Disaster Risk Reduction (ARPDRR), which derives from SFDRR.

Bangladesh has been investing strongly on DRR which has resulted in reduced disaster mortality rate and improved food security. Despite frequent disasters, Bangladesh achieved significant success in maintaining GDP growth. To sustain the progress towards materializing SDG, existing programs and policies in relation to disaster management call for an upgrade. Mainstreaming disaster management into national and local strategies through incorporating nature-based solutions, inclusivity and better use of science and technology will help us reach our goal.

With climate change on the rise, a changing risk context means new challenges, but also provides opportunities for building resilience. Suffering from a catastrophic pandemic in 2020 has given us perspective, making it possible for us to recognize our strength and weakness as a nation in tackling future disasters.

Aiming towards achieving milestones in disaster risk reduction and building on resilience, the vision of NPDM 2021-2025 is: "**Winning resilience against all odds**".

## 4.2 Goals

With the aforementioned vision for our future, some goals and achievable targets are to be set which will stimulate actions for the next 5 years of NPDM 2021-2025. National indicators are determined in alignment with the International framework SFDRR which are presented here:

i. Reduction of number of deaths, missing persons and directly affected people to 4000 per 100,000 population by 2025.
ii. Reduction of damaged land to 100,000 acres.
iii. Number of disaster affected households within 250,000 acres.
iv. Direct economic loss inflicted by disasters as a proportion of GDP has to stand at maximum 0.7% per cent in 2014.
v. Total damage and loss resulting from disasters should be brought down to 100,000 million BDT.
vi. In the past, a target was set to construct 5000 shelters in the coastal districts. 2000 additional shelter centres should be constructed.
vii. Flood related structural infrastructures like embankments should be designed providing adequate storm surge protection.
viii. Proper maintenance of polders/embankments.
ix. Increase in urban volunteers and coastal volunteers by 100,000.
x. Replicate the design of resilient houses in other disaster-prone regions in the country.
xi. Food silos in every house for food grain storage.
xii. Provision of safety equipment to volunteers in every ward.

## 4.3 NPDM 2021-2025 focus areas

Bangladesh aligns its DRM strategies and plans with SFDRR, SDG and Climate Agreement. Over the coming years in order to expedite the implementation of SFDRR, additional emphasis will need to be given to:

a) Promoting policy coherence among DRM and development in-country;

b) Making disaster risk reduction a development practice to achieve resilient public investment and the SDGs;

c) Encouraging private sector engagement towards risk sensitive investments;

d) Building capacity and leadership to implement NPDM 2021-2025 at the national and local level.

These focus areas also need to be supported by provisioning of adequate capacity and resources at the local level; knowledge and information from the scientific and academic community; and practical guidance and tools. Adopting an inclusive approach – via multi-sector/stakeholder DRR platforms, both at national and local levels – is particularly important. It should embrace the leadership of persons with disability, women, children and youth and marginalized people including ethnic minorities and the significant contribution of the private sector.

NPDM 2021-2025 provides two main implementation guides:

a) Broad policy direction in terms of national level action plans to guide DM in Bangladesh in alignment with SFDRR in the national context of the SDGs;

b) The action plans that are prioritized in line with the national disaster context and institutional framework are given indicative timeframes over the next 5 years and 35 core targets to be continued until 2030.

## 4.4 Inclusion as an underlying strategy

Social inclusion is a basis for achieving resilience and is an underlying and cross-cutting strategy in all the action plans of NPDM 2021-2025.

All DRM initiatives, policies, programs and planning are to be inclusive with emphasis on the following areas:

To ensure incorporation of gender issues in decision making and ensure participation of women and men, girls and boys in all the priority actions of NPDM 2021-2025.

- ✓ Gender mainstreaming in national policies, relevant laws, plans, and budgets related to disaster risk management will be emphasized during implementation of programs.

- ✓ Activation of disaster risk management committees as per SOD, with representation from national ministry and/or line agencies responsible for women and social welfare and women's organizations, along with

mechanisms in place to review decisions from gender lens will be ensured at national, districts and upzilla levels.

- ✓ Capacity for sex-disaggregated data collection through information management systems and capacity building of disaster management focal points at various levels will be ensured during implementation of the programs.

**Disability and Disaster Risk Management**

Disasters threaten the well-being of people from all walks of life, but they affect disproportionately to the women, children, persons with disabilities. Persons with disabilities are especially vulnerable when disaster strikes not only due to aspects of their disabilities, but also because they experience adverse socioeconomic outcomes such as higher poverty rates. Disasters risk and inadequacy of planning for disaster response and recovery efforts can exacerbate the suffering of persons with disabilities. On the other hand, Persons with disabilities and disabled persons' organizations (DPOs) have invaluable knowledge, experience, and expertise about how to make disaster risk management activities responsive to their needs. The Pandemic COVID-19 has intensified the vulnerability of the persons with disability who need twin track services- i) humanitarian assistance and ii) resilience socio-economic recovery and inclusive reconstruction.

Sendai Frameworks' landmark commitments to inclusion, and persons with disabilities included as contributing stakeholders while disability inclusion need be reported in the Sendai Monitor or other reporting processes. Inclusion of persons with disabilities in the COVID-19 response and recovery is a vital part of achieving the pledge to leave no one behind, and the global commitments of the Convention of the Rights of Persons with Disabilities (CRPD), Sendai Framework the 2030 Agenda for Sustainable Development. An integrated approach which is required to ensure that persons with disabilities are not left behind in COVID-19 and other disaster response and recovery.

**Twin-track strategy implementations for persons with disabilities in disaster risk management:**

| Inclusion of disability in the mainstream | Empowerment of Persons with Disabilities |
|---|---|
| Increasing awareness of disability in those involved in disaster risk management. | Increasing the skills of persons with disabilities in disaster risk management |
| Provide training to responders to enhance their ability to properly assist people with disabilities. | Granting membership to persons with disabilities in Disaster Management Committees. |
| Including rescue and relocation materials as well as useful aids for persons with disabilities. | Providing necessary therapy aids to persons with disabilities. |
| To consider the needs of persons with disabilities in Disaster Risk Management Laws, Policies, Orders and Guidelines. | Providing information through government on the facilities available to persons with disabilities and the process of obtaining them |
| Adequacy of data and statistics divided by gender, age and disability. | Development of leadership skills of persons with disabilities |

Bangladesh is the pioneer country has taken disability inclusive disaster risk management align with Sendai Framework for Disaster Risk Reduction. Bangladesh hosted the First International Conference on Disability and Disaster Risk Management in December 2015 and the

Conference Summary has been declared as the Dhaka Declaration. Bangladesh also organized the 2nd International Conference on Disability and Disaster Risk Reduction in 2018. The outcome document is titled as Dhaka Declaration 2015 +. The Dhaka Declaration is mentioned in Article 59 of the Chair's summary of the 5th GPDRR 2017 in Mexico which stated that the progress of implementation of the declaration should be reflected in the preparation of monitoring and progress report of the Sendai Framework. The 6th GPDRR in 2019 in Geneva also acknowledged Bangladesh's effort for promoting and scaling up disability inclusive disaster risk management.

**Important actions points of Dhaka Declaration 2015+ :**

1. Ensure the meaningful participation, inclusion and leadership of women, men, girls and boys with disabilities and Disabled People's Organizations (DPOs) within disaster risk management at local, national, regional and global levels.

2. Strengthen good governance, partnership and enhance collaboration among Governments at all levels, development agencies, UN, NGOs, CBOs, persons with disabilities, DPOs, professionals, active citizens, academic institutions, private sector and other key stakeholders to work together and ensure the effective implementation of inclusion within the Sendai Framework at all levels to reduce vulnerabilities and prevent and reduce the consequences of disasters for persons with disabilities.

3. Ensure that governments and other stakeholders establish effective mechanisms and guidelines to collect sex, age and disability disaggregated data at all stages of DRM

4. Support inclusive community-based disaster risk management initiatives, risk analyses and data banks in order to promote empowerment and protection and to facilitate and inform local, national and regional level early warning systems, disaster preparedness plans and social protection programs that are accessible by all.

5. Strengthen the self-reliance of persons with disabilities and care-givers at local and national levels through removing all kinds of barriers (cultural, social, economic, procedural, physical, communication and attitudinal), engaging private sector, guided by 'build better' approach and resilient universal design and support to replicate Information, Communication and Technology (ICT) based tools, equipment, devices and intermediate technology for inclusive humanitarian response and disaster risk reduction.

6. Take necessary actions to report on the Dhaka Declaration 2015 and Dhaka Declaration 2015+ and include these in the development of national, regional and global road maps, action plans, indicators and terminologies for the implementation of the Sendai Framework.

7. Take initiatives for knowledge sharing and learning among and between DPOs, governments and government departments, UN agencies, private sector, academicians, researchers, NGOs and other stakeholders to better address disability inclusion in DRM and Humanitarian action.

The major initiatives and achievement of disability inclusive disaster risk management are:

- A National Task Force has been formed under the Ministry of Disaster Management and Relief comprising representatives of concerned Ministries, Departments, persons with Disabilities, Disability and Disaster Risk Reduction Organizations to take, implement and monitor disaster risk management activities including disability.

- The Standing Orders on Disaster Management-2019 has directed the inclusion of people with disabilities and/or representatives of their organizations in various committees for disaster management.
- Preparation of training modules for capacity building on disaster risk management including disabilities and training for the field level and national level officials. Providing training for primary responders/volunteers to evacuate people with disabilities through effective communication during disasters.

- Evacuation boats are being constructed by the ministry so that all the flood-affected people, including people with disabilities, can transfer their houses and livestock during the floods.
- Construction of cyclone and flood shelters that ensure accessibility which have been designed and constructed accordingly so that people with disabilities can access easily ensuring their safety.

- Working to develop a live data platform to keep data readily available. Damage assessment form called D-Form which represent the disaggregated data by person with disabilities, gender, age find instrumental for designing and implementing inclusive response and reconstruction in a build back better manner

- Dissemination of disability friendly early warning before disaster such as Cyclones and Floods for their better access in compliance with hygiene rules considering the COVID 19 risk.

- During cyclone Amphan, Bangladesh prepared almost 10,500 additional shelters on top of the already existing 4,171 ones and accommodated 2.4 million people with all measures of social distancing amid COVID19. People with disability got priority in the evacuation and took shelter to ensure their safety.

- Keeping in mind about the upcoming second wave of COVID-19 in the winter season, Contingency Plan for Preparedness and Response to any kind of disaster have been prepared.

**Inclusive Reconstruction, Rebuilding and Recovery:**

The Sendai Framework stresses importance of investment on infrastructures towards future disaster risk reduction and contribution towards the economic growth with a strong focus of inclusiveness. In the aftermath of disasters, the needs of persons with disabilities should be reflected in post-disaster recovery efforts. Considering the current context of the pandemic and

future risk with disasters, needs to put more importance on the following issues for risk reduction and reconstruction:

- Adopt a twin-track approach to disability inclusion in all phases of response: relief and humanitarian assistance, recovery & reconstruction, and resilience. Use the principles of Universal Design for Learning (UDL) to ensure multiple means of engagement, representation, and empowerment.
- Communicating hazard exposure and risk information in a way that can be understood and acted upon. Early warning and other necessary Information should be wide-reaching and available in multiple languages and multiple accessible formats to the end users, especially people with disabilities
- The impacts of disasters can be devastating, COVID 19 can be the learning case for integrating disability friendly risk reduction and reconstruction including enhancing the accessibility to service with improving lifestyle skills through a self-help approach and networking
- Making infrastructure resilient and accessible, setting up programs to actively employ persons with disabilities in the recovery and reconstruction planning and implementation process

To ensure adequate considerations for people with vulnerabilities (e.g. single marital status, age, disability) in DRM policies and programs and across implementation of NPDM 2021-2025.

- ✓ Establishment of effective mechanisms and guidelines to collect sex, age and disability disaggregated data at all stages of DRM will be emphasized during implementation of the programme.

- ✓ Meaningful participation, inclusion and leadership of women, men, girls boys and persons with disabilities and Disabled People's Organizations (DPOs) within disaster risk management at national, district and upzilla level will be ensured during implementation of program.

- ✓ Remove barrier to full participation of persons with disabilities to participate and act on the decision-making process for risk reduction, response and reconstruction are critical. It needs to be ensured that physical or virtual sites for meetings and consultations are barrier-free, providing accommodations such as sign language interpretation and Braille materials when needed, and providing information in accessible formats.
- ✓ It is vital to include them in the design, implementation, and monitoring of the disability inclusive risk disaster risk reduction activities. This is also a critical aspect to generate knowledge and developing professionals for inclusive disaster risk management for the betterment of the persons with disabilities.
- ✓ Improved design shelters and services to address accessibility of persons with disabilities creates a need for new infrastructures and renovation for the existing ones.

- ✓ Compatible application of Information, Communication and Technology (ICT) based tools, equipment, devices for humanitarian response and disaster risk reduction will be ensured.

# PART – II: Targets for Implementation

# 5. Approach to Action Plans

## 5.1 Investment priorities for NPDM 2021-2025

To aid the planning process in terms of timeframes, the above priority actions are abbreviated to summary action statements that capture the key point of each action. The summary action statements are listed below corresponding to SFDRR priorities (P1, P2, P3 and P4).

***P1: Understanding disaster risk***

- Upgrade and strengthen national awareness.
- Awareness raising and data products on earthquakes.
- Contemporary technologies and innovations for improved weather and climate monitoring, prediction and forecasting.
- DRM-related research and development activities on scientific and socio-economic issues.
- Develop and implement tool for disaster impact assessment (DIA) by all sector
- Risk repository for planning major investments
- Strengthen regional and international DRM networks.
- Studies on other hazards (e.g. cold wave, lightning, fire, chemical hazards, health hazard/biological hazard and oil spills).

***P2: Strengthening disaster risk governance to manage disaster risk***

- Risk proof public investments and inclusion of Disaster Impact Assessment.
- Inter-ministerial coordination to develop sectoral policies and capacity building.
- Review and update the National Earthquake Contingency Plan.
- Strengthen the capacity of DMCs; activation of urban DMCs.
- Strengthen formal institutional capacities and social protection institutions.
- Guidelines for private sector investment for resilience.
- Close gaps in institutional policies and programs on drought and cold wave hazards.
- International and regional cooperation and knowledge/information sharing.

***P3: Investing in disaster risk reduction for resilience***

- Nationwide capacity building for resilience.
- Physical works and structural measures for resilience.
- DRM financial options - private sector, insurance and funding for social protection.
- Resilience institutions - Research & Development Center, National Emergency Operations Center.
- Strengthen flood management.

- Strengthen cyclone management.
- Follow an 'all-hazards' approach.

***P4: Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction***

- Strengthen forecasting and early warning systems.
- Build capacity on emergency response.
- Sector wise and critical facilities preparedness and emergency response measures.
- Inclusive recovery and rehabilitation strategy.
- Financial instruments e.g. recovery compensation or loans.
- Business continuity.
- Emergency preparedness and response to human-induced disasters.
- Preparedness and response measures for slow-onset hazards.

## 5.2 Timeline, actions and targets of NPDM 2021-2025

The timeline for the 5-year NPDM 2021-2025 is structured into three program periods: (a) 2021 is a preparatory year and many of the actions are continuation of existing programs; (b) 2022-2023 is planned for initiation of new actions in addition to existing actions undertaken in the previous period; and (c) 2024-2025 will include more initiatives and an activity peak is planned by taking into account the expected growth in institutional capacity through the actions of the preceding stages. Many of the core targets will continue to be implemented over the long term until 2030. This will also link with Decade of Action declared by SG of UN

After each of the three periods, the plan will be reviewed and updated based on lessons learned and stakeholders' feedback. NPDM 2021-2025 is therefore an adaptive document that will roll out and gain lessons at successive stages and be regularly updated.

Many of the actions that are continued across the different plan periods are essential to DRM in Bangladesh and will form an integral part of any national DRM plan. Many of them are existing programs, which may require upgrading and strengthening, which implementing across the timeline will allow.

The tables below show the action plan according to the 3-block timeline, with the summary actions grouped according to the SFDRR priorities with the corresponding 48 core targets to be committed by GoB.

## 5.3 Implementation Strategy

It will require comprehensive effort by the Government, Non- Governmental agencies, development partners, private sectors for implementation of the key targets identified in the NPDM with the view to Disaster Risk Reduction and Management. All agencies concerned to development, need to strengthen functional coordinate and cooperate for timely initiatives for reaching the goal of the Plan. Disaster risk reduction activities should be integrated in the periodic plan and programs and progress should be monitored regularly.

For successful implementation of the proposed intervention in the NPDM will need an appropriate arrangement or coordination body to provide oversight of implementation on behalf of the Ministry of Disaster Management and Relief. In order to facilitate NPDM 2021-25 implementation the following broad approach is proposed:

- MoDMR to provide technical support to establish an implementation mechanism that would coordinate the implementation of the priorities under the NPDM;

- An implementation team established by MoDMR will work closely with all the relevant ministries, departments, donors and partners to provide overall leadership and coordination of the implementation of the priorities.

### Implementation Team

Implementation team will be in combination of the focal points from the key agencies such as ministries, departments, research organizations, international donor agencies, academic/scientific institutions, NGOs and the private sector. The implementation team will ensure close working relationship among the agencies in order to ensure timely execution of the targets. The Implementation team will have following functions (not limited to),

- ✓ Facilitate liaison with governments, donor and relevant agencies with a view to securing funding for the implementation of the NMDP;

- ✓ Develop and implement a communications strategy to ensure high levels of awareness at national and community level particularly the hot spot areas indicated in the plan and the measures being identified to address these risks;

- ✓ Ensure that all initiated activities are Gender and disability inclusive;

- ✓ Facilitate regular meetings with the relevant stakeholders to ensure timely and effective implementation of selected activities and Sub activities in line ministries.

**Periodic review of the implementation of the plan**

A system is to be developed for periodic review of the plan at different levels and prepare the progress monitoring report. Periodic Reporting should be coordinated by MoDMR. It is also required to review the allocations for implementation of the plan by all relevant ministries and departments along with the outputs and outcomes.

## 5.4 Financing Mechanism

The main target of the financing mechanism is to assist identify sustainable sources of finance to implement the key targets of the NPDM. These can come from existing national budgets (as can be identified from Annual Development Plan) and from external sources (such as donors, regional partners, etc.). It is proposed that the financing of the NPDM be facilitated in the following manner:

1. Provision for regular budget allocation of sectoral Ministries and Departments;
2. Budget provision for the projects/programs on disaster risk reduction and management in sectoral Ministries and Departments;
3. Budget Code for DRR/CCA activity implementation;
4. Compulsory allocation of fund for annual repair and maintenance of the infrastructure damaged due to disaster;
5. Adequate fund allocation (at least 5%) for Research and Development for all targeted activities;
6. Dedicated "DRR/CCA Fund" at National, Local and Community level;
7. Investment by private institutions, Industry, cooperatives, banks, financial institutions, and insurance companies;
8. Assistance from development partners (bilateral, multi-lateral, UN agencies)
9. Wide coverage and easy access of insurance facilities including fast settlement for post-disaster claims
10. Support from private sectors through the Corporate Social Responsibility and other initiations
11. Development aid from development partners, such as Asian Development Bank, World Bank.

## 5.5 Accountability and monitoring framework

Implementation of NPDM 2021-2025 is connected with national laws, rules, regulations, strategies, polices, rules of business and mandates including SOD 2019. For implementation of the plan various strategies have been formulated. These are as below.

### Ministry, department and agency focal point

The focal point is the key agency that has the authority and resources to coordinate all related bodies for DRM such as ministries, departments, research organizations, international donor agencies, NGOs and the private sector. The agency focal points need a core of well-trained staff and adequate resources and should be supported by appropriate legislation and authority for decision making and implementation of the plan.

### Links between policies and operations

The system must ensure a very close working relationship between the policy formulating body of each of the ministries and set up a wing or cell to deal with the issues of DRM and CCA within the sectoral laws, policies, plans, projects and programs. Arrangement to be made so that the operational agency must implement the decisions and prepare reports of the actions. For this reason, there are significant advantages in placing the focal point in all the line ministries and in the Prime Ministers' office.

## Expanding the scope of planning

While most disaster planning describes how to react to a disaster, if disaster risks are to be reduced, it is essential that planning becomes pro-active with an emphasis on preparedness, mitigation and resilience. So disaster and climate risk assessment and risk analysis should be an integral part of decentralized local planning. Donors funding participatory planning and disaster planning initiatives should support the Government to formulate necessary rules, policies, guidelines and tools for a decentralized risk informed planning process in Bangladesh for greater resilience.

## Political consensus and allocation of resources

Consensus must be reached among all political parties to ensure implementation of national disaster management plans and legislation and allocate resources to execute the plan. International assistance through national budgets can improve national institutional capacities, development performance, and accountability to its citizens.

## Monitoring Framework

Monitoring track to be used will include inputs (activities), outputs, and outcomes. Performance of each of the program/project identified in the NPDM-2021-25 will be evaluated based on key targets set for respective cases.

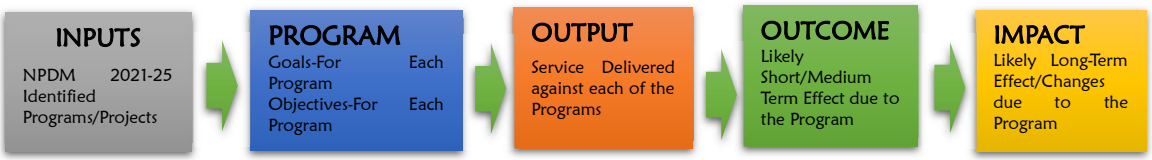



**Figure**: M & E Framework for NPDM 2021-25

***Performance Monitoring Plan***

Performance of program implementation will be monitored by M & E unit under the ministry of Disaster Management and Relief. Following is the outline of the monitoring plan with key tasks.

| Issues | Details |
|---|---|
| Key Performance Area | The key performance areas of the M&E Unit will be as follows:<br>✓ Manage the monitoring and evaluation database;<br>✓ Manage the information needs and requirements of stakeholders;<br>✓ Manage the development of a consolidated matrix of monitoring and evaluation indicators;<br>Manage the production and dissemination of quarterly and annual reviews reports; |
| Plans for Data Collection | M & E Unit will coordinate with the respective responsible Ministry, Department or agencies that are implementing the program/projects. As required, the data can from secondary/ primary sources. |
| Indicators | M & E unit will set indicators against each of the targeted programs. The indicators should be measurable and easily |

| Issues | Details |
|---|---|
| | understood. Before finalizing the indicators, M & E unit must consult with the relevant implementing agencies. |
| Methods of Data collection | Data will be collected from various sources electronically as well as manually. From time to time, the M&E Unit will gather data based on surveys in order to assess the quality and reliability of data sets by the Unit for the production of statistical reports. |
| Frequency of Data collection | Will depend on the specific programs |
| Data Analysis | The method of data analysis depends on the objective of the program study as well as the type of variables to be analyzed. Results of analysis shall be disaggregated units such as gender, residential area, level of education, level of income, etc. |
| Review and Reporting | M & E will set specific review and reporting mechanism depending on the program. Consultation with the relevant implementing agencies may require in this regard. |

***Evaluation Steps***

In order to execute the program evaluation, following steps will be followed;

| Process | Details | Activities |
|---|---|---|
| Stakeholders Engagement Consultation | Involve relevant implementing agency. This also might be stakeholders or partners involved in program operations. | Can be through workshops with stakeholders and coordinating stakeholder input through the process of evaluation design |
| Describe the program | Describe the features of the programme being evaluated. This should include purpose, background information, expected changes/outcomes, the activities, available resources etc. | List specific expectations as goals, objectives, and criteria for success. |
| Identify the relevant indicators | Outcomes and impact indicators | Collection of relevant indicators, Review indicators and consolidate into indicator matrix, |
| Gather credible evidence | Collect data with accurate and realistic information. | Choosing indicators that meaningfully address evaluation questions<br>Describe sources of information |
| Justify conclusion, ensure use and share lessons learned | Justify Evaluation conclusions ensuring the evidence gathered and judged against agreed upon values for or standards set by stakeholders. | Use appropriate methods of analysis and synthesis to summarize findings. |
| Ensure use and share lessons learned | Share the key lesson learned from the program (this can be success and challenges) | Through workshop, one to one meeting, publications. |

## Appendix 1: Key Targets of NPDM 2021-2025

| | Activities | Targets | Lead (Ministry/Department) | Associate (Ministry/Department) | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|
| | **Disaster Risk Reduction** | | | | | | | | |
| 1 | Reviewing and sharing result of existing multi-hazard Risk Assessment and Plans for Earthquake Preparedness and Response Programme | Earthquake preparedness and response programme reviewed | MoDMR, LGD | FSCD/Rajuk/CC | x | x | x | x | x |
| 2 | Conducting and Reviewing Community based Risk Assessment (CRA/URA) | 1,000 Union Parishad and 500 city wards conducted CRA/URA | MoDMR | LGD, LGIs | 100+50 | 200+100 | 300+100 | 300+100 | 100+150 |
| 3 | Capacity building programme for professionals, responders and DMCs | 500 DMCs, 500 professionals and 5000 responders are trained | MoDMR, LGD | LGI/FSCD, DDM | 50+100+1000 | 100+100+1000 | 150+100+1000 | 100+100+1500 | 100+100+500 |
| 4 | Updating and developing DRM training curriculum and DRR manual for public sector training institutes | 5 training institutes reviewed curricula and conducting training | MoDMR/DDM | BPATC, NAPD, NILG, TTC/PTI | 1 | 1 | 2 | 1 | |
| 5 | Implementing of SOD 2019 planned activities including coordination and monitoring Socialization and dissemination of SOD at National and Local Levels | Socialization and implementation continued | MoDMR | Associated ministries | x | X | x | x | x |
| 6 | Enhancing SFDRR implementation, monitoring and consolidation of the progress for submission | Operational plan produced in line with SDG | MoDMR | Associated ministries | x | X | x | x | x |
| 7 | Establishing National Volunteer Organization | Rule published | MoDMR | FSCD, Scouts, BNCC/Anser &VDP | | x | | | |
| 8 | Institutionalizing DIA in preparing TAPP/DPP in development projects/programmes | DIA is being used in DPP/TAPP | MoP | Associated ministries | x | X | x | x | x |
| 9 | Strengthening national, regional and international civil-military cooperation for | DREE and other drill continued | MoDMR | AFD, FSCD, SSD, PSD, MoD, MoFA | X | X | X | X | X |

| | Activities | Targets | Lead (Ministry/Department) | Associate (Ministry/Department) | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|
| | mega disaster response | RCGs decisions are being implemented | | | | | | | |
| 10 | Establishing NEOC and Humanitarian Staging Area (HSA) | NEOC and HSA established and operating | MoDMR | Associated ministries | | NEOC | **HSA** | **-** | **-** |
| 11 | Implementation of rural and urban risk sensitive land use plan (RSLUP) | RSLUP is implemented in at least 5 municipalities and 10 upazillas. | MoH&PWLGD, MoL | MoDMR, Rajuk, UDD | 1+1 | 1+1 | **1+3** | **1+3** | **1+2** |
| 12 | Scaling up/Institutionalization of Flood Preparedness Progarmme (FPP) | 10 districts are implementing FPP through its programme | MoDMR | MoWR and Associated ministries | **1** | **2** | **2** | **3** | **2** |
| 13 | Mainstreaming DRR into social safety net programme | Piloted and Scaling DRR integrated/inclusive social safety net programme through 10 different SSN programme | MoDMR | MoSW,LGD, MoWCA, MoSW, P&ME, MoF&L, MoA etc | **2** | **2** | **2** | **2** | **2** |
| 14 | Enhancing gender responsive and disability inclusive DRM in all phases | NPDM target activities and programmes | MoDMR, MoWCA | LGD and other Associated ministries | **x** | **x** | **x** | **x** | **x** |
| 15 | Update and expand hazard, vulnerability and risk assessment for earthquake and flood | | MoDMR, MoH &PW, LGD | UDD, City Corporation | x | x | x | x | x |
| 16 | Expanding earthquake preparedness program integrating national and local contingency plan | 8 new cities and 8 municipalities implementing earthquake preparedness programme | MoDMR, MoH &PW,FSCD, AFD | Associated ministries | 1+1 | 2+2 | 1+2 | 2+1 | 2+2 |
| 17 | Capacity building and strengthening of national institutions on Research & Development | Conducted Hazard specific research and DRR in development and paper produced | MoDMR, | MoE, MoS&T, ICTD | X | X | X | X | X |
| 18 | Studies on resilience building for biological hazards | 2 studies conducted and report produced for implementation | HSD, | MoDMR | | 1 | 1 | | |
| 19 | Studies on resilience building for human-induced hazards | 2 Studies | MoDMR, MoHPW, | FSCD, AFD | | 1 | | 1 | |

| | Activities | Targets | Lead (Ministry/Department) | Associate (Ministry/Department) | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|
| 20 | Establishing seismology and earthquake engineering disciplines in universities | 2 public universities | S&HSD, | MoDMR,, MoH&PW | | | | X | X |
| 21 | Integrating seismis & earthquake engineering module in private and public universities | At least 5 universities incorporated | S&HSD | MoDMR, | | 1 | 1 | 2 | 1 |
| 22 | Developing and implementing Risk Reduction Action Plan (RRAP) by conducting Community Risk Assessment (CRA)/ Urban Risk Assessment (URA) | 1000 UP level RRAP developed<br>300 ward level RRAP/contingency plan developed | MoDMR | LGD and other relevant ministries | 100+50 | 200+50 | 300+100 | 200+50 | 200+50 |
| 23 | Developing & implementing National DRM capacity building plan including Disability inclusiveness and CPM-MH issues | At least 500 responders received Psycho-social management training and provide field services in disaster | MoDMR, | MoSW, MoWCA | 100 | 100 | 100 | 100 | 100 |
| 24 | Reviewing and updating of secondary, higher secondary and university level curricula on DM | Curriculum of the relevant subjects are reviewed and updated up to class XII and 12 university curricula reviewed | MoDMR, S&HED, MoP&ME | | 2+2 | 3+2 | 2+2 | 2+3 | 2+3 |
| 25 | Reviewing/updating/ developing all guidelines for preparedness and response as per SOD | 10 guideline/SOP are updated/prepared | MoDMR | Other ministries | 2 | 2 | 2 | 3 | 2 |
| 26 | Expanding Capacity building programme of CPP | Enhanced capacity raising programme to the 6 new CPP regions/districts | MoDMR/CPP | LGD | 1 | 1 | 2 | 1 | 1 |
| 27 | Invest in construction of resilient rural housing | 25,000 resilient rural housing constructed | MoDMR | LGD and other ministries | 5000 | 6000 | 8000 | 3000 | 3000 |
| 28 | Develop strategy for sustainable embankment management including | Strategy developed | MoWR | MoDMR, BWDB | | 1 | | | |

| | Activities | Targets | Lead (Ministry/Department) | Associate (Ministry/Department) | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|
| | maintenance, recovery and reconstruction | | | | | | | | |
| 29 | Develop resilience of haor infrastructure system | Resilient haor infrastructure established | BHWDB, LGD, MoWR, moDMR | Other associated ministries | | 1 | | | |
| 30 | Capacity building of the professional (planner, designer, architecture/structural engineer) on earthquake resilient building construction system | 1000 professionals/policy stakeholders are trained | MoDMR, MoH&PW, LGD S&HED | FSCD, AFD, City Corporation | 100 | 200 | 200 | 200 | 300 |
| 31 | Prepare or Reviewing and updating sectoral DRR strategies/guidelines for ministries/division as per SOD | 5 ministries/division to be prepared sectoral guidelines | MoDMR, MoP, MoA, MoF&LS,MoWCA | | 1 | 1 | 1 | 1 | 1 |
| 32 | Mainstreaming Strategy/Guideline for DRR in social protection/safety net programme | Strategy developed | MoDMR, MoWCA, MoSW | Associated Ministries | | 1 | | | |
| 33 | Implementing National disaster and climate induced Displacement Management Strategy due to natural disaster | Strategy developed | MoDMR, MoL | LGD, MoWR, Other associated ministries and other actors | | x | x | x | x |
| 34 | Develop riverine transport system to improve supply chain resilience of the industrial sector | Strategy developed Existing facilities and infrastructure are expanded to handle cargo in containers | MoS, BIWTA | MoDMR and Other associated ministries | | 1 | | | |
| 35 | Develop sector wise Business Continuity Plan (BCP) for different industrial sectors | Develop at least BCP for 2 industrial sectors | MoI, MoC MoP | MoDMR, , E, MoF | | 1 | 1 | | |
| 36 | Develop Salinity/flood/drought resilient Food System and making household level food silo | Food system developed and 500,000 household level food silo made | MoFood, MoA | MoDMR | 100,000 | 1+100,000 | 100,000 | 100,000 | 100,000 |
| 37 | Develop Strategy for Regional & International Cooperation for DRR Financing, Technical Assistance and Partnership | Strategy developed | ERD, MoF | MoDMR, MoP | | 1 | | | |

| | Activities | Targets | Lead (Ministry/Department) | Associate (Ministry/Department) | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|
| 38 | International Cooperation and Resource Mobilization for Enhancing Resilience | | ERD | MoDMR, MF, GED, PC | | | | | |
| | **Alert/ Warning** | | | | | | | | |
| 39 | Innovating models for forecasting and warning system (e.g. flood, landslide) | 2 models are being implemented and institutionalized | MoDMR, BMD, FFWC | DDM, CPP | 1 | 1 | - | - | - |
| 40 | Develop location specific community based early warning system for flash flood | Early warning system developed | BMD, BWDB/FFWC, MoDMR | MoDMR | 1 | | | | |
| | **Emergency Response** | | | | | | | | |
| 41 | Develop resilient infra-reinforcement of BNBC | Resilient BNBC infra-reinforcement developed | MoHPW | MoDMR,LGD | | | | | |
| 42 | Research and knowledge management in each project allocate at least 5%. (Finance strategy) | | MoDMR, MoS &HS | Associated ministries | | | | | |
| 43 | Preparing and implementing recovery strategy & plan for disasters | Strategies for 2 hazards | MoDMR,LGD, MoH&PW, MoEF& CC | Other associated ministries | | 1 | | 1 | |
| 44 | Developing National Logistics Preparedness Plan for effective response | Plan produced and disseminated through | MoDMR | SSD, AFDOther associate, FSCDd ministries and other actors | | 1 | | | |
| | **Rehabilitation, Reconstruction and Recovery** | | | | | | | | |
| 45 | Developing Master Plan of Fire Service for strengthening manmade/natural disaster management system (fire/building, collapse, earthquake) | Mater plan are risk informed and response modality strengthened | SSD, FSCD, MoH&PW | MoDMR, Rajuk, CC | | 1 | | | |
| 46 | Developing guidelines for risk-informed private sector investments. | Guideline produced and disseminated | MoP | MoDMR & Other associated ministries | 1 | | | | |

| Activities | | Targets | Lead (Ministry/Department) | Associate (Ministry/Department) | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|
| 47 | Preparing Disaster Risk financing strategies for strengthening resilience | Strategies developed and disseminated | MoF, MoDMR, MoP | Other associated ministries | | 1 | | | |
| 48 | Enhance navigability of rivers, canals and water reservoirs | Dredging of 20 routes connecting canals with rivers | MoWR/BIWTA | MoDMR, LGD | 3 | 4 | 5 | 4 | 4 |

# APPENDIX 1: National level actions from the Sendai Framework for Disaster Risk Reduction (SFDRR)

## National level actions

The national level actions below are excerpted from SFDRR and they correspond to the four priority areas of the framework, as shown below. GoB ministries and other relevant stakeholders should take into consideration the key activities listed under each of these four priorities and should implement them, as appropriate, taking into consideration respective capacities and capabilities, in line with national laws and regulations.

### *Priority 1: Understanding disaster risk*

- To promote the collection, analysis, management and use of relevant data and practical information and ensure its dissemination, taking into account the needs of different categories of users, as appropriate;
- To encourage the use of and strengthening of baselines and periodically assess disaster risks, vulnerability, capacity, exposure, hazard characteristics and their possible sequential effects at the relevant social and spatial scale on ecosystems, in line with national circumstances;
- To develop, periodically update and disseminate, as appropriate, location-based disaster risk information, including risk maps, to decision makers, the general public and communities at risk of exposure to disaster in an appropriate format by using, as applicable, geospatial information technology;
- To systematically evaluate, record, share and publicly account for disaster losses and understand the economic, social, health, education, environmental and cultural heritage impacts, as appropriate, in the context of event-specific hazard-exposure and vulnerability information;
- To make non-sensitive hazard-exposure, vulnerability, risk, disaster and loss-disaggregated information freely available and accessible, as appropriate;
- To promote real time access to reliable data, make use of space and in situ information, including geographic information systems (GIS), and use information and communications technology innovations to enhance measurement tools and the collection, analysis and dissemination of data;
- To build the knowledge of government officials at all levels, civil society, communities and volunteers, as well as the private sector, through sharing experiences, lessons learned, good practices and training and education on disaster risk reduction, including the use of existing training and education mechanisms and peer learning;
- To promote and improve dialogue and cooperation among scientific and technological communities, other relevant stakeholders and policymakers in order to facilitate a science-policy interface for effective decision-making in disaster risk management;

- To ensure the use of traditional, indigenous and local knowledge and practices, as appropriate, to complement scientific knowledge in disaster risk assessment and the development and implementation of policies, strategies, plans and programmes of specific sectors, with a cross-sectoral approach, which should be tailored to localities and to the context;
- To strengthen technical and scientific capacity to capitalize on and consolidate existing knowledge and to develop and apply methodologies and models to assess disaster risks, vulnerabilities and exposure to all hazards;
- To promote investments in innovation and technology development in long-term, multi-hazard and solution-driven research in disaster risk management to address gaps, obstacles, interdependencies and social, economic, educational and environmental challenges and disaster risks;
- To promote the incorporation of disaster risk knowledge, including disaster prevention, mitigation, preparedness, response, recovery and rehabilitation, in formal and non-formal education, as well as in civic education at all levels, as well as in professional education and training;
- To promote national strategies to strengthen public education and awareness in disaster risk reduction, including disaster risk information and knowledge, through campaigns, social media and community mobilization, taking into account specific audiences and their needs;
- To apply risk information in all its dimensions of vulnerability, capacity and exposure of persons, communities, countries and assets, as well as hazard characteristics, to develop and implement disaster risk reduction policies;
- To enhance collaboration among people at the local level to disseminate disaster risk information through the involvement of community-based organizations and non-governmental organizations.

***Priority 2: Strengthening disaster risk governance to manage disaster risk***

- To mainstream and integrate disaster risk reduction within and across all sectors and review and promote the coherence and further development, as appropriate, of national and local frameworks of laws, regulations and public policies, which, by defining roles and responsibilities, guide the public and private sectors in: (i) addressing disaster risk in publically owned, managed or regulated services and infrastructures; (ii) promoting and providing incentives, as relevant, for actions by persons, households, communities and businesses; (iii) enhancing relevant mechanisms and initiatives for disaster risk transparency, which may include financial incentives, public awareness-raising and training initiatives, reporting requirements and legal and administrative measures; and (iv) putting in place coordination and organizational structures;
- To adopt and implement national and local disaster risk reduction strategies and plans, across different timescales, with targets, indicators and time frames, aimed at preventing the

creation of risk, the reduction of existing risk and the strengthening of economic, social, health and environmental resilience;

- To carry out an assessment of the technical, financial and administrative disaster risk management capacity to deal with the identified risks at the local and national levels;
- To encourage the establishment of necessary mechanisms and incentives to ensure high levels of compliance with the existing safety-enhancing provisions of sectoral laws and regulations, including those addressing land use and urban planning, building codes, environmental and resource management and health and safety standards, and update them, where needed, to ensure an adequate focus on disaster risk management;
- To develop and strengthen, as appropriate, mechanisms to follow up, periodically assess and publicly report on progress on national and local plans; and promote public scrutiny and encourage institutional debates, including by parliamentarians and other relevant officials, on progress reports of local and national plans for disaster risk reduction;
- To assign, as appropriate, clear roles and tasks to community representatives within disaster risk management institutions and processes and decision-making through relevant legal frameworks, and undertake comprehensive public and community consultations during the development of such laws and regulations to support their implementation;
- To establish and strengthen government coordination forums composed of relevant stakeholders at the national and local levels, such as national and local platforms for disaster risk reduction, and a designated national focal point for implementing the Sendai Framework for Disaster Risk Reduction 2020–2030. It is necessary for such mechanisms to have a strong foundation in national institutional frameworks with clearly assigned responsibilities and authority to, inter alia, identify sectoral and multisectoral disaster risk, build awareness and knowledge of disaster risk through sharing and dissemination of non-sensitive disaster risk information and data, contribute to and coordinate reports on local and national disaster risk, coordinate public awareness campaigns on disaster risk, facilitate and support local multisectoral cooperation (e.g. among local governments) and contribute to the determination of and reporting on national and local disaster risk management plans and all policies relevant for disaster risk management. These responsibilities should be established through laws, regulations, standards and procedures;
- To empower local authorities, as appropriate, through regulatory and financial means to work and coordinate with civil society, communities and indigenous peoples and migrants in disaster risk management at the local level;
- To encourage parliamentarians to support the implementation of disaster risk reduction by developing new or amending relevant legislation and setting budget allocations;
- To promote the development of quality standards, such as certifications and awards for disaster risk management, with the participation of the private sector, civil society, professional associations, scientific organizations and the United Nations;

- To formulate public policies, where applicable, aimed at addressing the issues of prevention or relocation, where possible, of human settlements in disaster risk-prone zones, subject to national law and legal systems.

***Priority 3: Investing in disaster risk reduction for resilience***

- To allocate the necessary resources, including finance and logistics, as appropriate, at all levels of administration for the development and the implementation of disaster risk reduction strategies, policies, plans, laws and regulations in all relevant sectors;
- To promote mechanisms for disaster risk transfer and insurance, risk-sharing and retention and financial protection, as appropriate, for both public and private investment in order to reduce the financial impact of disasters on Governments and societies, in urban and rural areas;
- To strengthen, as appropriate, disaster-resilient public and private investments, particularly through structural, non-structural and functional disaster risk prevention and reduction measures in critical facilities, in particular schools and hospitals and physical infrastructures; building better from the start to withstand hazards through proper design and construction, including the use of the principles of universal design and the standardization of building materials; retrofitting and rebuilding; nurturing a culture of maintenance; and taking into account economic, social, structural, technological and environmental impact assessments;
- To protect or support the protection of cultural and collecting institutions and other sites of historical, cultural heritage and religious interest;
- To promote the disaster risk resilience of workplaces through structural and non-structural measures;
- To promote the mainstreaming of disaster risk assessments into land-use policy development and implementation, including urban planning, land degradation assessments and informal and non-permanent housing, and the use of guidelines and follow-up tools informed by anticipated demographic and environmental changes;
- To promote the mainstreaming of disaster risk assessment, mapping and management into rural development planning and management of, inter alia, mountains, rivers, coastal flood plain areas, drylands, wetlands and all other areas prone to droughts and flooding, including through the identification of areas that are safe for human settlement, and at the same time preserving ecosystem functions that help to reduce risks;
- To encourage the revision of existing or the development of new building codes and standards and rehabilitation and reconstruction practices at the national or local levels, as appropriate, with the aim of making them more applicable within the local context, particularly in informal and marginal human settlements, and reinforce the capacity to implement, survey and enforce such codes through an appropriate approach, with a view to fostering disaster-resistant structures;

- To enhance the resilience of national health systems, including by integrating disaster risk management into primary, secondary and tertiary health care, especially at the local level; developing the capacity of health workers in understanding disaster risk and applying and implementing disaster risk reduction approaches in health work; promoting and enhancing the training capacities in the field of disaster medicine; and supporting and training community health groups in disaster risk reduction approaches in health programmes, in collaboration with other sectors, as well as in the implementation of the International Health Regulations (2005) of the World Health Organization;
- To strengthen the design and implementation of inclusive policies and social safety-net mechanisms, including through community involvement, integrated with livelihood enhancement programmes, and access to basic health-care services, including maternal, newborn and child health, sexual and reproductive health, food security and nutrition, housing and education, towards the eradication of poverty, to find durable solutions in the post-disaster phase and to empower and assist people disproportionately affected by disasters.

***Priority 4: Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction***

- To prepare or review and periodically update disaster preparedness and contingency policies, plans and programmes with the involvement of the relevant institutions, considering climate change scenarios and their impact on disaster risk, and facilitating, as appropriate, the participation of all sectors and relevant stakeholders;
- To invest in, develop, maintain and strengthen people-centred multi-hazard, multisectoral forecasting and early warning systems, disaster risk and emergency communications mechanisms, social technologies and hazard-monitoring telecommunications systems; develop such systems through a participatory process; tailor them to the needs of users, including social and cultural requirements, in particular gender; promote the application of simple and low-cost early warning equipment and facilities; and broaden release channels for natural disaster early warning information;
- To promote the resilience of new and existing critical infrastructure, including water, transportation and telecommunications infrastructure, educational facilities, hospitals and other health facilities, to ensure that they remain safe, effective and operational during and after disasters in order to provide live-saving and essential services;
- To establish community centres for the promotion of public awareness and the stockpiling of necessary materials to implement rescue and relief activities;
- To adopt public policies and actions that support the role of public service workers to establish or strengthen coordination and funding mechanisms and procedures for relief assistance and plan and prepare for post-disaster recovery and reconstruction;
- To train the existing workforce and voluntary workers in disaster response and strengthen technical and logistical capacities to ensure better response in emergencies;

- To ensure the continuity of operations and planning, including social and economic recovery, and the provision of basic services in the post-disaster phase;
- To promote regular disaster preparedness, response and recovery exercises, including evacuation drills, training and the establishment of area-based support systems, with a view to ensuring rapid and effective response to disasters and related displacement, including access to safe shelter, essential food and non-food relief supplies, as appropriate to local needs;
- To promote the cooperation of diverse institutions, multiple authorities and related stakeholders at all levels, including affected communities and business, in view of the complex and costly nature of post-disaster reconstruction, under the coordination of national authorities;
- To promote the incorporation of disaster risk management into post-disaster recovery and rehabilitation processes, facilitate the link between relief, rehabilitation and development, use opportunities during the recovery phase to develop capacities that reduce disaster risk in the short, medium and long term, including through the development of measures such as land-use planning, structural standards improvement and the sharing of expertise, knowledge, post-disaster reviews and lessons learned and integrate post-disaster reconstruction into the economic and social sustainable development of affected areas. This should also apply to temporary settlements for persons displaced by disasters;
- To develop guidance for preparedness for disaster reconstruction, such as on land-use planning and structural standards improvement, including by learning from the recovery and reconstruction programmes over the decade since the adoption of the Hyogo Framework for Action, and exchanging experiences, knowledge and lessons learned;
- To consider the relocation of public facilities and infrastructures to areas outside the risk range, wherever possible, in the post-disaster reconstruction process, in consultation with the people concerned, as appropriate;
- To strengthen the capacity of local authorities to evacuate persons living in disaster-prone areas;
- To establish a mechanism of case registry and a database of mortality caused by disaster in order to improve the prevention of morbidity and mortality;
- To enhance recovery schemes to provide psychosocial support and mental health services for all people in need;
- To review and strengthen, as appropriate, national laws and procedures on international cooperation, based on the Guidelines for the Domestic Facilitation and Regulation of International Disaster Relief and Initial Recovery Assistance.